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IMPROVED EFFICIENCY OF LEARNING PROJECT

PHASE II

(669-0166)

PROJECT PAPER

Designed Jointly by the

Ministry of Education

and

USAID/Liberia

August 1985

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ACTION MEMORANDUM FOR THE DIRECTOR

FROM: Douglas T. Kline, SPPD

THROUGH: Michael Rugh, DD

SUBJECT: Project Authorization - Improved Efficiency of Learning II Project (669-0166)

PROBLEM: Your approval is required to authorize a grant of \$14,550,000 from the Section 105 Education and Human Resources Appropriation to the Government of Liberia (GOL) for the Improved Efficiency of Learning II Project (669-0166). It is planned that \$2,000,000 will be obligated this year.

DISCUSSION:

A. Background

A variety of studies over the past decade have underlined the severity of the problems in the primary education system in Liberia; slightly more than 50% of school age children attend any type of school; a minority of students have appropriate textbooks; over 60% of teachers are unqualified; and poorly equipped and staffed rural teacher-training institutions are able to supply only a fraction of the trained teachers needed. The Improved Efficiency of Learning (IEL) I project, which was completed in March 1985, was the first phase in a 10-12 year effort to improve the quality of primary school instruction. IEL I focused on preparing and validating 570 low-cost core instructional modules for programmed learning in Grades 1-6 and disseminating these materials in a limited geographic area. Four evaluations of IEL completed between October 1981 and April 1984 found it to be (1) uniquely effective in increasing the academic performance of elementary school students and (2) able to provide the lowest pupil cost of any available alternative.

B. Project Description

The goal of the IEL II Project is to upgrade the quality of education in public primary schools nationwide. The Phase II program will disseminate IEL materials and will also emphasize improving the capacity of the Ministry of Education to supervise and administer the expanded IEL program by providing training and technical assistance to teachers, school principals, and county, district, and regional officers.

The project's purpose is to implement an effective primary level learning system nationwide through the use of programmed instruction. The project will provide approximately 29 person years of long-term technical assistance, 42 person months of short-term technical assistance, 17 person years of long-term training, and 48

person months of short-term training. The project will train 2,140 teachers and 660 principals and county, district and regional education officers and will finance vehicles and trail bikes for the technical assistance team and for the Ministry of Education personnel involved in supervision. Finally, the project will finance the production and distribution of programmed instruction materials.

By the end of the Phase II project, a nationwide IEL learning system will be in place. Specifically, the following will have been accomplished:

1. A total of 2,140 teachers will use IEL programmed instruction modules and 600 principals will be capable of supervising IEL trained teachers.
2. 75,000 pupils will learn from IEL modules.
3. A cadre of 3 trainers of trainers will be functioning at regional centers.
4. The IEL Division will become an operationally effective unit of the MOE coordinating the IEL instruction program nationwide.
5. An effective elementary teacher support system will become operational at school, district, county and regional levels.
6. Radio broadcasts through the Liberian Rural Communications Network will become a component of the IEL program for in-service and instructional enrichment.
7. The MOE will have the capability to coordinate the printing of IEL modules and other training materials and to maintain an efficient delivery system for them.

C. Financial Summary

The total project cost is estimated at \$24.087 million. AID's life-of-project contribution is estimated at \$14,550,000 of which \$2.0 million will be obligated in FY 1985. The GOL's contribution is estimated to be \$6.023 million or 25% of project costs. Peace Corps' contribution to the project is estimated at \$3.52 million. The following table illustrates the financial inputs:

	(\$000)			
	PC	AID	GOL	TOTAL
Technical Assistance	3,030.0	5,022.5	-	8,052.5
Personnel	-	-	3,056.9	3,056.9
Training	-	3,571.4	1,007.2	4,578.6
Commodities	-	1,720.5	174.0	1,894.5
Educational Benefits	-	1,176.5	413.9	1,590.4
Other Costs		256.9	108.0	364.9
Inflation & Contingency	<u>484.7</u>	<u>2,797.8</u>	<u>1,262.7</u>	<u>4,545.2</u>
TOTAL	3,514.7	14,545.6	6,022.7	24,083.0
		(rounded to 14,550,000)		(rounded to 24,087,000)
Share by Contributor	15%	60%	25%	100%

#### D. Analyses and Requirements

The USAID/Liberia Project Design Committee has concluded from the analyses of the project paper that:

1. The project approach is technically and economically sound, socially acceptable and administratively feasible;
2. The timing and funding of project activities are appropriately scheduled and the implementation plan is realistic and establishes a reasonable time frame for carrying out the project.
3. Adequate provision has been made for a project audit and external project evaluations.

A 611(e) certification has been made that the GOL can effectively maintain and utilize the assistance provided by the project.

The Initial Environmental Examination was approved by the Assistant Administrator for Africa on September 12, 1984.

#### E. Conditions Precedent and Covenants:

The authorization contains the following conditions precedent in addition to the standard C.P.'s to first disbursement, requiring names and signatures of responsible GOL officials and an opinion of counsel on the validity of the Project Agreement:

1. First Disbursement

Prior to the first disbursement under the Grant or to the issuance by AID of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

a) Evidence that the IEL Senior Staff and their support staff in Gbarnga have been relocated to the Ministry of Education in Monrovia and that the IEL project director will be working full time on the IEL project.

b) Evidence that an IEL Division has been made an official unit of the Ministry of Education directly responsible to the Deputy Minister of Instruction.

2. First Disbursement for Technical Assistance

Prior to disbursement under the Grant or to issuance by AID of documentation pursuant to which disbursement will be made, for the financing of technical assistance, except for contractor support and personal services contracts, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

a) Evidence that the Grantee has available and will provide adequate office space and secretarial assistance at the Ministry of Education and at each of the Regional Centers for each member of the team members' Liberian counterpart.

b) Evidence that the GOL has identified a counterpart to work with each member of the technical assistance team.

3. First Disbursement for In-Service Teacher Training

Prior to disbursement under the Grant or to issuance by A.I.D. of documentation pursuant to which disbursement will be made, for the financing of in-service teacher training the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that the Ministry of Education has initiated preparation for integrating the 16 week CINSTEP Program with the proposed 8 week IEL Teacher Training Program.

4. First Disbursement for Motorcycles

Prior to disbursement under the Grant, or to issuance by AID of documentation pursuant to which disbursement will be made, for the purchase of motorcycles, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, evidence that the Grantee, acting

through the Ministry of Education, has established a system in accordance with GOL policy whereby (a) employees will pay for at least half the cost of motorcycles through periodic salary deductions or other mutually agreed mechanisms, and (b) all monies so collected will be deposited in a revolving fund from which replacement motorcycles will be financed or will be used to support other project-generated recurrent costs as agreed to by the Parties in Project Implementation Letters.

5. First Disbursement for Radios

Prior to disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made for the purchase of radios, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, evidence that adequate radio programming has been developed for IEL instruction.

6. Disbursement for Computer Scanner and Related Computer Equipment

Prior to disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made for the purchase of a computer scanner and related computer equipment, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, a detailed plan outlining how the computer scanner and related equipment will be utilized.

7. Subsequent Disbursements

Prior to disbursements of project funds under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, in the years and for the purposes specified below, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

a) Prior to any gasoline and maintenance disbursements in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of gasoline expenses. The respective Grantee and AID contributions for gasoline are included in ANNEX I of the Project Agreement.

b) Prior to any disbursements for the IEL modules in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of the cost of replacing IEL modules. The respective Grantee and AID contributions for replacing IEL modules are included in ANNEX I of the Project Agreement.

c) Prior to any disbursements for IEL refresher training in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of refresher training expenditures. The respective Grantee and AID contributions for refresher training are included in ANNEX I of the Project Agreement.

d) Prior to any disbursements for radios in fiscal year 1988, evidence that 75 percent of the radios procured in fiscal years 1986 and 1987 are in place and operational.

#### 8. Disbursements for Long-Term Training

Prior to the first issuance of a Project Implementation Order/Participants (PIO/P) for long-term training under the Grant, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to AID, in form and substance satisfactory to AID, a copy of a contract to be executed between the Grantee and all long-term trainees which obliges them to work for the Ministry of Education upon completion of such training for a period of two years for each year of training received.

In addition to the above C.P.s, the authorization contains the following covenants:

a) The Grantee agrees that all vehicles, equipment and materials purchased for the first phase of the project will be utilized only for this Phase II project unless AID otherwise agrees in writing.

b) The Grantee agrees that vehicles purchased with IEL II Project Funds will be exclusively for project use. Vehicles will be managed by the IEL unit and will not be pooled with MOE vehicles.

c) The Grantee agrees that all participants trained under the project will be placed in established positions in the IEL Division of the Ministry of Education upon completion of their training for a period of not less than two years for every year of training.

d) The Grantee agrees to continue replacing IEL instructional and training materials at regular intervals after AID involvement in the project is terminated.

e) The Grantee agrees to study the feasibility of creating a Bureau for Primary Education which integrates all offices in the MOE dealing with Primary Instruction. A joint GOL/USAID committee will be formed in year one to study the issue. The outcome of this study will be communicated to AID by the end of year two of the Project.

f) The Grantee agrees to make every effort to ensure that IEL-trained teachers are assigned to IEL schools.

F. ECPR Approval and Issues

The ECPR approved the PID on June 29, 1984. The PID approval cable identified the following issues as needing to be addressed in the Project Paper:

1. GOL Commitment and Capability

The PID cable emphasized the importance of addressing institutional issues associated with implementing the project. The Phase II PP addresses institutional issues in detail and discusses at length the functions and placement of the IEL Division which will largely be responsible for project implementation. Regarding the project's implementation plan, the PID cable urges the Mission to "exercise caution in formulating the IEL II implementation schedule." The project implementation time frame has been extended from five years (at the PID stage) to 6 1/2 years to take into account IEL I implementation experience as well as problems of logistics. The issue of coordination with the IBRD textbook program has been addressed. It has been agreed that no further primary school textbooks will be purchased under the program. By the time the IEL system is expanded nationwide, the useful life of the textbooks will have passed. The project has been designed to minimize the recurrent cost burden on the GOL. The Government has agreed to finance an increasing share of project recurrent costs. However, in the event that the GOL cannot meet these costs due to the fiscal crisis, USAID will consider financing these costs with the project's contingency funds.

2. Linkage of IEL I and IEL II

As suggested in the PID cable, funds have been provided for transition between the Phase I and II projects through the provision of PD & S funds.

3. Comprehensive Early Alert System

The technical Assistance team will be selected competitively using the RFTP mechanism. Historically black colleges and universities will be encouraged to participate as sub-contractors under the project. Serious consideration is being given to an 8A set aside for commodity procurement.

4. Liberianization

Because IEL has now become a recognized national term, the MOE has elected not to change the IEL title.

G. Senior Mission Review of the IEL Project

The Mission Senior Review Committee reviewed the project on August 5, 1985. The issues of project rationale, financial viability, GOL commitment, implementation feasibility, proposed

equipment, mission support capacity and U.S. retrenchment options were discussed. A memorandum detailing issues raised at this meeting is included in the IEL file.

#### H. Availability of Peace Corps Volunteers

As of this writing the Government of Liberia is reevaluating the level of Peace Corps activity in the country. The first group of volunteers required for this project is scheduled to arrive in January 1986. To date, neither the GOL nor Peace Corps has indicated its intention to cancel that group or any subsequent groups.

Should some or all of the PCVs scheduled to work on this project ultimately not materialize, project implementation plans and targets will have to be extended. Specifically USAID and the MOE will have to reassess the capability of the MOE Field Supervisory Staff to cover the increasing number of IEL schools in the absence of PCVs to reinforce and train the Liberian staff. In this event, a major MOE-USAID reassessment of the project will take place within the first year to adjust the implementation plan and expansion targets, accordingly.

#### I. Congressional Notification

A congressional notification for the project was forwarded on July 11, 1985 and the waiting period expired on July 26, 1985, without objection.

#### J. Waiver Requirements

One waiver is required: a source/origin waiver for the procurement of 144 trail bikes from Code 935 countries at a cost of \$273,400. This waiver was approved by the AA/AFR on July 16, 1985. (See Annex F below).

#### K. Project Officers

The project will be managed by Stanley Handleman, Human Resources Officer and Murray Simon, Personal Services Contractor. Mr. George Hazel, AFR/PD/CCWAP, will be the officer responsible in AID/Washington.

#### L. Authority

Under Delegation of Authority 140, Revised, you have the authority to authorize for up to \$20 million.

RECOMMENDATION: That you sign the attached Project Authorization, thereby approving life-of-project fundings of \$14.55 million.

Clearances:

SPPD - C. Brown *C. Brown*  
EHR - S. Handleman *S. Handleman*  
DP - H. Marwitz *H. Marwitz*  
EO - M. Anderson *M. Anderson*  
CON - C. Kemner *CK Kemner*  
DD - M. Rugh *M. Rugh*

Drafted: SPPD - D. Kline

PROJECT AUTHORIZATION

Name of Country : Liberia  
Name of Project : Improved Efficiency of Learning, II  
Number of Project : 669-0166

Pursuant to Section 105 of the Foreign Assistance Act of 1961, as amended, and Africa Bureau Delegation of Authority No. 140, revised, I hereby authorize the Improved Efficiency of Learning (IEL) II Project for Liberia ("Cooperating Country") involving planned obligations of not to exceed \$14,550,000 in grant funds over a six year period from date of authorization, subject to the availability of funds and in accordance with the AID/OYB allotment process, to help in financing the foreign exchange and local currency costs of the project. The Project Assistance Completion Date (PACD) for the project is December 31, 1991.

The project will provide technical assistance, training and commodities to the Grantee to assist in implementing an effective primary learning system nationwide through the use of programmed instruction. Project activities will include: the short-term training of approximately 2,140 teachers and 600 principals in the use of programmed instruction modules; teacher/principal refresher training; on-the-job and formal training of regional district and county education officers in IEL methodology and supervision; the development of a capacity within the Ministry of Education to implement a nationwide IEL program; and the printing of IEL materials and the distribution of these materials to primary schools nationwide.

Total project costs are estimated at \$24,087,000 of which AID will provide \$14,550,000, and Peace Corps and the Grantee the remainder in personnel and operating costs.

The project shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as AID may deem appropriate.

1. Source and Origin of Goods and Services

Goods and services, financed by AID under the Grant shall have their source, origin and nationality in the United States or Liberia except as AID may otherwise agree in writing. Ocean shipping costs will be financed under the Grant only on vessels under flag registry of the United States except as AID may otherwise agree in writing.

## 2. Conditions Precedent to Disbursement

In addition to the standard conditions precedent, the Project Grant Agreement shall contain the following conditions precedent to disbursement.

### a. First Disbursement

Prior to the first disbursement under the Grant or to the issuance by AID of documentation pursuant to which disbursement will be made the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

1) Evidence that the IEL Senior Staff and their support staff in Gbarnga have been relocated to the Ministry of Education in Monrovia and that the IEL project director will be working full time on the IEL project.

2) Evidence that an IEL Division has been made an official unit of the Ministry of Education directly responsible to the Deputy Minister of Instruction.

### b. First Disbursement for Technical Assistance

Prior to disbursement under the Grant or to issuance by AID of documentation pursuant to which disbursement will be made for the financing of technical assistance, except for contractor support and personal services contracts, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

1) Evidence that the Grantee has available and will provide adequate office space and secretarial assistance at the Ministry of Education and at each of the Regional Centers for each member of the team members' Liberian counterpart.

2) Evidence that the GOL has identified a counterpart to work with each member of the technical assistance team.

### c. First Disbursement for In-Service Teacher Training

Prior to disbursement under the Grant or to issuance by A.I.D. of documentation pursuant to which disbursement will be made, for the financing of in-service teacher training the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that the Ministry of Education has initiated preparation for integrating the 16 week CINSTEP Program with the proposed 8 week IEL Teacher Training Program.

d. First Disbursement for Motorcycles

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e. First Disbursement for Radios

Prior to disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made for the purchase of radios, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, evidence that adequate radio programming has been developed for IEL instruction.

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g. Subsequent Disbursements

Prior to disbursements of project funds under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, in the years and for the purposes specified below, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

1) Prior to any gasoline and maintenance disbursements in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of gasoline expenses. The respective Grantee and AID contributions for gasoline are included in ANNEX I of the Project Agreement.

2) Prior to any disbursements for the IEL modules in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of the cost of replacing IEL modules. The respective Grantee and AID contributions for replacing IEL modules are included in ANNEX I of the Project Agreement.

3) Prior to any disbursements for IEL refresher training in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of refresher training expenditures. The respective Grantee and AID contributions for refresher training are included in ANNEX I of the Project Agreement.

4) Prior to any disbursements for radios in fiscal year 1988, evidence that 75 percent of the radios procured in fiscal years 1986 and 1987 are in place and operational.

n. Disbursements for Long-Term Training

Prior to the first issuance of a Project Implementation Order/Participants (PIO/P) for long-term training under the Grant, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to AID, in form and substance satisfactory to AID, a copy of a contract to be executed between the Grantee and all long-term trainees which obliges them to work for the Ministry of Education upon completion of such training for a period of two years for each year of training received.

3. Covenants

The Project Grant Agreement shall contain, in substance, the following special covenants:

a. The Grantee agrees that all vehicles, equipment and materials purchased for the first phase of the project will be utilized only for this Phase II project unless AID otherwise agrees in writing.

b. The Grantee agrees that vehicles purchased with IEL II Project Funds will be exclusively for project use. Vehicles will be managed by the IEL unit and will not be pooled with MOE vehicles.

c. The Grantee agrees that all participants trained under the project will be placed in established positions in the IEL Division of the Ministry of Education upon completion of their training for a period of not less than two years for every year of training.

d. The Grantee agrees to continue replacing IEL instructional and training materials at regular intervals after AID involvement in the project is terminated.

e. The Grantee agrees to study the feasibility of creating a Bureau for Primary Education which integrates all offices in the MOE dealing with Primary Instruction. A joint GOL/USAID committee will be formed in year one to study the issue. The outcome of this study will be communicated to AID by the end of year two of the project.

f. The Grantee agrees to make every effort to ensure that IEL trained teachers are assigned to IEL schools.

Date:

Dec 14 1984

William D. ...  
Mission Director  
USAID/Liberia

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT DATA SHEET</b>		1. TRANSACTION CODE <b>A</b> A = Add C = Change D = Delete		Amendment Number _____		DOCUMENT CODE <b>3</b>			
2. COUNTRY/ENTITY <b>Liberia</b>				3. PROJECT NUMBER <b>669-0166</b>					
4. BUREAU/OFFICE <b>Africa</b>				5. PROJECT TITLE (maximum 40 characters) <b>Improved Efficiency of Learning II</b>					
6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <b>1   2   3   1   9   1</b>				7. ESTIMATED DATE OF OBLIGATION (Under "B." below, enter 1, 2, 3, or 4) A. Initial FY <b>8   5</b> B. Quarter <b>4</b> C. Final FY <b>8   9</b>					
8. COSTS (\$000 OR EQUIVALENT \$1 = _____)									
A. FUNDING SOURCE		FIRST FY <b>85</b>			LIFE OF PROJECT				
		B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total		
AID Appropriated Total									
(Grant)		( 1,097 )	( 903 )	( 2,000 )	( 6,750 )	( 7,800 )	( 14,550 )		
(Loan)		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )		
Other									
U.S.									
Host Country		0	626	626	0	6,022	6,022		
Other Donor(s) <b>Peace Corps</b>		216	54	270	2,818	697	3,515		
<b>TOTALS</b>		<b>1,313</b>	<b>1,583</b>	<b>2,896</b>	<b>9,568</b>	<b>14,519</b>	<b>24,087</b>		
9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
								1. Grant	2. Loan
(1) EHR	20	636		0	0	2,000	0	14,550	0
(2)									
(3)									
(4)									
<b>TOTALS</b>				<b>0</b>	<b>0</b>	<b>2,000</b>	<b>0</b>	<b>14,550</b>	<b>0</b>
10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each) <b>634</b>								11. SECONDARY PURPOSE CODE	
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)									
A. Code		BR		BU		BWWW			
B. Amount		10,913		8,638		5,253			
13. PROJECT PURPOSE (maximum 480 characters) <div style="border: 1px solid black; padding: 10px; margin: 5px 0;">To implement an effective primary level learning system nationwide, through the use of programmed instruction.</div>									
14. SCHEDULED EVALUATIONS					15. SOURCE/ORIGIN OF GOODS AND SERVICES				
Interim		MM	YY	MM	YY	Final		MM	YY
		0   7	87	1   0	8   8			0   7	90
					<input checked="" type="checkbox"/> 000 <input type="checkbox"/> 941 <input checked="" type="checkbox"/> Local <input checked="" type="checkbox"/> Other (Specify) <u>host country</u>				
16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment.)									
17. APPROVED BY <b>Mary C. Kilgour</b> Director, USAID/Liberia								18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION:	
Signature								Date Signed	
Title								MM DD YY	
								MM DD YY	

Concurrence on methods of implementation and financing CM Kemner 8/29/85  
A/CON, C. Kemner

## ABBREVIATIONS

ADB	African Development Bank
AID	Agency for International Development (Washington)
CDSS	Country Development Strategy Statement
CEO	County Education Officer
COP	Chief of Party
CPS	Conditions Precedent
DEO	District Education Officer
DMI	Deputy Minister for Instruction
EO	Education Officer
ESF	Economic Support Funds
GOL	Government of Liberia
HB	Handbook (AID)
HRD	Human Resources Development
IBRD	International Bank for Reconstruction and Development (World Bank)
IDA	International Development Association (World Bank)
IEL	Improved Efficiency of Learning
IEL I	Improved Efficiency of Learning, Phase I
IEL II	Improved Efficiency of Learning, Phase II
IELD	Improved Efficiency of Learning Division or IEL Division
IMF	International Monetary Fund
IRR	Internal Economic Rate of Return
IS	Instructional Supervisor

LDCs            Less Developed Countries  
 LOP             Life of Project  
 LRCN            Liberian Rural Communications Network  
 MOE             Ministry of Education  
 NPV             Net Present Value  
 OC              Optimal Conventional School  
 PACD            Project Assistance Completion Date  
 PCV             Peace Corps Volunteer  
 PD              Project Director (IEL)  
 PIO/C            Project Implementation Order/Commodities  
 PIO/P            Project Implementation Order/Participant Training  
 PIO/T            Project Implementation Order/Technical Services  
 PL              Programmed Learning  
 PL 480          Public Law 480 (Food for Peace Program)  
 PM              Person Month  
 PP              Project Paper  
 ProAg            Project Agreement  
 PSA             Procurement Service Agent  
 PSC             Personal Services Contract  
 PT              Programmed Teaching  
 PY              Person Year  
 REC             Regional Education Center  
 REDSO/WCA      Regional Economic Development Services Office for West  
                     and Central Africa  
 REO             Regional Education Officer

RFTP Request for Technical Proposal  
SQ Status Quo School  
ST/IT Bureau of Science and Technology/International Training  
TA Technical Assistant; Technical Assistance  
TTI Teacher Training Institute  
USAID United States Agency for International Development  
(Mission)  
USDH U.S. Direct Hire  
WB World Bank

## GLOSSARY

- AID/OYB ALLOTMENT PROCESS - The AID/Washington funds allotted annually for the operating year budget. The process is based on monies requested by the Mission and approved by a combination of agencies including AID/W and the Congress.
- BUREAU OF PRIMARY EDUCATION - A proposed unit of the Deputy Minister of Instruction which would include the IEL Unit and be responsible for all primary instruction by the end of the project.
- CERTIFICATE "C" - Entry level teaching certificate in Liberian public schools for teachers who have completed an approved course of study at a teacher training institute. Since 1984, this certificate may be granted to untrained teachers who complete an approved inservice training program. Certificates "B" and "A" require higher level training.
- CINSTEP - Cuttington Inservice Teacher Education Program, a 16-week inservice program for unqualified teachers over a two-year period sponsored by the World Bank IV making teachers eligible for the "C" certificate. A parallel program, also sponsored by World Bank IV, is offered at the University of Liberia.
- CODE 935 COUNTRIES - Special Free World: Any area or country in the Free World, including the cooperating country itself.
- CORE MODULES - Programmed instructional materials of the IEL project that must be learned by all students.
- CYCLES - Annual repetitive patterns of training, supervision and the printing/ dissemination of instructional materials. First-year activities represents the first cycle, second-year activities represent the second cycle, etc.
- 8A FIRMS - Small businesses or small socially and economically disadvantaged firms.
- ELEMENTARY EDUCATION - Used interchangeably with primary education to describe the education level from grades 1 to 6.
- ENRICHMENT MODULES - Programmed instructional material of the IEL project that should be introduced and taught after optional modules if time permits. These modules are intended for the brighter students.
- IEL I - Phase I of the Improved Efficiency of Learning Project (1979 - 1985) which was the experimental phase of the primary school programmed instruction system in Liberia.

IEL UNIT - The Liberian staffed unit responsible to the Deputy Minister for Instruction for the implementation of the project in areas such as training, supervision, curriculum, evaluation and the printing and dissemination of instructional materials.

INSTRUCTIONAL SUPERVISOR (IS) - A member of the IEL Unit who serves in the dual role of trainer and classroom supervisor. This technician trains teachers, principals and education officers in the IEL annual workshops. During nontraining periods, the IS supervises classroom instruction. In IEL II, the IS role will change to resource person to Peace Corps volunteers and District Education officers who will become the classroom supervisors.

MONROVIA CONSOLIDATED SCHOOL SYSTEM (MCSS) - An autonomous school system for Monrovia which is responsible directly to the Minister of Education. The system covers all grades preprimary to 12 for both public and private schools.

OPTIONAL MODULES - Programmed instructional materials of the IEL project that should be introduced and taught after core modules if time permits.

PRIMARY EDUCATION - Used interchangeably with elementary education to describe the education level from grades 1 to 6.

PROGRAMMED LEARNING (PL) - Student directed and teacher guided programmed instruction of the IEL project for the second semester of grade 3 and all of grades 4, 5 and 6. Students work in small groups of three to seven pupils with one pupil rotating as group leader. The teacher serves as guide moving from group to group to facilitate the learning process.

PROGRAMMED TEACHING (PT) - Teacher directed programmed instruction of the IEL project for grades 1, 2 and the first semester of grade 3. The PT method combines a teacher guide with the instructional materials.

PROJECT IMPACT - (Instructional management by parents, community and teachers) A system of programmed instruction begun in January 1974 in five villages in the Philippines and in four villages in Indonesia. The project responded to the problems of a lack of resources and of a high primary attrition rate (less than half of the children were completing six years of primary education). Project was funded by International Development Research Centre (IDRC), Ottawa, Canada.

PROJECT MANAGER - An individual who is hired by USAID through a personal services contract to manage the project. The project manager reports to a direct-hire officer who is officially responsible for the project.

PROJECT PAMONG - Project Impact for Indonesia; an acronym for Pendidikan Anak oleh Masyarakat, Orang Tua, dan Guru-Guru, which translated is Children's Education by the Community, Parents and Teachers. "Pamong" also has the meaning of "guidance."

PROJECT RIT - Reduced Instructional Time project in Thailand was developed as an alternative to educate children in rural and remote poverty areas more efficiently.

REAM OF PAPER - A package of 500 sheets of quality paper used for IEL printing measuring 8 1/2 X 11" and weighing between 60 and 70 grams.

REGIONAL EDUCATION CENTER - One of three structures located in Paynesville, Gbarnga and Zwedru constructed under World Bank IV. These RECs will be inaugurated in 1985 and will serve to decentralize the Ministry of Education activities under the Regional Education Officers. The functions and operations of these RECs are still to be defined. Nevertheless, office and storage space in each Center will be assigned to IEL technical assistants and project personnel.

TRANSITION PERIOD - (IEL) The period between December 7, 1984 and December 31, 1985, or from the end of IEL Phase I to the scheduled arrival of the new technical assistance team for Phase II.

IEL II TABLES AND CHARTS

NOTE: TABLE II-1 means Chapter II, Table 1; TABLE G-1-1 means Annex G-1, Table 1

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CHAPTER I

SUMMARY AND RECOMMENDATIONS

A. Grantee and Implementing Agency

The Government of Liberia (GOL) will be the Grantee. Its implementing agency will be the Ministry of Education (MOE).

B. Financial Plan and Term of Project (\$000)

	<u>PC</u>	<u>AID</u>	<u>GOL</u>	<u>TOTAL</u>
Technical Assistance	3,030.0	5,022.5	0	8,052.5
Personnel	0	0	3,056.9	3,056.9
Training	0	3,571.4	1,007.2	4,578.6
Commodities	0	1,720.5	174.0	1,894.5
Educational Materials	0	1,176.5	413.9	1,590.3
Other Costs	0	256.9	108.0	364.9
Inflation & Contingency	<u>484.7</u>	<u>2,797.8</u>	<u>1,262.7</u>	<u>4,545.2</u>
TOTAL	3,514.7	14,545.6 (rounded to 14,550,000)	6,022.7	24,083.0 (rounded to \$24,087,000)

The Project Assistance Completion Date (PACD) will be December 31, 1991.

C. Background of the Project

A variety of studies over the past decade have underlined the severity of the problems in the primary education system in Liberia: slightly more than 50% of school-age children attend any type of school; a minority of students have appropriate textbooks; over 60% of teachers are unqualified; and poorly equipped and staffed rural teacher-training institutions are able to supply only a fraction of the trained teachers needed. The Improved Efficiency of Learning (IEL) I project, which was completed in March 1985, was the first phase in a 10-12 year effort to improve the quality of primary school instruction. IEL I focused on preparing and validating 570 low-cost core instructional modules for programmed learning in grades 1-6 and disseminating these materials in a limited geographic area.

Four evaluations completed between October 1981 and April 1984 found IEL I to be: 1) uniquely effective in increasing the academic performance of elementary school students and 2) able to provide the lowest per pupil cost of any available alternative.

#### D. Project Description

The goal of the IEL II Project is to upgrade the quality of education in public primary schools nationwide. The Phase II program will disseminate IEL materials and will also emphasize improving the capacity of the Ministry of Education to supervise and administer the expanded IEL program by providing training and technical assistance to teachers, school principals and county, district and regional officers.

The project's purpose is to implement an effective primary level learning system nationwide through the use of programmed instruction. The project will provide approximately 29 person years of long-term technical assistance, 17 person years of long-term training and 48 person months of short-term training. The project will train 2,140 teachers and 660 principals and county, district and regional education officers and will finance vehicles and trail bikes for the technical assistance team and for Ministry of Education personnel involved in supervision. Finally, the project will finance the production and distribution of programmed instruction materials.

#### E. Use of Small and Disadvantaged Businesses

Because of the desire to establish a long-term relationship between the MOE and a major U.S. university, the implementation contract will be competitively bid and will likely be with a large university. Bidding universities will be encouraged to sub-contract with 8A firms and historically black universities. Also, the Mission will pursue the possibility of awarding procurement services contracts through a minority business set aside.

#### F. Waiver Requirements

One waiver is required: a source/origin waiver for the procurement of 144 trail bikes from Code 935 countries at a cost of \$273,400. This waiver was approved by the AA/AFR on July 16, 1985 (State Cable 216886).

G. Project Paper Team Members

- Stanley Handleman, Human Resources Development Officer
- Murray Simon, Personal Services Contractor
- Michael Rugh, Program Officer
- Cynthia Kemner, Financial Analyst
- Douglas Kline, Project Development Officer

## CHAPTER II

### BACKGROUND AND DETAILED DESCRIPTION

#### A. PROJECT BACKGROUND

##### 1. The Primary Education Problem

A variety of studies over the past decade have underlined the severity of the problems in the primary education system in Liberia: about 52 percent of school-age children attend any type of school; a minority of students have appropriate textbooks; 63 percent of the teachers are either under- or unqualified; and poorly equipped and staffed rural teacher-training institutions are able to supply only a fraction of the trained teachers needed.

At present, about two-thirds of the primary school-age group enter first grade and only one-fourth of those who enter will complete six grades. Female enrollment is less than one-half of male enrollment, with even a greater disproportion in rural areas. The present student-teacher ratio is estimated at 35:1, but extensive variation exists around this average. Class sizes twice this number are common in urban classrooms, while smaller-sized rural classes are offset by multi-class teaching responsibilities assumed by most teachers.

There is a geographic imbalance in that the rural areas have a larger percentage of untrained teachers than urban areas. Teachers in all areas have little or no supervision because supervisors lack transportation to visit schools and lack formal training in supervision.

In short, access to primary school is limited, dropout and repeater rates are high and teacher effectiveness is minimal. Recurrent costs remain relatively high and are fixed (most costs being salaries), thus making the school system highly inefficient and cost-ineffective.

##### 2. GOL Development Strategy

Since the preparation of the First National Development Plan in 1976, Liberian goals in primary education have been threefold: 1) to improve the quality of classroom instruction, 2) to expand access to primary school in a way that addresses the problems of regional and male-female inequity, and 3) to enhance the administrative and supervisory capabilities of the Ministry of Education. To achieve these ends, the MOE has attempted to develop programs with donor assistance that will produce culturally relevant learning materials, recruit and train more qualified teachers, build and furnish classrooms, and upgrade the school inspectorate and central MOE management.

A severe and continued downturn in the Liberian economy beginning in the early 1970s, coupled with recent political and social changes, has made the attainment of these goals virtually impossible over the near to medium term. Instead, education strategies have been altered, delayed and shifted to meet short-term crises. To make any progress in implementing its programs, the MOE will continue to rely almost exclusively on foreign donor assistance. Currently, the USAID-supported Improved Efficiency of Learning Project and the Fourth World Bank Project are the major GOL/MOE development efforts directed toward the improvement of primary education. Although the two projects were initiated from different methodological assumptions, discussions within the MOE are being held to develop a coordinated, consistent system of primary education. It is anticipated that the World Bank V project will focus on budget support and the construction of facilities. Additional primary textbooks will not be purchased. Instead, textbooks under World Bank IV will be used in schools until IEL is phased in. By the time IEL has expanded nationwide, textbooks purchased under World Bank IV will have passed their useful life.

In 1982, an Education Sector Assessment was conducted jointly by the GOL and USAID. Recognizing the severity of the GOL's financial crisis, it assigned highest priority to improving the internal efficiency of education and training programs at all levels, but especially in the primary grades with a view towards reducing or minimizing recurrent costs. The assessment stressed making better use of existing resources and singled out USAID's Improved Efficiency of Learning Project as having particular relevance for improving instructional materials within current resource levels. The assessment recommended a phased implementation and expansion of the IEL system and specifically stated that a nation-wide IEL program would result "in the reduction of recurrent costs (as compared to the IEL I program) as the fixed costs of materials, modifications, administration, and materials production can be spread over a large number of schools and students." The assessment goes on to state that "The Ministry of Education may be able to continue the expanded implementation at a lower cost than required for the traditional system."

### 3. USAID Strategy

The USAID strategy outlined in the FY 1985 CDSS and reaffirmed in the more recent FY 1986 CDSS update, is a two-tiered approach. The first is to help stabilize Liberia's deteriorating economic, fiscal and balance of payments position which has reached crisis proportions in the 1980's. This economic and fiscal situation is considered the overriding constraint to Liberia's development. Until economic stability can be reestablished, the prospects for meeting the broader goals of socio-economic development are dim. The principal tools of this short-term strategy are LSF program assistance, PL 480 rice imports and technical assistance in financial management and revenue collections.

The second tier of the USAID strategy is to maintain the country's essential infrastructure and develop its resources in anticipation of a more favorable economic and fiscal context in which development can proceed. In this context, USAID has identified three major constraints: Liberia's lack of adequate human resources, the weakness of its institutions; and the lack of access that the mass of rural people have to services, communication and income earning opportunities. This longer term strategy is the principal form of USAID's development assistance program which focuses on institution building and technology transfer in three sectors: agriculture, education and health.

Within the development assistance portfolio, education is the second priority sector, after agriculture. The CDSS points out that, in the education sector, USAID assistance should be modest relative to total needs and should concentrate on medium- to long-range returns; seek to improve the quality of primary education and maintain close coordination with the IBRD and other donors. The CDSS also states that IEL, along with the Rural Information Systems Project, should constitute the basis for the USAID education program.

In weighing the merits of proceeding with an IEL II project, USAID/Liberia considered the severity of the GOL's financial crisis including current financial constraints and the likelihood that fewer resources would be available for educational recurrent costs in the foreseeable future. The Mission concluded that in view of Liberia's high illiteracy rate (over 75%), sustained and continual declines in primary school enrollment (15% since 1980 or an average of 3% per year), the absence of any teaching/learning materials in many rural schools, and the importance of education as a pre-requisite to productivity, the Mission could not await the end of Liberia's financial crisis to move forward with a national primary education project. To deal with the ongoing crisis, realistically the project has been designed to keep recurrent costs to an absolute minimum. Further, if the GOL is unable to absorb recurrent costs associated with the project at the end of the project, USAID would consider assisting in financing some of the costs necessary to keep the IEL system functioning (i.e. printing of modules, and gasoline for vehicles) through the PL-480 program or some form of a limited follow-on activity.

#### 4. MOE Selection of Programmed Instruction

In 1976, recognizing the low quality of primary education and the potential for further deterioration in the system as economic conditions continued to decline, the GOL requested that AID finance an in-depth review of the Liberian education system. As a result, the Harvard Institute for International Development, the Ministry of Planning and Economic Affairs, and the Ministry of Education identified low-quality primary school instruction as a basic impediment to Liberia's economic and social development. They saw improvement in the quality of the educational system as a key element in the development process and in the correction of social inequities that have persisted throughout Liberia's history.

The Ministry of Education selected the technique of programmed instruction on an experimental basis as a possible solution because it responded to the problems of increasing educational costs, shrinking budgets, lack of instructional materials and large numbers of unqualified teachers. Members of the MOE visited the Philippines (Project Impact) and Indonesia (Project Pamong), where programmed instruction for primary schools was being adopted for the same reasons. The delegation returned to Liberia convinced that the system could be applied to Liberia.

##### 5. Programmed Instruction and the IEL System

Programmed instruction is a method of learning and teaching to make pupil learning more logical in its presentation and more task-oriented. Developed by educators and educational psychologists more than 50 years ago, the method places learning responsibilities on the pupils. The student becomes an active learner rather than the "sponge" learner of the traditional system. The teacher concentrates on the dynamics of the pupil-teacher relationship because the material is already prepared in sequence and both the teacher and pupil understand the tasks required.

The subject material, i.e., reading, language, mathematics, science and social studies, is presented in sequence in large, easy-to-read lesson units called modules. In the IEL system, there are three levels of modules for each subject:

- a. Core modules are materials which all pupils must learn;
- b. Optional modules should be learned if time permits; and
- c. Enrichment modules are additional detailed material intended for pupils who have completed core and optional modules.

Under programmed instruction, the pattern of teaching changes from the traditional approach. In the lower grades, the teacher directs the teaching of modules (Programmed Teaching) to one-half of the class at a given time while the other half is actively reviewing the previous or current lesson. Teaching is done in 20 minute units.

In the higher grades, pupils learn in peer groups of three to seven pupils with one pupil rotating as leader (Programmed Learning). The teacher serves as guide and helper, moving from group to group while following the instruction.

Modules are reusable and remain in the classroom year after year. The current estimated life of modules is three years. With timely replacements, the school is continuously equipped with instructional materials.

IEL is a complete educational system. It is not simply an instructional technique. The system includes all participants

(students, teachers, principals and education officers) who work together to create a supportive atmosphere for effective and enjoyable learning. Children learn together in small groups, and teachers share responsibilities across grade levels.

#### 6. Appropriateness of IEL

The programmed instructional system is appropriate to the problems of Liberian primary schools because it addresses basic weaknesses in a uniform way -- inadequate training of teachers and lack of resources for a massive long-term teacher training effort, lack of professional classroom supervision and an almost total lack of instructional materials (particularly in rural areas). Teachers with limited preparation are trained to use the system in three to four weeks of intensive training. Frequent visits by supervisors are required. The instructional content is based on the current curriculum and the materials are easy to reproduce. In effect, the system minimizes recurrent costs, since only the existing teachers, principals and education officers are required to implement the system and to improve the quality of primary education after they receive IEL training. Recurrent costs are limited to the relatively low cost of instruction materials and their replacement, (which are much lower than textbooks), the costs associated with delivery of these materials, short refresher training courses for teachers and transportation for regional supervisory staff.

#### 7. Improved Efficiency of Learning I

The Ministry of Education presented a formal request for USAID assistance in upgrading its primary education system, and in November 1976, an agreement for cooperative action was reached. It detailed a two-phase plan that would develop and validate a Liberian system of programmed instruction for grades 1-6 in its first phase and disseminate the system to virtually all elementary schools in the second phase.

A \$7,000,000 project, using programmed learning and titled Improved Efficiency of Learning (IEL), began with the signing of a Project Agreement in 1979. Under Phase I, 570 core instructional modules for grades 1-6 have been prepared and validated, as well as the necessary supplementary materials -- reading booklets, unit and semester tests and 120 enrichment modules. Further, the system is now being utilized and is fully operational in 70 primary schools in the counties of Montserrado, Grand Gedeh, Gbarnga, Lofa and Nimba. This year, about 450 teachers are teaching about 16,000 pupils using the IEL system.<sup>1/</sup> Phase I objectives were successfully reached under the IEL I project which terminated on March 31, 1985.

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<sup>1/</sup> This figure includes IEL I and the transition period between IEL I and IEL II.

## 8. Outcomes of Phase I

In four evaluations completed between October 1981 and April 1984,<sup>1/</sup> the project was found to be well-fitted to the current Liberian educational situation and to have a high potential for exportability to other LDCs. Each independent evaluation has recommended continued investment in the IEL method and made recommendations in the areas of cost, design effectiveness, cultural relevancy, factual accuracy and content complexity.

However, the evaluations also pointed to some areas of concern. Pupil achievement results were mixed. In some cases, traditional school pupils scored higher than IEL students. In peer group teaching, brighter students were often held back by the slower ones. In addition, it has been reported that a number of unqualified teachers do not have the verbal skills to master IEL material. The most frequent criticism has been that the system is too mechanical and makes a robot of the teacher. Furthermore, since the project headquarters was located in Gbarnga during the life of IEL I, an attitude developed among some MOE staff that IEL I was a "foreign" project and was operating outside the orbit of the MOE.

Nevertheless, a decision by the GOL and USAID to continue to expand IEL's coverage is based on the following conclusions:

a. Dr. Edward F. Kelly, of the State University of New York at Albany and external evaluator of IEL concluded in his report of April 19, 1984:

"Based on the evidence available, when the IEL system is appropriately implemented and assessed against measures that are valid, it demonstrates achievement outcomes that are superior to those achieved in traditional elementary schools in Liberia. This finding, when combined with other evidence descriptive of the IEL's increased student enrollments as well as its cost savings, clearly supports the continuation and expansion of the program in Liberia."

b. Between 1980 and 1983, with no increase of instructional staff, enrollment in IEL schools increased by 71% while enrollment in two groups of control schools actually declined by more than one percent. This dramatic increase in enrollment most likely indicates that interest levels in school attendance are higher among both pupils and parents when instructional materials are available and are being utilized for instruction.

c. IEL's capability to provide the lowest per pupil cost of any available alternative has been documented in continuing evaluation reports.

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<sup>1/</sup> See Technical Annex G-1.

Given the criticisms of IEL I, this IEL II project places increased emphasis on professional upgrading of teachers, principals and supervisors including improvement of verbal skills, mastery of principles of effective teaching and school supervision, school administration and pupil evaluation. IEL II requires a field-based technical assistance team and considerable participant and inservice-training for teachers and principals as well as district and regional education officers. The Phase II program is described in detail in the following section.

## B. PROJECT DESCRIPTION

### 1. Goal and Purpose

The project's goal is to upgrade the quality of education in public primary schools nationwide. The project's principal emphasis will be on public schools although private schools will not be excluded. As discussed in the project background, IEL I, which was completed March 31, 1985, was the first phase in a 10-12 year effort to improve the quality of primary school instruction. While IEL I focused on preparing and validating 570 low-cost core instructional modules and necessary supplemental materials for grades 1-6 and disseminating these materials in a limited geographic area, the Phase II program will disseminate these materials on a phased basis nationwide. The project will also emphasize improving the capacity of the Ministry of Education to supervise and administer the expanded IEL program by providing training and technical assistance to teachers, school principals and county, district, and regional officers.

The project's purpose is to implement an effective primary level learning system nationwide through the use of programmed instruction. It is anticipated that the technical assistance, in-country and U.S. training, and commodities financed by the project will result in a nationwide programmed instruction learning system by the end of the six and one-half year project life.

### 2. MOE Management Capacity

Although IEL I was an experimental program and was not managed from Ministry headquarters in Monrovia, the Ministry did play a major role in directing the project's implementation. IEL I was managed by a self-contained unit in Gbarnga (3 hours from Monrovia by road) staffed with Ministry of Education personnel who received policy guidance from a 13 person steering committee located in the MOE. The Gbarnga IEL unit was responsible for developing and testing IEL modules in 70 schools, disseminating these materials and supervising IEL schools.

Since IEL II will be a national program, it will be implemented from the Ministry of Education in Monrovia. IEL I personnel in Gbarnga will be reassigned to the MOE's Department of Instruction

which will be charged with the administration of IEL II. The Liberian Project Director for IEL II will be the Director of the newly established IEL division and will report to the Deputy Minister of Instruction as shown in Table II-1. Training/Supervision, Printing/Distribution and Curriculum/Evaluation Units as well as administrative staff (as shown in Table II-2) will all form part of the newly created division.

### 3. End of Project Status

By the end of the project, a nationwide IEL learning system will be in place. Specifically, the following will have been accomplished (see Log Frame, ANNEX D):

- a. A total of 2,140 teachers will use IEL programmed instruction modules and 600 principals will be capable of supervising IEL trained teachers.
- b. 75,000 pupils will learn from IEL modules.
- c. A cadre of 3 trainers of trainers will be functioning at regional centers.
- d. The IEL division will become an operationally effective unit of the MOE coordinating the IEL instruction program nationwide.
- e. An effective elementary teacher support system will become operational at school, district, county and regional levels.
- f. Radio broadcasts through the Liberian Rural Communications Network will become a component of the IEL program for inservice and instructional enrichment.
- g. The MOE will have the capability to coordinate the printing of IEL modules and other training materials and to maintain an efficient delivery system for them.

### 4. Project Phasing - Numeric and Geographic Focus

#### a. Numeric

Because of the complexity of establishing a nationwide system of instruction and the necessity for strengthening the Ministry's capability to implement the new IEL system, the project will be gradually phased. As shown in Table II-3, 192 teachers were trained in 1985 during the transition between IEL I and IEL II. Beginning in 1986 and continuing through 1991, 2,140 teachers will be trained. Training will be phased so that more teachers are being trained in the latter years of the project until 1991 when the number will be reduced, reflecting the gradual phaseout of the technical assistance team. Based on MOE 1984 data, 2,140 teachers are estimated to be all public primary school teachers who will not

Table II-1  
 Ministry of Education Table of Organization  
 with Bureau of Primary Education

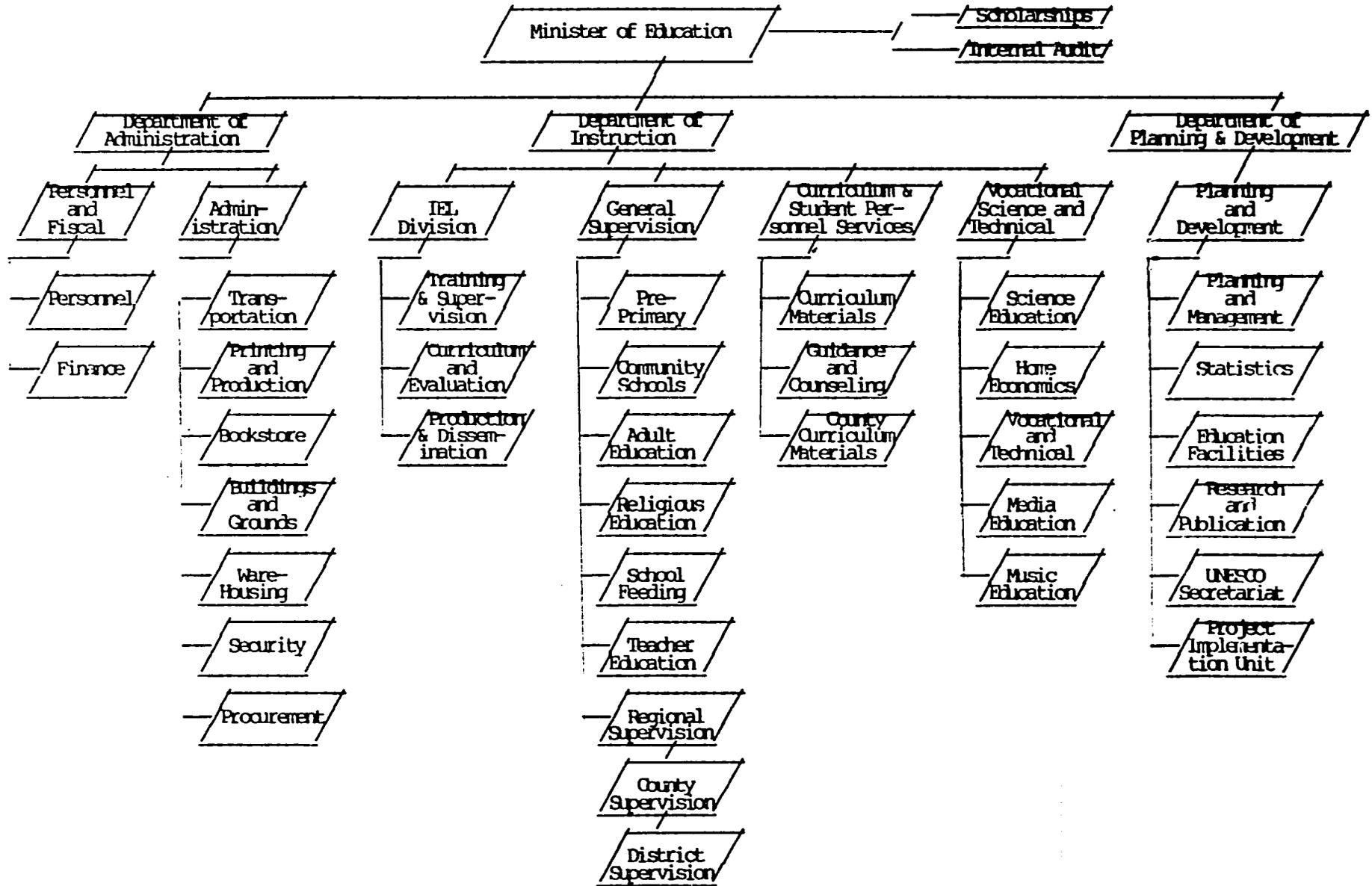


Table II-2  
Table of Organization  
IEL II

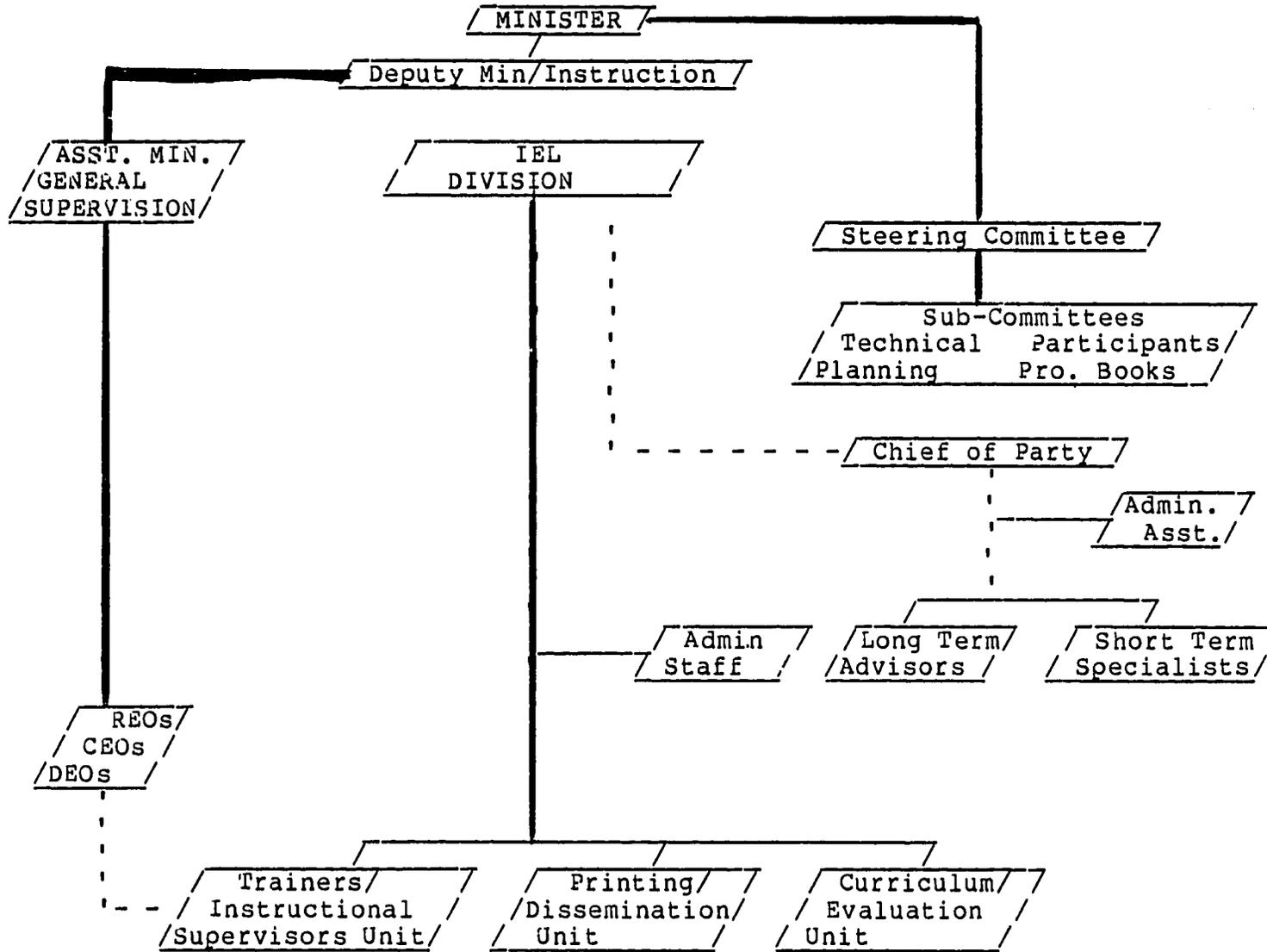


Table II-3  
Proposed Plan for  
IEL II Teacher Training  
(1985 - 1991)

Year	Trainer of Trainers	Teacher Trainers	Assistant Teacher Trainers	Teachers Trained	Number of School Units Involved	Number of Pupils to be Benefitted	Refresher Trg for Teachers and Principals
1985 (Actual)		8	16	192	25	5,911	
1986		4	8	250	84	8,750	
1987	-	-	-	350	117	12,250	249
1988	3	-	-	350	117	12,250	192
1989	-	-	-	450	150	15,750	325
1990	-	-	-	450	150	15,750	450
1991	3	-	-	290	97	10,150	450
End of Project Totals	3	12	24	2,332 (1985-91)	740 (1985-91)	80,811 (1985-91)	1,666 (1987-91)

## NOTE:

- The analysis does not include the 45 IEL schools and the 249 teachers of IEL I.

- Teacher-Pupil Ratio - 1: 35. However, according to IEL I experience an IEL teacher may be able to handle as many as 70 pupils

- For planning purposes, one school comprises three teachers

- In addition, an estimated 600 principals and 60 education officers will also receive IEL training.

- This phasing should cover all public primary teachers in Liberia.

- Refresher training given 3 and one-half years after initial IEL training received.

have had IEL training at the time the second phase was initiated.<sup>1/</sup> Similarly, the number of schools utilizing the programmed learning system will be increased from 70 in 1985 during the transition to 70 or more per year beginning in 1986. By 1991, over 90,000 pupils will be receiving IEL instruction.

#### b. Geographic

Table II-4 illustrates how all of Liberia's counties will be incorporated quickly. Year one of IEL II will include training for teachers in all counties.<sup>2/</sup> All schools will be served by one of the three regional education centers at Paynesville, Gbarnga and Zwedru.

IEL II will expand the phase-in pattern of school selection established in Phase I. The existing 70 IEL schools, as indicated in Chart IV-1, are located in seven counties (Lofa, Nimba, Bong, Grand Gedeh, Montserrado, Margibi and Bomi). The selection of schools for 1986 will include a representation from all counties and Monrovia to establish a national image for the IEL methodology. During the first year or two of the project, frequent supervision visits may be difficult in some remote areas of the country because of distances between schools. However, this problem will be partially resolved by concentrating school selection within accessible districts of the counties. As the project expands in each county, supervision will be more efficiently programmed for accessibility and frequency of visits to all schools.

### 5. Project Activities

Success in utilizing IEL materials will be contingent upon 1) developing the Ministry of Education's capacity to manage and evaluate the implementation of the project, 2) developing the capacity of regional, county and district education officers to supervise teachers, 3) developing within regional education centers the capacity to train untrained teachers to teach effectively with IEL materials, 4) developing administration and supervision skills of primary school principals in order to help implement and monitor IEL in their schools and 5) training primary school teachers to teach and administer the IEL methodology.

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<sup>1/</sup> 1984 education statistics indicate that 92,000 students are enrolled in the MOE's public primary schools grades 1-6. With the 16,000 students covered under the IEL I project and transition, total coverage of IEL I and II will exceed 90,000 or nearly 100% of GOL schools. All primary school enrollment (GOL, mission, private, concession and self-help) totals 147,000. The IEL projects would thus provide about two-thirds coverage of all primary education, public and private.

<sup>2/</sup> For planning purposes, the newer counties of Grand Cru, Margibi, Grand Cess and Bomi are subsumed in the counties listed in Table II-4.

Table II-4  
Six Year  
Proposed Teacher Phase-in of  
IEL Teachers by County and Year  
(1986 - 1991)

County*	No. of Teachers	%	1986	1987	1988	1989	1990	1991
Bomi	57	2.8	7	9	9	12	8	12
Bong	99	4.6	12	16	16	21	13	21
Grand Bassa	170	7.9	20	28	28	36	36	22
Grand Cape Mount	65	3.0	8	10	10	13	13	11
Grand Gedeh	114	5.3	13	18	18	24	24	17
Lofa	156	7.3	18	26	26	33	33	20
Maryland/Grand Kru	270	12.6	31	45	45	56	56	37
Monrovia City	429	20.0	50	70	70	90	90	59
Montserrado, Margibi (excluding Monrovia)	290	13.6	34	48	48	61	61	38
Nimba	321	15.0	37	53	53	67	67	44
Sinoe	<u>169</u>	<u>7.9</u>	<u>20</u>	<u>27</u>	<u>27</u>	<u>35</u>	<u>35</u>	<u>21</u>
Totals	2,140	100.0	250	350	350	450	450	290
Cum Totals			250	600	950	1400	1850	2140

\* The newest county of Grand Cess is included in the number of teachers for Grand Bassa.

Table II-5

IEL Technical Assistance

<u>A. TYPE OF T.A.</u>	<u>ESTIMATED DURATION</u>
Chief of Party/School Administration	<u>5.3 years    5 yrs    10 mos</u>
Administrative Assistant	<u>6.17 years    6 yrs    2 mos</u>
Training/Supervision (Paynesville)	<u>4.3 years    4 yrs    4 mos</u>
Training/Supervision (Gbarnga)	<u>3.3 years    3 yrs    4 mos</u>
Training/Supervision (Zwedru)	<u>3.3 years    3 yrs    4 mos</u>
Personal Services Contractor/Proj. Mgr.	<u>6.0 years    6 yrs    0 mos</u> 28.99            27 yrs    24 mos 29.0 years            or 29 yrs
 <u>B. Short Term</u>	
Evaluation (External)	9 person months
Curriculum	12 person months
Printing/Distribution	6 person months
Tests Measurements	12 person months
Specialized needs	<u>6 person months</u>
Total	3.75 PY
 <u>Summary</u>	
Total Long Term	29.0 PY
Total Short Term	3.75 PY
TOTAL	<u>32.75 PY</u>

## 6. Technical Assistance

Substantial technical assistance and training will be provided to strengthen IEL and the MOE Department of Instruction, as illustrated in Table II-5. Specifically, a technical assistance contractor Chief of Party (COP) will be assigned to the MOE for the entire life of the project. The COP (whose job description can be found in Annex H-2) and the Liberian Project Director will be responsible for overseeing all facets of the IEL II program ranging from the training of teachers and their supervision to the printing and distribution of materials. The COP will be assisted by three field-based advisors in training and supervision and an administrative assistant. The phasing of the long-term technical assistance and training is discussed in detail in Chapter IV of the PP.<sup>1</sup> Briefly, the local hire administrative assistant will be under contract for 6.2 years and will arrive in advance of the COP to arrange housing and logistics. The COP will remain in-country for 70 months. Two of the three training supervision specialists will depart in the fourth year of the project, thereby providing one year of overlap with the three long-term Liberian participants trained in supervision. The third Training/Supervision Specialist will serve as a rover for all three participants for one additional year and will depart in the middle of the fifth year of the project. All of these individuals (for a total of 23.0 person years) will be part of the technical assistance contract.<sup>1</sup> Additionally, the project will finance a personal services contractor for a 6.0 year period to serve as project manager of the IEL project. This individual whose job description is included in Annex H-2 of the PP will report to the Chief of USAID's Human Resources Development Office.

In addition, 45 person months of short-term assistance is included as follows: 1) 12 person months of technical assistance in curriculum design to assist in modifying existing modules by the end of IEL II; 2) 12 person months of short-term technical assistance in the area of tests and measurements to ensure the learning effectiveness of IEL modules; 3) six months of short-term assistance will be provided in the area of printing and distribution to evaluate and make recommendations on the needs of this area as the project expands nationwide; 4) six months of short-term technical assistance is planned for unspecified needs during the life of the project; and 5) nine person months of short-term technical assistance will be provided for the three external evaluations. Thirty-six of the forty-five person months of short-term TA will be provided under the Technical Assistance contract. The nine months for external evaluations will be arranged by USAID/Liberia.

## 7. Participant Training

To develop the MOE capability to manage IEL II, 17 person years of long-term participant training have been included plus 48 person

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<sup>1</sup> Details on contracting procedures are discussed in Chapter IV of the PP.

months of short-term specialized training, described as follows:

a. Three years of doctoral level training in educational administration and management for the IEL Project Director. Alternatively, the doctoral level training may be replaced by a master's program in public administration.

b. Six years of Master's degree training are scheduled for three trainees (two years each) in Training and Supervision.

c. Two years of Master's degree training in Tests and Measurements (one person).

d. Two years of Master's degree training in educational evaluation (one person).

e. Four years of graduate training to the Master's level are scheduled for two candidates for two years each in Curriculum Development and Design.

f. Short-term training will be used during the project for upgrading selected district education officers; a total of 48 person months is envisaged.

With the exception of a candidate for Master's degree training in educational evaluation, candidates have been identified for all long-term training slots. Examples of identified candidates are as follows:

<u>Training Specialty</u>	<u>Number of Trainee Posts</u>	<u>Candidates Identified</u>
1. Administration/Management	1	Present Director - IEL.
2. Training and Supervision	3	Eight candidates for three posts.
3. Tests and Measurements	1	Five candidates who were trained in Criterion Reference Tests.
4. Curriculum Development	2	Two candidates in Curriculum Design Unit.
5. Educational Evaluation	1	To be identified.

All long-term candidates will be assigned to the IEL Division after completing study abroad. The three training and supervision trainees will be assigned to regional education centers where they will replace the training/supervision technical advisors after a year of overlap. One technical adviser will serve an additional year to supervise the activities of the three returned participant trainees. District Education Officers will return to their respective posts upon completion of their short-term training.

The three training and supervision candidates will be studying simultaneously and will be the first candidates to leave for study after the 1986 training session and part of the immediate supervision follow-up of classroom teachers. During 1985, the IEL Director will identify at least three replacements for these participants.

As shown in Table II-6, all long-term participant training is scheduled to be completed by December 1988 except for the last year of study of the trainee in administration/management. This will permit all participant trainees, except the management/administrative trainee, to work within the IEL II project for at least three years upon return. All trainees will return to specific posts after study and will be selected by a joint MOE-USAID Contractor Committee. The first four trainees are scheduled for a June/July '86 departure, allowing the technical assistance team an opportunity to become acquainted with the candidates.

#### 8. Teaching Materials Dissemination

The IEL teaching materials, including teaching modules, teaching instructions and boxes to store IEL materials, will be disseminated through the IEL Division of the Ministry of Education. The Administrative Assistant to the Chief of Party, like the COP, will play a major role in coordinating this effort. It is anticipated that this individual will have experience in supply management and logistics and will work closely with the COP and IEL Director to ensure that the printing of materials is competitively bid; that material printed is correctly phased with the nationwide expansion program; that materials are properly stored; and finally, that they are delivered to regional, county and district education officers on a timely basis so that these officers, in turn, can deliver them to IEL schools.

## 9. Project Commodities

The following are the commodities planned for the IEL II project (see Annex I-3 for a detailed listing):

- a. 40 four-wheel drive vehicles and parts.
- b. 144 Motorcycles and parts.<sup>1/</sup>
- c. '16,000 reams of paper for printing of instructional materials.
- d. 5 radio communications units - Regional intercommunication network.
- e. 1,100 school radios.<sup>2/</sup>

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<sup>1/</sup> To help ensure adequate maintenance of the motorcycles by Ministry of Education employees, the project agreement will contain a condition precedent whereby the ministry agrees to present a plan to USAID requiring that: (1) employees pay for at least half the cost of motorcycles through periodic salary deductions and (2) monies collected be deposited in a revolving fund. The same condition precedent was included in the Liberia Primary Health Care Project. However, as of the drafting of this Project Paper, it was too early to evaluate the merits of this approach. It may be that with experience this approach will have to be modified during project implementation.

<sup>2/</sup> Initially, only 100 radios will be purchased to serve IEL schools which come on board in FY 1985/86. A condition precedent to disbursement for the purchase of radios in year three will require an accounting of radios purchased in years one and two. If a large number (more than 25%) of the radios cannot be accounted for, no additional radios will be purchased with project funds.

Table II-6  
 IEL II  
 Six Year  
 Participant Training  
 Schedule

Specialty	P e r s o n   M o n t h s						Total
	1986	1987	1988	1989	1990	1991	
Administration/Management		12	12	12			36
Training/Supervision #1	6	12	6				24
Training/Supervision #2	6	12	6				24
Training/Supervision #3	6	12	6				24
Tests and Measurement	6	12	12				24
Curriculum Dev/Design #1		12	12				24
Curriculum Dev/Design #2		12	12				24
Institutional Evaluation		12	12				24
Specialized Training	8	8	8	8	8	8	48
TOTAL	32	104	80	20	8	8	252

Summary:

Long Term = 204 PM = 17 PY

Short Term = 48 PM = 4 PY

Total = 252 PM = 21 PY

- f. 5,350 professional books.
- g. 133,283 gallons of gasoline (USAID share according to formula, Table II-7).
- h. 3 units-video cassette players and television receivers and 50 pre-recorded training cassettes.
- i. computer scanner and three terminals.

#### 10. Distribution of Commodities

The distribution of vehicles is planned as follows:

	<u>Four-wheel Drive</u> <sup>1</sup>	<u>Motorcycles</u> <sup>2</sup>
Vehicle	1-COP*	1-46 DEOs *
" "	2-3 Headquarters *	47-92 PVCs
" "	4-6 Field based TAs*	93-103-CEOs *
" "	7-9 REOs *	
" "	10-20 Instructional Supervisors *	

NOTE: \* Indicates vehicles to be replaced after the third year of use.

Paper for printing will be ordered annually on a need basis through GSA or a PSA to minimize storage problems. The regional intercommunication network is intended to maintain immediate radio communication among the MOE headquarters, USAID/HRD and the three IEL regional offices. The school radios are planned for distribution to schools when the LRCN facilities are functioning (late 1986) for radio inservice training and instructional enrichment but will be initially distributed to only 100 IEL schools. A packet of 12 professional books will be awarded to each school completing IEL training to be used toward a basic professional library in each primary school. Books will be used as source materials to supplement IEL modules.

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<sup>1</sup> Initially 20 vehicles will be procured. Twenty additional vehicles will be procured at the end of the third year to replace those purchased in year 1.

<sup>2</sup> Initially 103 motorcycles will be purchased. Forty-one additional motorcycles will be purchased as replacements at the end of year 3.

The project proposes GOL/USAID cost sharing formula for recurrent costs which will continue after the project. The formula will gradually phase in GOL contributions for gasoline for vehicles (Table II-7) for instructional materials, (Table II-8) and in-service refresher courses for principals, teachers and regional supervision personnel. In all three areas, the formula is designed so that the GOL will begin financing 25% of these costs in the fourth year, 50% in the fifth year and 75% in the sixth year. In proposing this formula, USAID and the GOL are acutely aware of the severity of the GOL's financial crisis and the likelihood that resources available for education will at best remain at current levels. In proposing such a formula it is hoped that, as a demonstration of commitment to the project, the Ministry will scrutinize its budget and associated expenditures with a view towards reducing recurrent expenditures in some areas to finance expenditures required of the project. This will also ensure that the GOL is better prepared to absorb these costs by the end of the project. In the event that, due to the deepening financial crisis, the GOL is unable to finance these costs, the project has been designed so that the contingency can pick up some of these costs during the project life. Further, if it appears that the GOL will not be able to absorb costs associated with sustaining the IEL project after the project is complete, USAID/Liberia will consider mechanisms to continue support for recurrent costs. These mechanisms might include a small follow-on project or making available additional PL-480 resources so that PL-480 counterpart can be used.

Three video cassette players and television receivers are intended for inservice training equipment. A total of 50 training cassettes (quality of Association of Supervision and Curriculum Development training cassettes) are included.

The computer scanner and three terminals are intended to help diagnose pupils' progress in all primary grades. Results of Criterion Referenced Texts will be scored on the MOE computer equipment and analyzed to help more student "throughput" from grades 1 to 6. The MOE will also use the equipment for a 6th grade leavers examination scoring. As a condition for procuring the computer equipment, the project agreement contains a condition precedent requiring that the GOL submit for USAID approval a plan outlining how the equipment will be utilized.

Table II-7

MOE/USAID Formula on Gasoline Expenditures  
During IEL II

## Gasoline Consumption in Gallons

Year	Number of 4-wheel Drives (50 gals/mo)	Months of Use During Year	Vehicle Mos	Number of Motorcycles (25 gals/mo)		Vehicle Mos
				PCVs (9 mos. use annually)	MOE	
1986	6	12	72	18	29	47
	10	10	100			
1987	6	12	72	26	37	63
	14	10	140			
1988	6	12	72	30	41	71
	14	10	140			
1989	6	12	72	39	50	89
	14	10	140			
1990	6	12	72	46	57	103
	14	10	140			
1991	6	12	72	43	57	100
	14	10	140			473
			1,232			x 9
			x 50			4,257
			61,600			x 25
						100,425

## Summary Gas Consumption

YEAR	PERCENTAGE FORMULA			GALLONS		
	USAID	MOE	TOTAL	USAID (Inc. PCVs)	MOE	TOTAL
1986	100%	-	100%	19,175	-	19,175
1987	100%	-	100%	24,775	-	24,775
1988	100%	-	100%	26,575	-	26,575
1989	75%	25%	100%	25,163	5,462	30,625
1990	50%	50%	100%	22,063	11,712	33,775
1991	25%	75%	100%	15,532	17,568	33,100
				133,283	34,742	168,025
			USAID Share @ \$3	\$399,849		
			MOE Share @ \$3	\$104,226		
			168,025 gallons @ \$3 =	\$524,075		

Table II-8

MOE/USAID Formula  
on Training Material Costs  
During IEL II

<u>A. MOE/USAID Formula</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	
USAID Contribution	100%	100%	100%	75%	50%	25%	
GOL Contribution	0%	0%	0%	25%	50%	75%	
TOTAL	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	
 <u>B. Instructional Materials Required</u>							
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>Total</u>
Number of new boxes of modules for distribution*	250	350	350	450	450	290	2,140
Number of Replacement Units*	-	249	192	250	599	542	1,832
TOTAL	250	599	542	700	1,049	832	3,972
 <u>C. Cost Analysis</u> (Calculated at \$341 per annual unit plus costs of semester boxes, chalkboards and lapboards or \$461 per annual unit)							
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>Total</u>
Total Cost	\$115,250	\$258,707	\$236,422	\$305,200	\$441,659	\$345,612	\$1,702,850
USAID Contribution	115,250	258,707	236,422	228,900	220,830	86,403	1,146,512
GOL Contribution	-	-	-	76,300	220,829	259,209	556,338

\* Calculations include first and second semester units, semester boxes, chalkboards and lapboards (annual cost).

## 11. Supervision and Training

Inadequate teacher supervision has been a serious problem in Liberia's school system. Introduction of the IEL system, which requires more effective supervision than the present system, necessitates strengthening the supervisory capacity of regional, county and district education officers.

The project will provide assistance to strengthen supervisory capacity. First, the project will provide three training/supervision specialists to be assigned simultaneously to regional education centers in Gbarnga, Zwedru and Paynesville. Although these training/supervision specialists will focus on training teachers to use the IEL methodology, their main effort will be devoted to the formal and informal supervisory training of regional, county and district education officers. The content of training will include IEL techniques for teacher and classroom monitoring and supervision, materials distribution, familiarization with IEL classroom materials and procedures, data collection and test administration procedures. TA personnel will teach in the formal training program to be held annually. REO's, CEO's and DEOs will be enrolled in the IEL supervisory training program during school vacation periods. When not engaged in formal training, the three training supervision specialists will work closely with the three regional education officers who will serve as their principal counterparts to the U. S. Advisory team. The REO's and the long-term technicians will work closely with the CEO's and the DEO's in all aspects of IEL supervision as described in Chapter IV Implementation Plan and ANNEX G-1 Technical Analysis.

## 12. Peace Corps

The project will employ 46 PCVs (beginning with 18 in 1986 for two years and increasing each year to 46) to work directly as teacher trainers with CEO's and DEO's. As shown in Table II-9, the number of PCVs corresponds to the expansion plan and the number of classroom visits required. It is anticipated that the PCVs will attend the formal training course for teachers and supervisors prior to working with DEOs and CEOs and will be provided supplementary training by long-term technical assistance personnel. Accompanied by DEOs, PCVs will regularly visit IEL schools to 1) ensure that teaching modules are being used properly; 2) through the principal, assist teachers with any curriculum or other problems associated with the IEL materials; 3) ensure that schools have sufficient teaching materials; and 4) provide supplementary instruction of IEL material as needed. The project has been discussed in considerable detail with Peace Corps Senior Staff and they are fully committed to providing 46 PCV's during the life of project.

### 13. Inservice Teacher Training Administration

IEL II will train 2,140 teachers over the project life. At teacher training centers with the assistance of the three long-term advisors, three trainers of trainers and 12 teacher trainers. In addition to the 2,140 teachers receiving initial IEL training, 1,666 teachers will receive refresher training in IEL instruction. Refresher training will be offered three and one-half years after initial training. Eight of the twelve teacher trainers have already been trained under the IEL I project. (See Table II-3)

Table II-9

IEL II Classroom Supervision Schedule  
and Number of Peace Corps Volunteers (PCVs)  
1986-1991

Activity	1986		1987		1988		1989		1990		1991	
	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Total classroom visits for semester	5,764	2,764	8,364	4,164	9,764	5,564	12,764	7,364	14,564	9,164	13,804	10,324
Number of monthly visits required	1,441	691	2,091	1,041	2,441	1,391	3,191	1,841	3,641	2,291	3,451	2,581
Number of PCVs required (80 visits/month)	18		26		30		39		46		43	

## Notes:

1. Total classroom visits are calculated on the basis of one visit per month per classroom for all IEL classes. However, all newly trained teachers will be visited once weekly for the first semester. After the first semester these teachers will be visited once each month.

2. It is expected that PCVs will be able to visit 20 classes weekly for supervision.

3. Semesters are calculated as a four month period.

Three of the eight trainers will be selected for participant training to return as trainers of trainers. Seven trainers will be selected from among the best performers trained locally during the first and second year of the project. They will receive training from the trainer of trainers with the assistance of the long-term supervisory training specialists.

To train 2,140 teachers and provide refresher training for 1,666 teachers and principals over the project's life, it will be necessary to provide teaching materials and equipment for the training centers. While training materials have already been developed under the Phase I project, Phase II will finance sufficient training packets for teachers, principals and the EOs. It will be the responsibility of the contractor to contract or arrange for the printing of these materials. In addition to training packets, the project will finance supplies (e.g., pads, markers, folders, etc.) and three video cassette players and training cassettes for use at each of the three training centers. As mentioned earlier, USAID/Liberia will initiate procurement of commodities in 1985 until the contractor's COP arrives at which time the contractor will assume in-country procurement responsibilities for the remainder of the contract.

#### 14. Testing and Evaluation

As discussed in the technical analysis, ongoing evaluations of the IEL program are critical to maintaining the program's educational and cost effectiveness. IEL students will be tested on a yearly basis to determine the progress of the pupils. The content of IEL has been revised three times to give it credibility and validity for the first years of the project.

To ensure an impartial evaluation of the project, the evaluation contract will be separate and apart from the long-term contract for technical assistance. It is anticipated that about 9 person months (at three different periods) of short-term technical assistance will be required to carry out the evaluation function. In addition, USAID/Liberia will conduct semi-annual in-house reviews of the project.

#### 15. Use of Radio

The IEL project will use the radio facilities of the Liberian Rural Communications Network (LRCN) project when the facilities become operational in late 1986. Since IEL and LRCN are both funded by USAID, this activity integrates both projects for public benefit. The IEL project will use the LRCN for inservice education and instructional enrichment. The project will purchase approximately 634 hours of air time from this medium at a cost of \$44,400. Two IEL technicians will attend the LRCN special nine-month training course beginning in July 1985. Eleven hundred radios will be purchased by IEL and disseminated to the public primary schools. Discussions with LRCN have already taken place for this activity.

## CHAPTER III

COST ESTIMATE AND FINANCIAL PLANA. Cost Estimate

The estimated AID contribution to the IEL II project is \$14.55 million. This includes technical assistance of \$5.0 million, participant and inservice training of \$3.57 million and commodities of \$2.9 million, with the balance provided for local support costs, contingency and inflation (Table III-1). A financial plan summary is shown in Table III-2.

Technical assistance costs were based on those of other USAID funded projects. ST/IT estimates were used to calculate participant training costs for U.S. training, while in country training costs were derived from the training exercises of IEL I. Commodity cost estimates were based on vendor price lists and informal quotations. Local support costs and contingency estimates are based on prior USAID experience. Inflation was calculated at a rate of 5% per annum beginning in year two of the project. Contingency was calculated at 10% per year beginning in year one of the project.

The GOL contribution is estimated at \$6.02 million, or 25 percent of the total project cost including personnel, accommodations for incountry training participants, office space for the technical assistance team and gasoline and maintenance for the project vehicles (Table III-3). In an effort to minimize the additional burden on an already constrained GOL budget, the project was designed without generating any new GOL positions. The GOL will transfer 2,140 teachers, 600 principals and 60 education officer positions from the traditional classroom structure to IEL II over the six years of the project. Training costs are calculated in Table III-4.

B. Financial Plan

The means of financing for the various implementation methods used in this project are illustrated in Tables III-5 and III-6. The obligations schedule is contained in Table III-7.

Table III-1

Financial Plan  
AID Projected Accrued Expenditures  
by Fiscal Year  
(\$'000)

	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92	TOTAL
<b>A. <u>Technical Assistance</u></b>								
Long-Term (PYs)	(2.1)	(4.0)	(4.0)	( 3.0)	( 2.0)	( 1.5)	(0.25)	(16.8)
Annual Cost \$210,000/yr	430.5	840.0	840.0	630.0	420.0	315.0	52.5	3,528.0
PSC Project Manager	150.0	150.0	150.0	150.0	150.0	150.0	37.5	937.5
\$150,000/yr Short-term (1 month TDYs)Cost \$12,000	(7)	(6)	(6)	(6)	(6)	(5)	(0)	(36)
Administrative Assistant	84.0	72.0	72.0	72.0	72.0	60.0	0.0	432.0
SUBTOTAL	20.0	20.0	20.0	20.0	20.0	20.0	5.0	125.0
	<u>684.5</u>	<u>1,082.0</u>	<u>1,082.0</u>	<u>872.0</u>	<u>662.0</u>	<u>545.0</u>	<u>95.0</u>	<u>5,022.5</u>
<b>B. <u>Participant Training</u></b>								
Long-term (PYs) (1.0)	(7.0)	( 7.0)	( 1.8)	( 0.2)	( 0.0)	( 0.0)	(17.0)	
Annual Cost \$21,000/yr	21.0	147.0	147.0	37.8	4.2	0.0	0.0	357.0
Short-term training (PMs)	(4)	(4)	(4)	(4)	(4)	(4)	0	(24)
Annual cost at \$3,700/month	29.6	29.6	29.6	29.6	29.6	29.6	0.0	177.6
SUBTOTAL	50.6	176.6	176.6	67.4	33.8	29.6	0.0	534.6
	<u>50.6</u>	<u>176.6</u>	<u>176.6</u>	<u>67.4</u>	<u>33.8</u>	<u>29.6</u>	<u>0.0</u>	<u>534.6</u>
<b>C. <u>In-country Training</u></b>								
Teachers	(250)	(350)	(350)	(450)	(450)	(290)	0	(2,140)
at \$15/day x 56 days ea.	210.0	294.0	294.0	378.0	378.0	243.6	0.0	1,797.6
Principals/REOs/CEOs/DEOs	(135)	(160)	(160)	(185)	(185)	(135)	0	(960)
at \$15/day x 56 days ea.	113.4	134.4	134.4	155.4	155.4	113.4	0	806.4
Other personnel	(25)	(25)	(25)	(25)	(25)	(25)	0	(150)
at \$15/day x 56 days ea.	21.0	21.0	21.0	21.0	21.0	21.0	0.0	126.0
Refresher Courses	0	(249)	(192)	(244)	(225)	(112)	0	(1,022)
at \$15/day x 7 days ea.	0.0	26.1	20.2	25.6	23.6	11.8	0.0	107.3
Orientation Workshops	(75)	(75)	(75)	(75)	(75)	0	(450)	
at \$15/day x 2 days ea.	2.3	2.3	2.3	2.3	2.3	2.3	0.0	13.5
Supplies	31.0	31.0	31.0	31.0	31.0	31.0	0.0	186.0
SUBTOTAL	377.7	508.8	502.8	613.3	611.3	423.0	0.0	3,036.8
	<u>377.7</u>	<u>508.8</u>	<u>502.8</u>	<u>613.3</u>	<u>611.3</u>	<u>423.0</u>	<u>0.0</u>	<u>3,036.8</u>

	FY 86	FY 87	FY 88	Y 89	FY 90	FY 91	FY 92	TOTAL
<u>D. Commodities</u>								
Vehicles w/spare parts	(10)	(10)	0	0	(10)	(10)	0	(40)
at \$15,800 each	158.0	158.0	0.0	0.0	158.0	158.0	0.0	632.0
Trail bikes w/spare parts	(47)	(16)	(8)	(47)	(22)	(4)	0	(144)
at \$1,900 each	89.3	30.4	15.2	89.3	41.8	7.6	0.0	273.6
Gasoline	57.5	74.3	79.7	75.5	66.2	46.6	0.0	399.8
Vehicle Maintenance	27.3	34.5	37.2	32.0	23.3	11.6	0.0	165.8
Communication Radios	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Audio-Visual Equipment	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
and Supplies	8.3	0.0	0.0	0.0	0.0	0.0	0.0	8.3
Classroom Radios	(100)	(500)	(500)	0	0	0	0	(1,100)
at \$50 each	5.0	25.0	25.0	0.0	0.0	0.0	0.0	55.0
Professional Books	10.7	10.7	10.8	10.8	0.0	0.0	0.0	43.0
Office Furniture & Equipment	020.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
Computer Equipment (Scanner/3CRTS)	110.0							110.0
SUBTOTAL	499.1	332.9	167.9	207.6	289.3	223.8	0.0	1,720.5
<u>E. Material Prod./Distribution</u>								
IEL Materials:								
Mat/modules at \$341/unit	85.3	119.4	119.4	115.1	76.7	24.7	0.0	540.5
Replacement Units	0.0	97.4	75.1	73.3	117.1	53.0	0.0	415.8
Semester Boxes	12.5	17.5	17.5	16.9	11.3	3.6	0.0	79.3
Chalkboards	2.5	3.5	3.5	3.4	2.3	0.7	0.0	15.9
Lapboards	15.0	21.0	21.0	20.3	13.5	4.4	0.0	95.1
Additional Paper, binding tapes and binding equip- ment	20.0	10.0						30.0
SUBTOTAL	135.3	268.7	236.4	228.9	220.8	86.4		1,176.5
F. <u>LRCN Air Time</u>	5.0	7.5	7.5	7.5	7.5	7.5	1.9	44.4
G. <u>External Evaluation (9 PMS)</u>		37.5	37.5		37.5	0.0	0.0	112.5
Compliance Audit				100.0				100.0
H. <u>TOTAL</u>	1,752.1	2,414.0	2,210.7	2,096.6	1,862.2	1,315.3	96.9	11,747.8
Contingency (10%)	175.2	241.4	221.1	209.7	186.2	131.5	9.7	1,174.8
SUBTOTAL	1,927.3	2,655.4	2,431.8	2,306.3	2,048.4	1,446.9	106.6	12,922.6
<u>I August 1985</u>								
Inflation at 5%	0.0	132.8	249.3	363.5	441.4	399.7	36.2	1,623.0
GRAND TOTAL	1,927.3	2,788.2	2,681.1	2,669.8	2,489.8	1,846.6	142.8	14,545.6

Table III-2

Financial Plan Summary  
(\$'000)

	PC	AID	GOL	TOTAL	%
Technical Assistance	3,030.0	5,022.5	--	8,052.5	34.4%
Personnel	--	--	3,056.9	3,056.9	12.7%
Training	--	3,571.4	1,007.2	4,578.6	19.0
Commodities*	--	1,720.5	174.0	1,894.5	7.9
Educational Materials	--	1,176.4	413.9	1,590.3	6.6
Other Costs		256.9	108.0	364.9	1.5
Inflation & Contingency	<u>484.7</u>	<u>2,797.8</u>	<u>1,262.7</u>	<u>4,545.2</u>	<u>18.9</u>
TOTAL	3,514.7	14,545.5	6,022.7	24,082.9	100.0%
Share by Contributor	14.6%	60.4%	25.0%	100%	

Table III-3

GOL Contributions by Fiscal Year  
(\$'000)

	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
<b>A. Personnel*</b>							
<u>MOE Staff Time (25%)</u>							
7 persons at \$8,400/yr	14.7	14.7	14.7	14.7	14.7	14.7	88.2
<u>IEL Division of MOE</u>							
18 Professionals @ \$5,500/yr	99.00	99.0	99.0	99.0	99.0	99.0	594.0
12 Office Staff @ \$1,800/yr	21.6	21.6	21.6	21.6	21.6	21.6	129.6
26 Drivers @ 1,440/yr	37.4	37.4	37.4	37.4	37.4	37.4	224.6
Salaries of MOE Personnel	146.3	204.8	204.8	263.3	263.3	146.3	1,228.5
Principals @ \$825/2 mo.	111.4	132.0	132.0	152.6	152.6	111.4	792.0
<b>SUBTOTAL</b>	<u>430.4</u>	<u>509.5</u>	<u>509.5</u>	<u>588.6</u>	<u>588.6</u>	<u>430.4</u>	<u>3,056.9</u>
<b>B. Training</b>							
<u>Inservice Trg Accommodations:</u>							
Number of Staff Participants	(385)	(510)	(510)	(635)	(635)	(425)	(3,100)
at \$5/day x 56 days each	107.8	142.8	142.8	177.8	177.8	119.0	868.0
Other Personnel	(25)	(25)	(25)	(25)	(25)	(25)	(150)
at \$5/day x 56 days each	7.0	7.0	7.0	7.0	7.0	7.0	42.0
Refresher Courses**	0	0	0	(81)	(225)	(337)	(643)
at \$15/day x 7 days	0.0	0.0	0.0	8.5	23.6	35.4	67.5
Information Workshops	(75)	(75)	(75)	(75)	(75)	(75)	(450)
at \$5/day x 2 days each	0.8	0.8	0.8	0.8	0.8	0.8	4.5
<u>Overseas Training Travel:</u>							
Long-term Training	(4)	(4)	(7)	(1)	0	0	(16)
Airfare @ \$900 one way	3.6	3.6	6.3	0.9	0.0	0.0	14.4
Short-term Training	(1)	(1)	(1)	(1)	(1)	(1)	(5)
Airfare @ \$1,800 round trip	1.8	1.8	1.8	1.8	1.8	1.8	10.8
<b>SUBTOTAL</b>	<u>121.0</u>	<u>156.0</u>	<u>158.7</u>	<u>196.8</u>	<u>211.0</u>	<u>163.9</u>	<u>1,007.2</u>

	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
<b>C. <u>Material</u></b>							
<b><u>Production/Distribution</u></b>							
<b>IEL Materials:**</b>							
Mat/modules at \$341/unit	0.0	0.0	0.0	38.4	59.7	89.5	187.6
Replacement Units	0.0	0.0	0.0	21.3	59.7	89.5	170.5
Semester Boxes	0.0	0.0	0.0	5.6	11.3	10.9	27.8
Chalkboards	0.0	0.0	0.0	1.1	2.3	2.2	5.6
Lapboards	0.0	0.0	0.0	3.8	7.5	11.3	22.5
<b>SUBTOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>70.2</b>	<b>140.4</b>	<b>203.3</b>	<b>413.9</b>
<b>D. <u>Gasoline**</u></b>	0.0	0.0	0.0	16.4	35.1	52.7	104.2
<b>Vehicle Maintenance**</b>	0.0	0.0	0.0	11.7	23.3	34.9	69.8
<b>SUBTOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>28.1</b>	<b>58.4</b>	<b>87.6</b>	<b>174.0</b>
<b>E. <u>Office Space for TA Team</u></b>							
<b>5 Offices at \$3,600/yr</b>	18.0	18.0	18.0	18.0	18.0	18.0	108.0
<b>SUBTOTAL</b>	<b>18.0</b>	<b>18.0</b>	<b>18.0</b>	<b>18.0</b>	<b>18.0</b>	<b>18.0</b>	<b>108.0</b>
<b>TOTAL</b>	<b>569.3</b>	<b>683.4</b>	<b>686.1</b>	<b>901.6</b>	<b>1,016.3</b>	<b>903.2</b>	<b>4,760.0</b>
<b>Contingency at 10%</b>	<b>56.9</b>	<b>68.3</b>	<b>68.6</b>	<b>90.2</b>	<b>101.6</b>	<b>90.3</b>	<b>476.0</b>
<b>SUBTOTAL</b>	<b>262.2</b>	<b>751.8</b>	<b>754.8</b>	<b>991.8</b>	<b>1,117.9</b>	<b>993.5</b>	<b>5,236.0</b>
<b>Inflation at 5%</b>	<b>2.0</b>	<b>37.6</b>	<b>77.4</b>	<b>156.3</b>	<b>240.9</b>	<b>274.5</b>	<b>786.7</b>
<b>GRAND TOTAL</b>	<b>626.2</b>	<b>789.4</b>	<b>832.1</b>	<b>1,148.1</b>	<b>1,358.8</b>	<b>1,268.0</b>	<b>6,022.7</b>

\* No new GOL positions generated by IEL II

\*\* Phasing of GOL contribution - FY 89/90/91 as follows: 25%/50%/75%

Table III-4

USAID/GOL Training Categories  
Calculation of Costs  
FY 1986-1991

TRAINING CATEGORY	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
<u>AID</u>							
Teachers @ \$15 x 56 days	(250)	(350)	(350)	(450)	(450)	(290)	(2,140)
@ \$15 x 56 days	210.0	294.0	294.0	378.0	378.0	243.6	1,797.6
Principals/REO/DEO/CEO	(135)	(160)	(160)	(185)	(185)	(135)	(960)
@ \$15 x 56 days	113.4	134.4	134.4	155.4	155.4	113.4	806.4
Other	(25)	(25)	(25)	(25)	(25)	(25)	(150)
@ \$15 x 56 days	21.0	21.0	21.0	21.0	21.0	21.0	126.0
Refresher	-	(249)	(192)	(325)	(450)	(450)	(1,666)
@ \$15 x 7 days	-	26.1	20.2	25.6	23.6	11.8	107.3
Orientation	(75)	(75)	(75)	(75)	(75)	(75)	(450)
@ \$15 x 2 days	2.3	2.3	2.3	2.3	2.3	2.3	13.5
Supplies	31.0	31.0	31.0	31.0	31.0	31.0	186.0
<b>AID TOTALS</b>	<b>377.7</b>	<b>508.8</b>	<b>502.8</b>	<b>613.2</b>	<b>611.3</b>	<b>423.1</b>	<b>3,036.8</b>
<u>GOL - Maintenance</u>							
Teachers	(250)	(350)	(350)	(450)	(450)	(290)	(2,140)
@ \$5 x 56 days	70.0	98.0	98.0	126.0	126.0	81.2	599.2
Principals/REO/DEO/CEO	(135)	(160)	(160)	(185)	(185)	(135)	(960)
@ \$5 x 56 days	37.8	44.8	44.8	51.8	51.8	37.8	268.8
Other	(25)	(25)	(25)	(25)	(25)	(25)	(150)
@ \$5 x 56 days	7.0	7.0	7.0	7.0	7.0	7.0	42.0
Refresher	-	(249)	(192)	(325)	(450)	(450)	(1,666)
@ \$5 x 7 days	-	8.7	6.7	11.4	15.8	15.8	58.3
Orientation	(75)	(75)	(75)	(75)	(75)	(75)	(450)
@ \$5 x 2 days	0.8	0.8	0.8	0.8	0.8	0.8	4.5

TRAINING CATEGORY	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
<u>GOL - Inservice Training</u>							
Refresher	-	-	-	(325)	(450)	(450)	(1,225)
@ \$15 x 7 days	-	-	-	8.5	23.6	35.4	67.6
Inservice Training TOTAL	115.6	159.3	157.3	205.5	224.9	177.9	1,040.4
<u>GOL - Participant Training</u>							
Long-Term Training	(4)	(4)	(7)	(1)			(16)
Airfare @ \$900 one way	3.6	3.6	6.3	0.9	0.0	0.0	14.4
Short-Term Training	(1)	(1)	(1)	(1)	(1)	(1)	(6)
Airfare @ \$1,800 round trip	1.8	1.8	1.8	1.8	1.8	1.8	10.8
Participant Training TOTAL	5.4	5.4	8.1	2.7	1.8	1.8	25.2
SUBTOTAL	121.0	164.7	165.4	208.2	226.7	179.7	1,065.6

Table III-5  
Method of Implementation  
and Financing

METHOD OF IMPLEMENTATION	METHOD OF FINANCING	COST (\$000)
Technical Assistance: RFTP	Direct Payment	4085
Technical Assistance (Project Manager): PSC	Direct Payment	938
Technical Assistance (Project Evaluation): Non-PSC	Direct Payment	213
Participant Training: Placement by USAID	TA Contract	535
Inservice training: Incountry training	Direct Payment	3037
Commodities: AID Direct Contract, PSA	Direct Payment and Letter of Commitment	2895
Local Support Cost (Commodities and Services): USAID-issued Purchase Orders	Direct Payment	45

Table III-6  
**Technical Assistance Costs  
 Per Person Per Year**

Salary	50,000.0
Post Differential (25%)	12,500.0
COLA	4,575.0
Fringe Benefits (20%)	10,000.0
DBA Insurance (2.05/100)	1,500.0
Contract Overhead (85%)	62,900.0
Travel to/from post (including household effects and airfare)*	8,875.0
Education Allowance	11,000.0
Education travel	1,800.0
R & R or Home Leave Travel	4,500.0
Rent	10,000.0
Utilities	15,250.0
Household Furniture & Appliances*	7,500.0
Generator*	3,000.0
Security & Maintenance	<u>6,600.0</u>
Total	210,000.0

Costs for Personal Services Contractor Per Person Year:

Salary	\$48,200.00
Post Differential (25%)	12,050.00
COLA	5,125.00
Fringe Benefits (20%)	9,650.00
DBA Insurance (2.05/100)	1,250.00
Travel to/from post (including household effects and airfare)*	9,775.00
Education Allowance	11,000.00
Education travel	1,800.00
R & R or Home Leave Travel	4,500.00
Rent	14,000.00
Utilities	15,550.00
Household Furniture & Appliances*	7,500.00
Generator*	3,000.00
Security & Maintenance	<u>6,600.00</u>
Total	\$149,990.00

Rounded to \$150,000.00

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\* Annualized over 4 years

TABLE III-7

AID OBLIGATIONS SCHEDULE BY FISCAL YEAR  
(\$'000s)

	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	Total
Technical Assis- tance	572.3	1,194.2	1,082.0	872.0	662.0	640.0	0.0	5,022.5
Training	604.9	542.1	749.5	724.2	515.8	434.9	0.0	3,571.4
Commodities	500.0	379.5	169.1	207.9	266.9	197.1	0.0	1,720.5
IEL Educational Materials	136.0	269.0	236.5	229.0	221.0	85.0	0.0	1,176.5
Other Costs	5.0	45.0	45.0	107.5	45.0	9.4	0.0	256.9
Contingency	181.8	243.0	228.2	214.1	171.1	136.6	0.0	1,174.8
Inflation	0.0	132.9	249.5	363.7	441.6	435.3	0.0	1,623.0
Total	2,000.0	2,805.7	2,759.8	2,718.4	2,323.4	1,938.3	0.0	14,545.6
Projected Accrued Expenditures by FY	0.0	1,927.3	2,788.2	2,681.1	2,669.8	2,489.8	1,989.4	14,545.6
PER CP	2,000.0	2,363.0	3,000.0	3,000.0	2,887.0	1,300.0		

TABLE III-8

GOL Recurrent Costs Per Year  
After Completion of Project  
(\$'000)

A. Training	
In-service training accommodations	
No. of New Teachers (est.)	(125)
at \$15/day x 56 days ea.	105.0
No of New Principals	(10)
at \$15/day x 56 days ea.	8.4
Refresher Courses	(325)
at \$15/day x 7 days	<u>34.1</u>
SUBTOTAL	147.5
B. Material Production/Distribution	
IEL Materials	
Mat/modules (860 units at	336.3
\$391/unit incl. semester boxes	
C. Gasoline	
19,200 visits/yr x 1 ga/visit x	
\$3/ga	57.6
E. Vehicle Maintenance	
20 veh. x 6 service/yr x	18.0
150/service	
46 motos x 3 service/yr x	<u>6.9</u>
\$50 service	
SUBTOTAL	24.9
TOTAL	566.3
Contingency at 10%	56.6
SUBTOTAL	622.9
Inflation at 5%	0.0
GRAND TOTAL	622.9
	=====

During the life of the project, the GOL contribution (including personnel, training facilities, teaching materials, gasoline and office supplies) ranges from \$626,200 in FY 86 to \$1,358,000 in FY 1990. Although no specific MOE data are available on primary education expenditures, these GOL project costs can be compared to the Ministry's overall budget to gain a sense of their sustainability. Total MOE expenditures in BY 82-83 were \$35.27 million and in BY 83-84, \$31.35 million.<sup>1/</sup> Assuming that overall MOE expenditures average around \$31 million per year during the next five years, project costs would average between 2 and 4 percent of MOE yearly expenditures.

The GOL recurrent costs when the project is completed are approximately \$622,900 per year as shown in Table III-8. Since all present teachers (based on 1:35 teacher-student ratio) will be trained during the life of the project, the MOE will only require an estimated 125 new teachers or about 5% of the teaching force to meet rising enrollments. About 10 new principals are estimated for training. In addition, about 325 teachers would be scheduled for refresher training.

The IEL materials required are for replacement of about 1/3 of all of the teachers trained in IEL I and IEL II per year or 860 units. Finally gasoline and vehicle maintenance costs are based on an average of one gallon of gasoline required to visit each classroom as well as six servicings per vehicle and three servicings per motorbike annually.

Recognizing the severity of the GOL fiscal crisis, the project is designed to keep recurrent costs to a minimum. No new project personnel will be hired and the cost of reproducing IEL materials will be kept low. Even with these efforts, the Mission recognizes that the GOL may not be able to absorb even these few costs. Accordingly, if the GOL is unable to absorb recurrent costs associated with the project at the end of the project, USAID would consider assisting in financing the costs necessary to keep the IEL system functioning (i.e. printing of modules, and gasoline for vehicles) through the PL-480 program or some form of a limited follow-on activity.

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<sup>1/</sup> MOE data.

## CHAPTER IV

IMPLEMENTATION PLANA. Administrative Arrangements1. Project Organization

The GOL agency responsible for project implementation will be the Ministry of Education (MOE). The responsible official in the MOE will be the Deputy Minister of Instruction, as illustrated in Table II-1 (in Chapter II). Within the Department of Instruction, a separate IEL Division will continue the functions of the former IEL Unit, presently headed by Mrs. Janice Vani. She and key members of her staff will be located in the Ministry of Education (Monrovia) and will report to the Deputy Minister of Instruction (see Table II-2). The IEL Division will include IEL Training/ Supervision, Printing/Dissemination and Curriculum/Evaluation units in addition to the administrative staff. The Project Director will be guided by policy decisions of a project Steering Committee composed of key MOE officials, the Monrovia Consolidated School System (MCSS) Superintendent, the Contractor, USAID and Peace Corps officers. The composition of the Steering Committee is detailed in Table IV-1. The committee will meet monthly and will report directly to the Minister of Education. Chart IV-1 shows the three regions of Liberia with the location of IEL schools as of 1985.

The new status of the IEL Division will effect a closer working relationship within the MOE among the IEL personnel, education officers, the Teacher Education Unit and the Division of Curriculum because all of these units are under one head, the Deputy Minister of Instruction.

At present, overall direction for primary school instruction in Liberia is the responsibility of a variety of offices in the Department of Instruction. As IEL II proceeds and the preponderance of primary schools change to IEL methodology, the role (vis-a-vis, primary instruction) of these other offices should diminish and many primary education-related functions should be absorbed by the IEL Division or a newly created Bureau for Primary Education. The project agreement will contain a condition precedent to initial disbursement requiring the establishment of an IEL Division in the Ministry of Education. As a covenant, the GOL has agreed to study the feasibility of converting the IEL Division into a Bureau for Primary Education during the project life.

The IEL Project Director with the assistance of the project Chief of Party will have major day-to-day responsibility for all GOL operations related to IEL II implementation activities including supervision, teacher/principal/education officer training for IEL and material production and distribution.

Chart IV-1

Location of Schools  
Using the IEL Instructional System (1985)

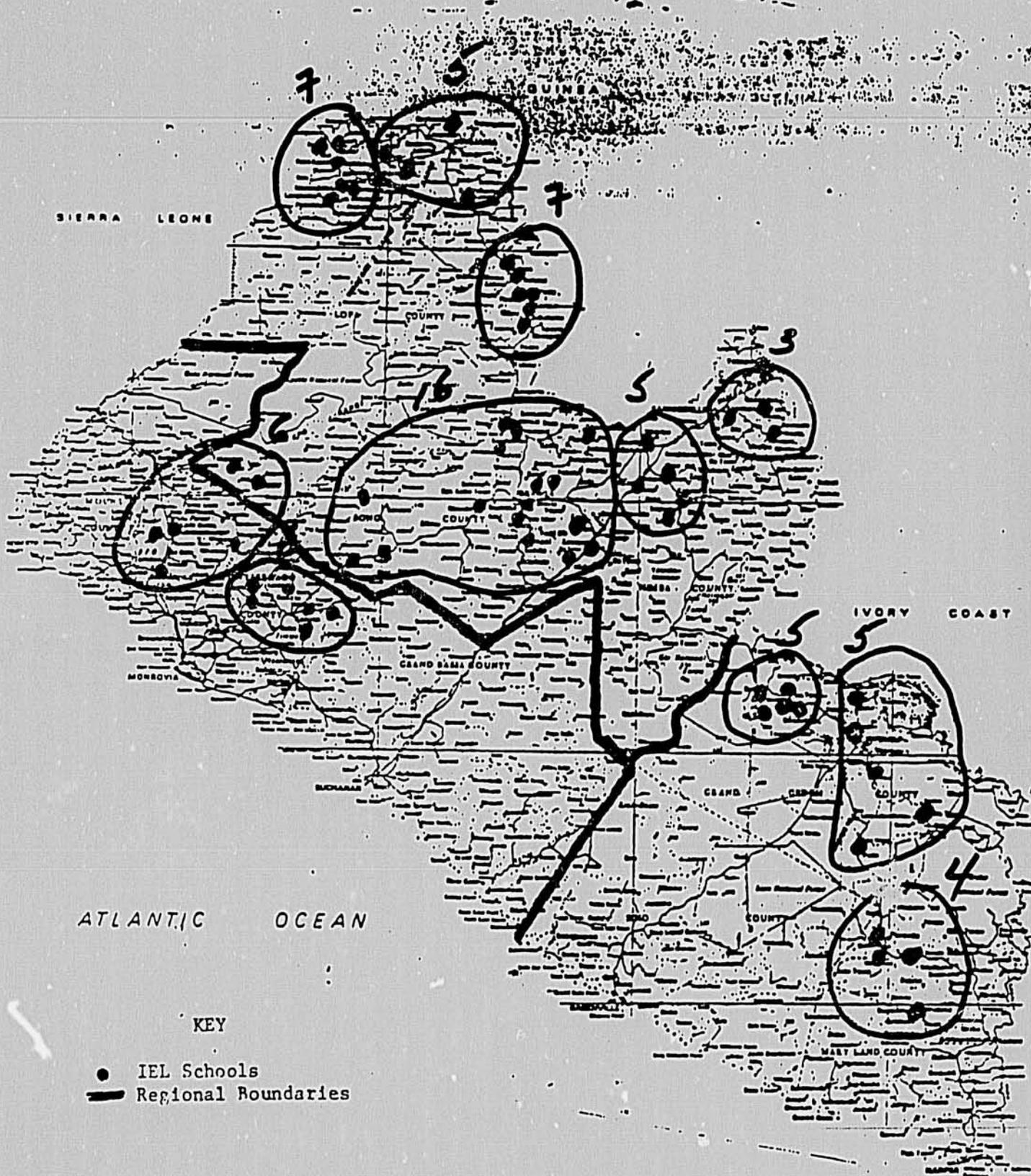
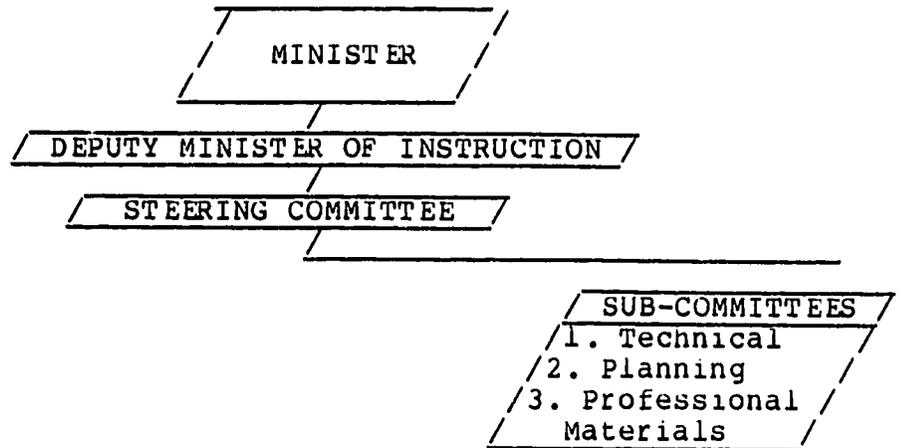


Table IV-1

IEL II Steering Committee



VOTING MEMBERS

1. Minister (Chairman)
2. Deputy Minister of Instruction (Vice-Chairman)
3. Deputy Minister of Planning and Development
4. Deputy Minister of Administration
5. Superintendent, MCSS
6. Representative, USAID
7. Representative, Peace Corps
8. Representative, Ministry of Planning and Economic Affairs
9. One Regional Education Officer (Annual Rotation)

NON-VOTING MEMBERS

1. Project Director
2. Contractor Chief of Party

The IEL headquarters unit, now located in Gbarnga, will move to the Ministry of Education in Monrovia as a condition precedent to first disbursement. The IEL II field-based staff will operate from offices constructed under the World Bank IV Education Project which will be inaugurated in August 1985 at the Regional Education Centers in Paynesville, Gbarnga and Zwedru. The field staff will be composed of 8 to 12 IEL trainers who will train teachers, school principals and education officers, and will assist in the supervision of the IEL schools. In addition to the Chief of Party who will be based at the MOE in Monrovia, one long-term technical advisor will be based in each Regional Education Center for up to three and one-half PY as a Training/ Supervision expert. This position will be phased out as long-term participants return from training. Up to 46 Peace Corps Volunteers (PCVs) will assist district education officers in providing classroom visits.

The in-service teacher training component of the project will be conducted for eight weeks each year during the vacation period of January and February. The first four weeks will cover IEL methodology with the second four weeks covering teacher methods, content and materials. Teachers will be selected for training each preceding October. Beginning in 1986 and continuing through 1991, approximately 2,140 teachers will be trained. School principals and education officers will also receive training with emphasis placed upon techniques of school organization, personnel management and methods of school supervision. Every June/July beginning in 1987, a one-week refresher course will be conducted for all teachers who have not had the introductory course for three or more years.

The IEL modules will be printed commercially in Monrovia with paper provided by the project. For the initial three years, paper will be purchased by USAID, through GSA or a PSA. Under IEL I, the plates to be used have been field-tested and revised three times and are camera ready. These will serve for the entire life of project. The modules will be delivered by the printer to a distribution center. The IEL printing/dissemination unit (part of the IEL Division in the MOE) will collate and pack the material in boxes and will disseminate them to the regional and county education centers for further distribution to the schools, or will deliver boxes to the schools directly. The useful life of a module averages three years, and every fourth year the modules will be replaced.

## 2. Teacher Supervision.

The purpose of the teacher support system is to give regular supervisory coverage to every IEL classroom. In addition, the County Education Officers (CEOs) and the Instructional Supervisors (IS) are to respond to problems identified by the PCVs and the District Education Officers, such as offering subject area workshps, resolving special classroom or coordination problems or responding to other needs as they arise. The supervisory teacher support system is illustrated in Table IV-2.

Supervision of teachers, critical to the success of the project, will be done in three ways: 1) the principal of the school, as the school administrator, will supervise his teachers on a day-to-day basis; 2) after the eight week training period (January-February), each teacher will be visited weekly by district education officers and Peace Corps volunteers until the end of June; and 3) after June of the training year, all teachers will be visited on a monthly basis, by the District Education Officer at least through the life of the project.

### 3. Coordination of Teacher Supervision

#### a. At the District Level

Table IV-3 illustrates how the supervisory system is to be coordinated. The District Education Officer and the Peace Corps Volunteer represent the keystone of the supervision process, supervising IEL classrooms, providing on the job training for teachers, and offering assistance to the principal. The DEO and PCV will prepare a monthly workplan at least one month in advance for the approval of the CEO/IS. The DEO/PCV team will average four classroom visits daily, five days per week, observing teachers. The Peace Corps volunteer will serve as the principal classroom teacher trainer.

Since the DEO has other district responsibilities (private primary education and all secondary schools), the DEO will be unable to visit classrooms as extensively as the PCV. However, it is expected that the DEO will spend at least half of his work time visiting schools and classrooms with the PCV. A suggested arrangement would be for the PCV and the DEO to work as a team every other week. While the DEO is the responsible officer, both the PCV and the DEO will complete weekly evaluation reports of their IEL activities including visits, observations and problems encountered. In the first semester, after eight weeks of training the teacher will be visited by a PCV or DEO once each week. Thereafter, the teacher will be visited about once each month.

#### b. At the County Level

The CEOs and Instructional Supervisors (IS) coordinate the activities of the DEOs and the PCVs at the county level. They approve the monthly workplan of the DEOs/PCVs. Both officers review the weekly evaluations of the PCVs and the DEOs and use them as guides to visit classrooms with the PCVs and DEOs. They may offer on-site subject matter workshops and demonstrations to strengthen teachers' command of subject matter and method. The CEO and

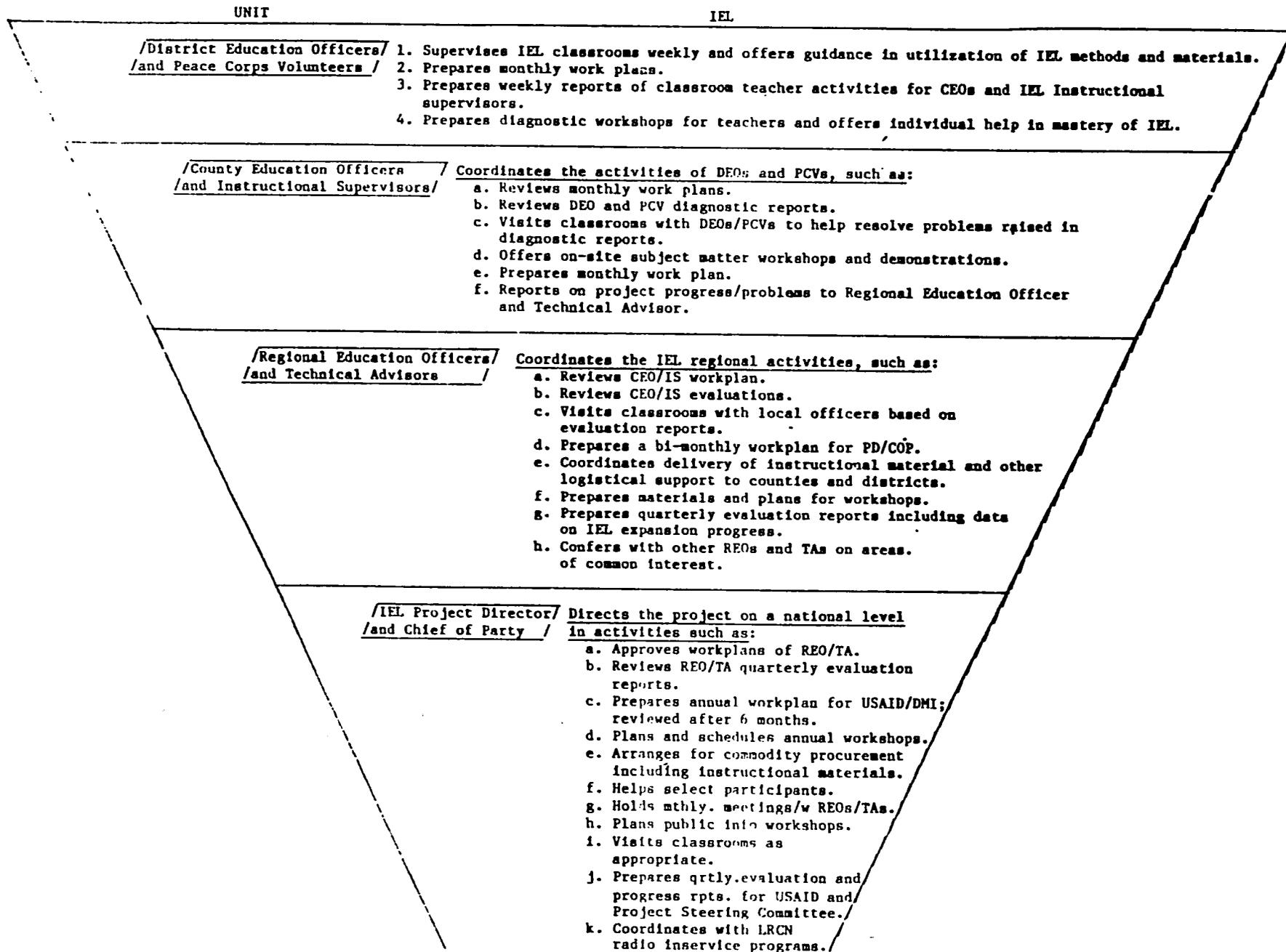
Table IV-2

IEL II Supervisory Teacher Support System  
by Geographic Area

REGIONAL LEVEL (Regional Education Officer)	COUNTY LEVEL (County Education Officer)	DISTRICT LEVEL (District Education Officer)
<p><u>Functions:</u></p> <ol style="list-style-type: none"> <li>1. Administers educational activities of the region.</li> <li>2. Serves as feedback agent between county and district education officers and MOE headquarters.</li> <li>3. Coordinates activities of the Regional Education Center including IEL Unit.</li> <li>4. Plans and implements all IEL regional teacher training workshops in coordination with the field-based technical advisors and IEL supervisors.</li> </ol>	<p><u>Functions:</u></p> <ol style="list-style-type: none"> <li>1. Administers educational activities of county schools.</li> <li>2. Serves as feedback agent between REO and DEOs, as well as principals.</li> <li>3. Advises DEOs and principals on matters of school administration and supervision.</li> <li>4. Schedules subject matter or other pertinent workshops in conjunction with Instructional Supervisors (IS).</li> </ol>	<p><u>Functions:</u></p> <ol style="list-style-type: none"> <li>1. Administers activities of district schools</li> <li>2. Serves as feedback agent between the CEO/IS and principals/teachers.</li> <li>3. Visits school on a regular basis to determine IEL progress.</li> <li>4. Assigns Peace Corps volunteers to specific specific schools.</li> <li>5. DEOs to visit and supervise schools with PCVs every other cycle.</li> </ol>

Table IV-3

Coordination of Supervisory  
Teacher Support System



Instruction Supervisors will coordinate an average of four districts with schools whose enrollment will range from under 50 to more than 600. The CEOs and IS prepare a bimonthly workplan to be approved by the REO and TA at least one month in advance. In addition, they will complete monthly evaluation reports for the Regional Education officer at the field based TA.

c. At the Regional Level

The regional education officer and his T.A. regional counterpart will coordinate the IEL activities of the County Education Officers and Instruction Supervisors and will, in effect, oversee IEL activities on a regional basis. The regional team assures that instructional materials from the MOE, Monrovia, are delivered promptly to counties and districts and to schools. In coordination with other REOs and field-based TAs, the REO's with their technical assistance counterparts will prepare materials and plans for annual worksnops as well as for monthly worksnops which will be held for the CEOs. Each REO/TA team will prepare quarterly reports for the IEL Project Director and the Chief of Party.

d. At the National Level

The IEL Project Director and counterpart COP oversee the overall project. They approve the workplans of the three REOs and three field-based TAs and, in turn, prepare an annual workplan for USAID and the Deputy Minister of Instruction's approval. The Project Director and the Chief of Party, (PD/COP) with assistance from the regional teams, plans and schedules the annual worksnops for teachers, principals and education officers including refresher courses. They plan schedule and also arrange for the procurement and delivery of all commodities. Additionally, they respond to the logistical needs of the field.

The PD/COP, assisted by USAID, will select and schedule long and short-term participants. Consistent with the project's technical assistance plan, the PD/COP will assign the TAs, PCVs and short-term technical specialists. The PD/COP will hold monthly meetings with the REOs and TAs on the achievement of project objectives. The PD/COP are also responsible for the coordination of radio inservice programs arranged through the Liberian Rural Communications Network and will assure that the programs planned will enhance the overall training program. The PD/COP will visit classrooms with regional, county or district officers for firsthand observations and evaluations of IEL progress. They will prepare and submit quarterly reports of project progress to USAID and to the project Steering Committee. As non-voting members, they will attend all project Steering Committee meetings.

#### 4. Participant Training

The Participant Training plan is discussed in Chapter II. The GOL will provide international air transport costs for all participants. The GOL will also maintain the salaries for trainees. The contractor will provide academic progress reports to USAID and MOE in accordance with HB 10 Guidelines. A covenant is included in the project agreement requiring that all Liberian participant trainees will return to the IEL/MOE positions for which they receive training and will serve for a minimum of twice the time of their training period. Salaries for all personnel assigned to attend project training workshops or other training functions will be provided by the GOL.

#### 5. Technical Assistance

USAID will contract directly with a U.S. educational institution or private firm for technical assistance and the placement of participants under the project. USAID will contract separately for the three project external evaluations. USAID plans to use a PSA initial commodity procurement and the T.A. contractor for later procurement and commodity management. Small shelf item procurement will also be the responsibility of the technical assistance contractor.

USAID will be responsible for project monitoring, and the USAID Project Manager will serve as the primary contact point for the technical assistance team's Chief of Party. USAID will prepare necessary Project Implementation Letters and will be responsible for coordinating external evaluations and preparation of all project evaluation summaries.

### B. Implementation Schedule

#### 1. Transition Plan

Project activities for IEL I and IEL II are dovetailed into a transition period. IEL I terminated on March 15, 1985, but the transition activities began in December 1984 in order to provide for and maintain project momentum. Transition activities will terminate on February 28, 1986, at which time (or soon thereafter) a new contract team is scheduled to be in Liberia to work. The transition period serves to ensure continuity of activities between IEL I and IEL II. Table IV-4 gives a schedule of activities to be undertaken during the transition.

#### 2. IEL II Detailed Project Implementation Schedule

The implementation schedule in Annex H-1 indicates the major activities planned for the life of the project. The chronology is indicated by a month-by-month list of activities and by annual cycles.

Table IV-4

IEL 1985 Transition  
Estimated Cost Requirements  
Before and After June 30, 1985  
To December 31, 1985

Requirement	Date	Observation	Before June 30	After June 30	Total
Gasoline/Maintenance	Mar/Dec '85	Gasoline 500 gals @ 3.00/mo.	6,000	9,000	15,000
		Maintenance	2,000	8,000	10,000
Advertising/Selecting Contracting		See REDSO (3/5/85) Travel (2) USA Travel (1) Abidjan	6,000	4,000	10,000
IEL Move to Monrovia August 1985			2,000	-	2,000
Modules	Feb '85 Aug. '85	Administrative collating	500	-	500
Printing Modules Second Semester 1985	May/June '85	Bid to open in May	55,000	55,000	110,000
Distribution	July/Aug '85				
One week workshop	July '85	Planning begins in April	20,000		20,000
Testing Student Achievement (CRT)	Oct/Nov '85		-	25,000	25,000
Print Modules First Semester 1986	Sept/Oct '85	Bid in August	-	300,000	300,000
Three-Day Seminars	Oct/Nov '85			15,000	15,000
TOTALS			91,500	416,000	508,000

### 3. Contract Implementation

Advertising for the technical assistance contractor will begin in August 1985 with proposals due in Monrovia in October/November when a USAID technical committee will evaluate them. A three person team of the MOE and the USAID Project Manager will visit the top two or three finalists prior to award which is planned for November. It is expected that the TA contract will be signed in January 1986 once negotiations are completed between the contractor and USAID. The COP will visit Liberia for a two week familiarization tour. The contractor will have its locally hired administrative assistant on board in January 1986. The Chief of Party and three long-term training/supervisor specialists will arrive in early March 1986 or soon thereafter for the life of the project. Short-term specialists will be provided by the contractor as illustrated in Table II-V.

Consistent with USAID's policy on contractor support, technical assistance personnel in Monrovia will receive support from the USAID Executive Office which will negotiate leases for Monrovia and Paynesville housing, maintain appliances and provide other logistical support.<sup>1/</sup> For up-country personnel, the contractor's administrative assistant will perform these functions with USAID assistance. Office space will be provided by GOL, both in Monrovia and up-country.

#### 4. In-Service Teacher Training

Table IV-5 describes the training schedule for teachers principals and education officers. The training course will run for eight weeks (January-February) and will deal with teaching methods and the application of the IEL system in the classroom. Each year, the number selected will be trained in content, general methodology, improvement of verbal skills and principles of education and with the IEL methodology. Starting in the summer of 1987, one week or refresher training will be offered to those teachers for whom three or more years have passed since the introductory course. The 1987 and 1988 refresher courses will apply to teachers trained under IEL I and the transition period. The 1989 refresher course will be for those teachers initially trained under the project in January/February 1986. Table IV-6 illustrates the formal training schedule for the life of the project.

IEL training instruction will be conducted by the trainers of the IEL Unit within the IEL Division. Instruction in other teaching aspects will be given by selected faculty members of Liberian post-secondary institutions. Planning for the workshops is the responsibility of the IEL Project Director, the Chief of Party and his field-based technical advisors. For the 1986 workshop, however, planning will be coordinated between the IEL Project Director and USAID. Primary school principals will be trained in IEL and in classroom supervision as illustrated in Table IV-5. Education officers will receive two weeks of supervision training annually for the six year life of the project, by the end of the project, the EOs will have 12 weeks of in-depth supervision training given by the field-based technical advisors.

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<sup>1/</sup> USAID/Liberia's contractor support policy is now under review. It is possible that in the future contractors will provide their own logistical support or that support will be provided through a separate contractor support unit.

Table IV-5  
 IEL II - Suggested Inservice Training Schedule  
 For Teachers, Principals and  
 Education Officers  
 1986 - 1991

Component	1986	1987	1988	1989	1990	1991	Total
First eight-week Teacher New to IEL (Methodology)	250	350	350	450	450	290	2140
Principals	75	100	100	125	125	75	600
Education Officers	60	60	60	60	60	60	360*
Refresher Courses for Teachers & Principals	-	249 <sup>1</sup>	192 <sup>2</sup>	325	450	450	1666
Additional Professionals		<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>125</u>
TOTALS	385	784	727	985	1110	860	4891

\* The 60 education officers return annually for 6 supervision training sessions, or a total of 12 weeks of training. For this table education officers are counted for each year of attendance.

<sup>1</sup> Trained in IEL I

<sup>2</sup> Trained during "transition" (1985)

Table IV-6  
Suggested Training Table  
During Life of Project

January-February	Activity	Participants
Eight weeks Integrated Work- shop	IEL Methodology content, problems in classroom manage- ment, testing, general methodology, principles of effec- tive teaching and pupil evaluation	Teachers and Principals
Two weeks selected during eight week period	Classroom supervi- sion training, school supervision and pupil evaluation	Principals* and EOs
July - one week	Refresher Course	Teachers and principals who had IEL methodology more than three years before

\*Principals will attend the IEL workshop for six weeks. For the remaining two weeks, they will join the education officers' workshop in supervision.

It is anticipated that up to 25 additional professionals will be added to the number of trainees each year. These persons fall into various categories such as: teachers who have had IEL training and request attendance for the course; private school teachers who wish to learn the system; and university or teacher training faculty who want to study the system for professional purposes.

#### 5. Monitoring and Evaluation Plan

The Monitoring and Evaluation plan for IEL II is divided into the following components (as shown in Table IV-7):

a. USAID in-house reviews will occur every six months, as part of USAID's (and Africa Bureau's) semi-annual Project Implementation Reviews. These reviews are held each April and October; they review progress against EOP indicators and input/output or status actions taken to remedy problems, and identify important actions to be taken over the succeeding six months.

b. External Evaluation. Three project-funded external evaluations will be carried out over the life of the project. The first will be held about 24 months after the start of the project (or about July 1987). This evaluation is viewed as critical to the future direction of the project and will carefully assess the project's progress and the GOL commitment to the project and to the IEL concept. The evaluation will reassess the GOL's financial situation, its ability to pay salaries of teachers and supervisory personnel, and budgetary provisions/adjustments made by the GOL for paying future IEL recurrent costs. The evaluation will also measure progress towards consolidating primary education responsibilities in one division or office in the MOE's headquarters. This evaluation will help determine the magnitude of future A.I.D. assistance to IEL specifically and to the education sector generally. The second evaluation to take place in the fall of 1988 will be able to assess two full years of IEL expansion. This evaluation will assess progress to date, impact, status or recommendations from the past evaluation, and propose changes in the implementation plan or design. A particular focus should be on the financial status of the project, including an assessment of the GOL's plans for assuming a share of the project's operating costs. The third evaluation, scheduled for July 1990, will be similar in scope to the second except that sufficient time will have passed for a reasonable judgment on the project's ability to meet EOPS conditions by the PACD or December 1991.

#### C. Technical Assistance Plan

As indicated in Table IV-8 (the technical assistance schedule), the institutional long-term technical assistance team will be composed of a Chief of Party, three field-based advisors and an administrative officer. The first four advisors will arrive in

Table IV-7

IEL II - Evaluation Plan

Component	1986	1987	1988	1989	1990	1991
USAID Semi-Annual Project Implementation Reviews	Apr/Oct	Apr/Oct	Apr/Oct	Apr/Oct	Apr/Oct	Apr/Oct
External Reviews	--	Jul-Sep	Oct-Dec	--	Jul-Sep	



March 1986 (or soon thereafter) to begin their work. The locally-hired administrative officer will be in place two months in advance, at the direction of the contractor, to care for logistical requirements of the advisors.

The Chief of Party, to be based at the MOE in Monrovia, will be in-country for six years. Two of the three training/ supervision advisors will have postings of three and one-half years and the third for four and one-half years. The administrative officer position is for six years, two months (1/86 - 12/91). The lengths of tour for the training/supervisor advisors are predicated on participants having returned after two years and an allowance for one

year of overlap. The extra year for the third advisor will be to function as a "rover" (nationwide) to assist the COP and GOL Project Director in training/supervision.

The PSC Project Manager (project-funded) will be engaged from the beginning of the project for the duration of the project. The PSC project manager will serve as an advisor to the institutional contractor and the MOE. He will assist in the establishment of implementation plans, in planning for workshops in preparation of commodity lists, and in preparation of participant training. He will report to the USAID HRD officer.

#### D. Procurement Plan

USAID will arrange initial commodity procurement. This includes contracting for the technical assistance team and start-up commodities. Once the technical assistance contract is signed, the contractor will assume responsibility for future procurement. The institutional contractor will be responsible for participant training. It is not the Mission's policy to utilize host country contracting.

##### 1. Designated Responsibilities

Soon after authorization, ProAg signature and satisfaction of CPs, USAID will arrange initial commodity procurement to ensure that necessary commodities and equipment are in place at the time of arrival of the technical assistance team. This includes furniture, initial vehicles, office equipment and paper. Thereafter, the contractor will take over responsibility for all procurement details and management.

##### 2. Technical Assistance

The GOL and USAID have opted for an RFTP which reflects their wish to initiate and maintain a long-term relationship with a U.S. university.

##### 3. Commodities

A listing of commodity needs for this project is included in Annex H-3. By means of PSA and GSA arrangements, USAID/Liberia will initiate procurement of vehicles, paper and other required items during the transition period upon the authorization of the project, allocation of funds, signatures on the project agreement and the fulfillment of initial conditions precedent. The USAID Project Manager will be responsible for the preparation of a detailed listing of commodities to be procured in 1985 and for the steps of procurement. The list includes a breakdown by annual requirements to include possible sources of purchasing and estimated costs.

#### E. USAID Monitoring Responsibilities

The Project Officer will follow all aspects of project implementation and evaluation and will maintain current information on project progress. Specific responsibilities include the following:

- Oversee GOL compliance with AID policies, procedures and regulations.
- Monitor adherence by the implementation and external evaluation contractors to contract requirements and timetables.
- Insure the timely provision of AID financing and/or other inputs.
- Assist GOL to insure the effective utilization of resources and early awareness of potential problems.
- Identify and assist in resolving implementation issues.
- Monitor the vehicle control plan and enforcement of all vehicle operation and maintenance policies.
- Insure that the external evaluation plan is carried out in accordance with the schedule.
- Develop a historical record of implementation for the official AID project files.

All staff responsible for monitoring activities will use the widest possible range of sources to maximize their information of current project performance and anticipated constraints and opportunities. Recurrent, systematic and coordinated monitoring and evaluation are prerequisites to successful achievement of IEL II goals.

Because of the critical nature of the IEL II dissemination activities, a major monitoring responsibility of the PSC Project Manager will be to insure that vehicle, fuel and maintenance resources are being handled properly. The Project Manager will institute, through the COP and the Liberian Project Director, administrative procedures adequate to assure AID/Liberia and GOL that vehicles and fuel are used for project purposes and that proper vehicle repair and maintenance procedures are being followed.

## CHAPTER V

SUMMARY OF PROJECT ANALYSES

This chapter presents summaries of the five major project analyses which appear as annexes to this project paper. The purpose of these analyses is to determine the feasibility of the project, the probability of achieving its outcomes, and to identify specific opportunities and problems that may be encountered in implementation. The analyses are:

- A. Technical
  - B. Financial
  - C. Economic
  - D. Social Soundness
  - E. Administrative
- A. Technical Feasibility Summary

1. Efficacy of the IEL Programmed Instruction System

As indicated in the Technical Analysis (Annex G-1), the IEL system is technically feasible and appropriate because children learn basic subject matter based upon the national curriculum of the Ministry of Education. In addition, the organizational framework of IEL was developed during IEL I. An IEL Unit exists and is staffed by specialists in the IEL programmed learning technique. Instructional materials have been developed for all six primary grades at core, optional and enrichment levels of achievement. As a result, the IEL system responds to the two basic problems inherent in the present system: 1) underqualified teachers; and 2) lack of instructional materials.

2. Staffing

To minimize recurrent costs no new staffing is required for Phase II. The formats and staffing for teacher training, supervision and instructional materials have already been established and put in practice. More in depth administrative know-how will be required from the Ministry of Education because of the greater scale of the materials production and distribution, training, and supervision efforts necessary for Phase II. The project will assist in this complex dimension by offering a combination of participant training, in service training and the vehicles necessary to accomplish these tasks with the skills required. The teachers, principals and education officers in the field will be trained by IEL trainers, assistant trainers and three trainers or trainers (participant

trainees) who will replace the U.S. technical advisors. An adequate number of vehicles is also essential to deliver project materials and to provide regular supervision. During the life of the project, about 40 four-wheel drive vehicles and 144 trail bikes will be provided by the project.

### 3. Training

The IEL system is designed to make primary school teachers more effective in their classrooms and thus provides training for new IEL teachers through an 8 week program of in-service training. A refresher training course will be offered to renew the skills developed and to share new findings with the teachers. School principals and education officers will also be given training in the IEL system and in methods of classroom supervision.

### 4. Teacher Support System

A teacher support system will be in place in the field to assure regular classroom coverage. The educational officers IEL instructional supervisors, Peace Corps volunteers and field-based technical advisors will synchronize their services to the schools as described in the Implementation Plan (Chapter IV). Twelve District Education Officers will receive short-term (2-4 months) stateside universities or equivalent institutions in classroom supervision methods and techniques. All EOs will be trained for two weeks annually for the six year LOP. In addition, the EOs will benefit on a day-to-day basis from the expertise available from the technical advisors, instructional evaluators and Peace Corps volunteers. All members of the supervisory teacher support system will be assigned a vehicle (motorcycle or four-wheel drive) to help administer and supervise the instructional program as well as to deliver materials on a regular basis.

### 5. Materials Production and Dissemination

The greater scale of IEL II poses a challenge for the task of materials production and distribution. Over the life of the project, IEL instruction and support materials will be produced for 2,140 classrooms plus about 1,800 replacement units in use of three years or more. The IEL Production/ Dissemination Unit has experience in materials distribution but will require upgrading or skills to handle the larger scale of this activity. This upgrading will be accomplished by the short-term consultant in instructional materials production.

The project will select a printer who will be responsible for printing and production of all IEL materials and their distribution to the designated offices where they will be collated and distributed to the IEL schools. Phase I indicated that capable printing firms exist in Monrovia to produce the instructional materials in a timely manner and at a competitive price.

## 6. Summary

The technical feasibility analysis concludes that the detailed project design is feasible and appropriate for IEL II as a significant step to solve the problems of lack of instructional materials and the large number of untrained teachers in Liberia.

### B. Financial Summary

The design team encountered considerable difficulty in accurately estimating MOE expenditures in primary education. The Ministry does not have an office or division of primary education and this administrative structure is reflected in the budget. Thus at this stage, only total Ministry recurrent costs can be evaluated.

Because of the GOL's severe financial crisis, the project is designed to minimize GOL recurrent costs. The salaries of project personnel -- teachers, REOs, CEOs, DEOs and Ministry staff, are a major recurrent cost. Given the GOL fiscal position and anticipated cuts in the recurrent and development budgets, IEL II was designed without creating any new GOL positions or schools.

The GOL's fiscal crisis will make it difficult for it to fund the costs of the IEL materials, gasoline and vehicle maintenance during the initial years of the project (see Table G-2-1). In order to ease this burden, the project has a phasing plan whereby the GOL will contribute 25% of the costs of the IEL materials, gasoline and vehicle maintenance in year 4, and 50% and 75% in years 5 and 6 respectively. USAID will provide for 100% of these costs in years 1 to 3, 75% in year 4, and 50% and 25% in each of the remaining two years. Recognizing the severity of the GOL's financial crisis, the project contains a contingency which could be utilized if the GOL does not have sufficient funds to contribute to these project recurrent costs. Further, if the GOL does not have the resources to finance costs of IEL modules and gasoline for transportation of supervisors, USAID will consider a small follow-on activity. A discussion of these after-project costs is included in Chapter 3 of this Project Paper.

The project's midpoint evaluation team will include a financial analyst. The financial analyst's task will be to reevaluate this strategy for sharing recurrent costs and to recommend any improvements or modifications which help to ease the financial burden.

### C. Summary of Economic Analyses

Two economic analyses were conducted. The first was a benefit cost analysis and the second was a relative cost analysis.

The benefit cost analysis concluded that the IEL II project's tangible and quantifiable benefits versus the AID and GOL costs, yield a net present value exceeding \$11 million when discounted

using a social discount rate of 10 per cent. The project's internal economic rate of return comes to 19.2 percent. Considering that a great portion of the project's benefits are intangible and therefore unquantifiable these calculations indicate that this is a highly productive and economically feasible project even on tangible evidence.

The relative least cost analysis compared the IEL approach to two alternative textbook approaches. The IEL is least expensive in almost all cases. In cases where IEL is not least expensive the cost advantage of the best alternative is not overriding since previous cost effectiveness studies have shown that this alternative approach would not be nearly as effective as IEL.

In sum, IEL II is a high yielding project in economic terms and, in most instances, it represents the least cost alternative. Where it is not the least cost alternative, it is considered to be more effective than the least cost alternative.

#### D. Social Soundness Summary

This analysis concentrates on three areas of social impact upon which the IEL II project may be expected to impinge. These areas are:

- Increased teacher effectiveness
- Effects on educational participation
- Effects on student behavior and performance

The Social Soundness analysis concludes that the IEL II program, despite its radical departure from traditional Liberian classroom practices and Monrovia economic problems, offers an opportunity for educational improvement in a manner acceptable to local social institutions and cultural norms (see Annex G-4) and should go forward.

##### 1. Increased Teacher Effectiveness

The experimental and developmental stage of the current project demonstrated that this technology, applied to Liberia, is justified both in terms of cost factors and educational achievement. Of the factors which determined the design and process of IEL I, none was more apparent than the insufficient, and even decreasing, supply of trained teachers to staff the national education program.

Developing countries which undertake to provide primary education to all school age children commonly face a shortage of trained teachers. It is therefore necessary to design programs to use unqualified or underqualified teachers. The problem is exacerbated for several reasons including: local teacher training institutions are not capable of producing sufficient numbers of trained teachers; teachers who train in institutions abroad may not return to invest their training in their home country; and those trained at home or abroad are often not willing to go to rural areas where trained teachers are in shortest supply.

In Liberia, there also may be strong economic disincentives operating to prevent young people from choosing a teaching career and investing in the requisite training. In any case, IEL I has demonstrated, as have similar projects, that programmed instruction, when delivered with carefully prepared materials, can achieve excellent educational quality with minimally trained teachers.

## 2. Effects on Educational Participation

Programmed learning may be the first educational process available to the majority of primary age children in many developing nations which lack trained teacher, instructional materials and an adequate budget. In addition, the materials are national curriculum for rural as well as urban girls and boys. These factors may encourage more girls to enroll in primary education to help bridge the gap between male and female enrollments. MOE data show that the percentage of girls' enrollment to that of boys has slowly increased for government primary schools as is shown in Tables V-1 and V-2.

## 3. Effects on Student Behavior and Performance

Children operating in the IEL programs, in some activities in grades 1 to 3 and in almost all classroom activities in grades 4 to 6, are placed in control of their own learning process. Primary school students with low levels of cognitive skills can move from a passive, recipient role to an active, peer learner/learner role with apparent ease and demonstrated achievement.

This new classroom role is possible only because carefully prepared and tested materials are provided to support the learners at every stage of progress. Primary school students who become accustomed to taking responsibility for their own education, may be expected to become stronger students in other learning tasks in both formal and non-formal contexts throughout their lives.

## 4. Other Social Dimensions

The project should go forward because it will affect Liberia's next generations. Despite the present and future economic crisis that Liberia faces, IEL II's 80,000 beneficiaries will enrich society and will reflect the social demands for better education of children. Despite a drop in school enrollment since 1981, IEL I showed that parents will send their children to school if instruction and learning are taking place.

Table V-1  
 Percentage of Girls' Enrollment  
 in Government Primary Schools  
 1970 - 1984

Year	Total Enrolled (Boys and Girls)	Total Enrolled Girls	% of Girls Enrolled
1970	53,442	14,454	27.0%
1978	85,475	28,686	33.6%
1981	104,229	36,541	35.0%
1984	92,158	33,224	36.1%

Source: Ministry of Education

Note:

The drop in actual enrollment between 1981 and 1984 is considered temporary reflecting the existing economic situation in Liberia.

TABLE V-2  
MINISTRY OF EDUCATION  
ENROLLMENTS BY TYPE OF SCHOOLS  
AND LEVEL (1970, 1978, 1981, 1984)

Type of School/Level	1970			1978			1981			1984		
	M	F	TOT									
<b>Govt.</b>												
Pre-Primary	16,056	9,463	25,519	23,934	15,468	39,402	34,481	25,978	60,459	23,346	17,291	40,637
Elementary	38,988	14,454	53,442	56,789	28,686	85,475	67,688	36,541	104,229	58,934	33,224	92,158
Jr. High	4,851	895	5,746	12,098	4,134	16,232	16,103	5,580	21,683	14,954	4,860	19,814
Sr. High	1,503	310	1,813	7,250	1,824	9,074	10,288	2,869	13,157	9,698	2,813	12,511
			86,520			150,183			199,528			165,120
<b>Other:</b>												
Pre-Primary	8,593	5,916	14,509	6,376	4,887	11,263	10,278	7,742	18,020	10,277	8,677	18,954
Elementary	17,293	9,482	26,775	11,668	7,439	19,107	15,279	8,958	24,237	16,490	11,697	28,187
Jr. High	4,109	1,717	5,826	2,778	1,287	4,065	2,597	1,282	3,879	3,442	2,177	5,619
Sr. High	1,403	679	2,082	2,440	1,091	3,531	1,816	813	2,629	2,147	1,184	3,331
			49,192			37,966			48,765			56,091
<b>Mission:</b>												
Pre-Primary				6,424	5,320	11,744	6,983	5,932	12,915	7,220	6,608	13,828
Elementary				14,733	10,461	25,194	14,924	11,776	26,700	14,980	12,122	27,102
Jr. High				4,632	2,910	7,542	5,252	3,551	8,803	5,602	3,813	9,415
Sr. High				3,223	2,001	5,224	3,964	2,493	6,457	3,457	2,377	5,834
						49,704			54,875			56,179
<b>Totals</b>												
Pre-Primary	24,649	15,379	40,028	36,734	25,675	62,409	51,742	39,652	91,394	40,843	32,576	73,419
Elementary	56,281	23,936	80,217	83,190	46,586	129,776	97,891	57,275	155,166	90,404	57,043	147,447
Jr. High	8,960	2,612	11,572	19,508	8,331	27,839	23,952	10,413	34,365	23,998	10,850	34,848
Sr. High	2,906	989	3,895	12,913	4,916	17,829	16,068	6,175	22,243	15,302	6,374	21,676
			135,712			237,853			303,168			277,390

A key problem is how to bring about change most effectively from the traditional to the IEL methodology. The inputs of IEL II are intended to address this problem. While some MOE officials have shown resistance to IEL expansion nationwide, the MOE top leadership has endorsed the thrust of IEL II as an alternative to the present status of low-quality education.

We should be sensitive to the problems inherent in this First World attempt to use programmed instruction at the primary level nationwide. IEL is a high risk project and can easily be sidetracked. Therefore, the MOE, USAID and the contractor must remain alert to needs of the project and maintain a positive climate during the LOP.

#### E. Administrative Feasibility

The major issues revealed in the administrative analysis (Annex G-5) deal with the MOE's organization and management. The analysis, concludes that the present organization of the MOE - at least, with respect to primary education - would inhibit the objective of making programmed instruction/learning (the IEL "method") a sustained nationwide program. Primary instruction is diffused throughout a large number of offices and bureaus within the MOE. To give primary education and the IEL project an institutional base, the MOE is creating an IEL Division within the Department of Instruction. As a first step, the Division will transfer its headquarters activities from Gbarnga to the MOE in Monrovia. The Government has also agreed to study and give serious consideration to the feasibility of creating a Bureau of Primary Education. This agreement is included in a covenant to the project agreement.

Poor management is also a potential problem in terms of teacher supervision. For this reason, the proposed hierarchical relationship for supervision is presented in some detail in Chapter IV of this PP. Classroom supervision is of critical importance and this aspect of the project will be continuously monitored by project management and assessed in the periodic evaluations. An effective field-based teacher support system will be initiated to strengthen the capability of the education officers. The Regional Education Officers will be assigned technical assistants; the County Officers, Instructional Supervisors; and the District Education Officers will be assigned Peace Corps Volunteers.

USAID management of the project does not pose any major problem. The PSC Project Manager position is critical given USDH staff ceiling limitations. He will also give advice and counsel to the MOE and the contractor.

## CHAPTER VI

NEGOTIATING STATUS AND CONDITIONS AND COVENANTSA. Negotiating Status

The design of the Phase II project was initiated in July 1984, with the arrival of a project design team recruited under the Science and Technology Bureau's African initiatives project. The team prepared an initial design after consultations with the Ministry of Education and the IEL I staff in Gbarnga. After the team departed, it was determined by the USAID staff that the paper was in need of substantial revision as there were still many unresolved issues and many elements of the original PP draft which were unacceptable to either the GOL or USAID. A series of meetings were held with senior Ministry of Education officials in which both technical and policy issues were discussed in great detail. USAID then prepared the present document incorporating USAID and MOE concerns.

B. Conditions Precedent to Disbursement

In addition to the standard conditions precedent, the Project Grant Agreement shall contain the following conditions precedent to disbursement.

1. First Disbursement

Prior to the first disbursement under the Grant or to the issuance by AID or documentation pursuant to which disbursement will be made the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

a) Evidence that IEL Senior Staff and their support staff in Gbarnga have been relocated to the Ministry of Education headquarters in Monrovia and that the IEL project director will be working full-time on the IEL project.

b) Evidence that an IEL Division has been made an official unit of the Ministry of Education directly responsible to the Deputy Minister of Instruction.

2. First Disbursement for Technical Assistance

Prior to disbursement under the Grant or to issuance by AID or documentation pursuant to which disbursement will be made, for the financing of technical assistance, other than for contractor support and personal services contracts, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

a) Evidence that the Grantee has available and will provide adequate office space and secretarial assistance at the Ministry of Education and at each of the Regional Centers for each member of the team under the technical assistance contract and for each team member's Liberian counterpart.

b) Evidence that the GOL has identified a counterpart to work with each member of the technical assistance team.

### 3) First Disbursement for In-Service Teacher Training

Prior to disbursement under the Grant or to issuance by A.I.D. of documentation pursuant to which disbursement will be made, for the financing of in-service teacher training the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that the Ministry of Education has initiated preparation for integrating the 16 week CINSTEP Program with the proposed 8 week IEL Teacher Training Program.

### 4. First Disbursement for Motorcycles

Prior to disbursement under the Grant, or to issuance by AID of documentation pursuant to which disbursement will be made, for the purchase of motorcycles, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, evidence that the Grantee, acting through the Ministry of Education, has established a system in accordance with GOL policy whereby (a) employees will pay for at least half the cost of motorcycles through periodic salary deductions or other mutually agreed upon mechanisms, and (b) all monies so collected will be deposited in a revolving fund from which replacement motorcycles will be financed or will be used to support other project - generated recurrent costs as agreed to by the Parties in Project Implementation Letters.

### 5. First Disbursement for Radios

Prior to disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made for the purchase of radios, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, evidence that adequate radio programming has been developed for IEL instruction.

6. Disbursement for Computer Scanner and Related Computer Equipment

Prior to disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, for the purchase of a computer scanner and related computer equipment, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID, a detailed plan outlining how the computer scanner and related equipment will be utilized.

7. Subsequent Disbursements

Prior to disbursements of project funds under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, in the years and for the purposes specified below, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

a) Prior to any gasoline and maintenance disbursements in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of gasoline expenses. The respective Grantee and AID contributions for gasoline are included in ANNEX I of the Project Agreement.

b) Prior to any disbursements for the IEL modules in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of the cost of replacing IEL modules. The respective Grantee and AID contributions for replacing IEL modules are included in ANNEX I of the Project Agreement.

c) Prior to any disbursements for IEL refresher training in 1989, 1990 and 1991, a budget breakdown showing that the Grantee has set aside sufficient funds to finance its share of refresher training expenditures. The respective Grantee and AID contributions for refresher training are included in ANNEX I of the Project Agreement.

d) Prior to any disbursements for radios in FY 1988, evidence that 75 percent of all the radios procured in calendar year 1986 and 1987 are in place and operational.

8. Disbursements for Long-Term Training

Prior to the first issuance of a Project Implementation Order/Participants (PIO/P) for long-term training under the Grant, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to AID, in form and substance

satisfactory to AID, a copy of a contract to be executed between the Grantee and all long-term trainees which obliges them to work for the Ministry of Education upon completion of such training for a period of two years for each year of training received.

### C. Covenants

The Project Grant Agreement shall contain, in substance, the following special covenants:

1. The Grantee agrees that all vehicles, equipment and materials purchased for the first phase of the project will be utilized only for this Phase II project unless AID otherwise agrees in writing.

2. The Grantee agrees that vehicles purchased with IEL II Project Funds will be exclusively for project use. Vehicles will be managed by the IEL unit and will not be pooled with MOE vehicles.

3. The Grantee agrees that all participants trained under the project will be placed in established positions in the IEL Division of the Ministry of Education upon completion of their training for a period of not less than two years for every year of training.

4. The Grantee agrees to continue replacing IEL instructional and training materials at regular intervals after AID involvement in the project is terminated.

5. The Grantee agrees to study the feasibility of creating a Bureau for Primary Education which integrates all offices in the MOE dealing with primary instruction. A joint GOL/USAID committee will be formed in year one to study the issue. The outcome of this study will be reported to AID by the end of year two of the project.

6. The Grantee agrees to make every effort to ensure that IEL trained teachers are assigned to IEL schools.

ANNEXES

- A. PID Approval and Issues Cables
- B. Grantee's Request for Assistance
- C. Statutory Checklist
- D. Logical Framework Matrix
- E. 611(e) Certification
- F. Procurement Waiver - 2 cables
- G. Project Analyses
  - G-1 Technical Feasibility
  - G-2 Financial Analysis
  - G-3 Economic Analysis
  - G-4 Social Soundness Analysis
  - G-5 Administrative Feasibility
- H. Supplementary Project Information
  - H-1 Detailed Project Implementation Schedule
  - H-2 Proposed Scopes-of-Work for Technical Assistance Personnel
  - H-3 Commodities List
- I. Initial Environmental Examination (IEE)

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ACTION ( AID 5 ) INFO: AMB DCM ECON 8/EV

VZCZCMV0412  
 OO RUEHMV  
 DE RUEHC #2538/01 1812222  
 ZNR UUUUU ZZH  
 P 292220Z JUN 84  
 FM SECSTATE WASHDC  
 TO AMEMBASSY MONROVIA PRIORITY 0414  
 BT  
 UNCLAS STATE 192538

06-JUL-84  
 TOR: 14:51  
 CN: 00623  
 CHRG: AID  
 DIST: AID

AIDAC

E.O. 12356: N/A

TAGS:

SUBJECT: LIBERIA - PID, IMPROVED EFFICIENCY OF LEARNING  
 (669-0166)

REF: STATE 162200

REFTEL APPROVED THE SUBJECT PID. THE FOLLOWING ARE ISSUES IDENTIFIED DURING THE PID REVIEW WHICH MISSION IS REQUESTED TO ADDRESS DURING THE INTENSIVE ANALYSIS PRECEEDING REVIEW OF THE PROJECT PAPER.

## 1. GOL COMMITMENT AND CAPABILITY:

- A. THE PID RECOGNIZES THE IMPORTANCE OF THE MOE'S CAPABILITY TO CARRY OUT IMPLEMENTATION EFFICIENTLY. TO ADEQUATELY ADDRESS THIS CONCERN MAJOR EMPHASIS SHOULD BE PLACED ON THE INSTITUTIONAL (I.E. TECHNICAL, MANAGERIAL AND FINANCIAL CAPACITY) ANALYSIS OF THE MOE AND ON EXPLORING ALTERNATIVE APPROACHES (E.G., PRIVATE SECTOR PARTICIPATION) IN IMPLEMENTING THE IEL II EFFORT.
- B. THE REVIEW EMPHASIZED THAT IEL II BE BOLD ENOUGH TO CAPTURE THE SUPPORT AND IMAGINATION OF KEY EDUCATIONALISTS, BUT THAT THE IMPLEMENTATION PLAN BE REALISTIC ENOUGH TO BE ACHIEVED. GIVEN LIBERIA'S SEVERE LOGISTICAL PROBLEMS AND THE SIGNIFICANT REVISIONS REQUIRED TO IEL I'S IMPLEMENTATION PLAN, CAUTION SHOULD BE EXERCISED IN FORMULATING THE IEL II IMPLEMENTATION SCHEDULE.
- C. THE PID DESCRIBED WORLD BANK INTERVENTION IN THE EDUCATION SECTOR AT SOME LENGTH. FOLLOW-UP DISCUSSIONS WITH THE WORLD BANK NOTED STRONG SUPPORT FOR COORDINATING AID AND BANK EDUCATION ACTIVITIES. WHILE THE BANK INDICATED ITS WILLINGNESS TO CONSIDER SPECIFIC SUPPORT FOR IEL II ACTIVITIES BASED UPON A GOL REQUEST, ULTIMATELY, ITS DECISION WILL BE BASED ON A THOROUGH REVIEW AND CLEAR DEMONSTRATION OF THE EFFECTIVENESS OF THE IEL METHODOLOGY AND REPLICATING MECHANISM. WHILE THE BANK HAS TEMPORARILY SUSPENDED THE PURCHASE OF TRADITIONAL TEXTBOOKS UNTIL A MARKETING STUDY CAN BE COMPLETED. IT HAS NO CURRENT PLANS TO DISCONTINUE THE TEXTBOOK PROGRAM.

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ROUTE TO	ACT.	INFO.
D/DD		✓
DP/TRG		✓
SPPD		✓
HRD	✓	
CON		✓
ARD		
EO		
PER		
GSO		
RF		✓
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ANS'D BY		
DRAFTED BY: NAN [x]		

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7/2/84

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THIS RAISES FUNDAMENTAL QUESTIONS CONCERNING THE GOL'S TECHNICAL, MANAGERIAL AND BUDGETARY CAPACITY TO IMPLEMENT BOTH PROGRAMS WHICH SHOULD BE ADDRESSED IN THE PP. THE PP SHOULD ALSO EXPLORE THE FEASIBILITY OF CONCENTRATING LIMITED GOL RESOURCES ON A SINGLE NATIONAL PRIMARY EDUCATION EFFORT RATHER THAN DILUTING LIMITED SUPPORT AND COUNTERPART BETWEEN THE IEL AND THE WORLD BANK PROGRAM RAISING THE POSSIBILITY OF NEITHER RECEIVING ADEQUATE SUPPORT. IF THIS IS FEASIBLE, THE PP SHOULD DISCUSS HOW THE GOL PLANS TO INTEGRATE THE TWO PROGRAMS. IF ON THE OTHER HAND THIS APPROACH IS NOT FEASIBLE, THE PP SHOULD DISCUSS THE REASONS FOR THIS CONCLUSION AND WHAT SPECIFIC MECHANISMS THE GOL INTENDS TO USE FOR COORDINATING THE AID AND THE WORLD BANK PROJECTS AND HOW THE GOL WILL ENSURE THAT ADEQUATE BUDGETARY MANAGEMENT AND TECHNICAL RESOURCES ARE AVAILABLE FOR BOTH EFFORTS.

- D. THE PID EXPRESSES RESERVATIONS CONCERNING THE GOL'S ABILITY TO FUND RECURRENT COSTS AND SUGGEST EXPLORING THE POSSIBILITY OF FAMILY AND COMMUNITY INVOLVEMENT IN ADDRESSING THIS PROBLEM. THE QUESTION OF RECURRENT COSTS IS A KEY ISSUE THAT MUST BE ADEQUATELY RESOLVED BEFORE FINAL PROJECT APPROVAL AND AUTHORIZATION. IN FOCUSING ON

THIS ISSUE, THE MISSION SHOULD ESTABLISH THE NATURE AND MAGNITUDE OF THE RECURRENT COSTS FOR THE ENTIRE IEL II EFFORT, IDENTIFY THE RESOURCES THAT CAN BE EXPECTED FROM THE GOL AND DEVELOP AN APPROPRIATE MECHANISM FOR BREACHING THE GAP BETWEEN RECURRENT COSTS AND THE RESOURCES THAT WILL BE FORTHCOMING FROM THE GOL. GIVEN THE GOL'S CURRENT AND FUTURE BUDGETARY PROBLEMS, THE FORMULATION OF A VIABLE APPROACH TO THE QUESTION OF RECURRENT COSTS IS SEEN AS ONE OF THE MOST SIGNIFICANT CHALLENGES FACING THE PP DEVELOPMENT PROCESS.

2. LINKAGE OF IEL I AND IEL II: IF FUNDS FOR IEL II ARE NOT AUTHORIZED/OBLIGATED UNTIL EARLY FY 1985, NORMAL CONTRACTING PROCEDURES MAY DELAY IMPLEMENTATION UNTIL LATE FY 1985. THIS WOULD RESULT IN A CONSIDERABLE GAP BETWEEN THE INITIAL AND FOLLOW-ON PROJECT. TO MINIMIZE THIS POTENTIAL PROBLEM, THE MISSION IS REQUESTED TO EXPLORE VARIOUS OPTIONS FOR ENSURING AN ADEQUATE DEGREE OF CONTINUITY BETWEEN THE TWO EFFORTS. ONE SUGGESTION FOR MAINTAINING CONTINUITY WOULD INVOLVE THE USE OF PD/S RESOURCES TO FINANCE A BRIDGE CONTRACT BETWEEN THE TWO ACTIVITIES. THE MISSION IS REQUESTED TO EXPLORE OTHER MECHANISMS FOR DEALING WITH THE CONTINUITY QUESTION IN THE EVENT THE PD/S APPROACH PROVES INADEQUATE OR OTHERWISE UNACCEPTABLE.

3. COMPREHENSIVE EARLY ALERT SYSTEM: AS NOTED IN THE PID,

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TECHNICAL ASSISTANCE AND COMMODITIES MAY BE ACQUIRED THROUGH AN 8(A) SET-ASIDE (IN THE CASE OF COMMODITY PROCUREMENT, THE PROCUREMENT SERVICE AGENT COULD BE SELECTED THROUGH A SET-ASIDE BUT THE ITEMS MUST BE PURCHASED THROUGH COMPETITIVE PROCEDURES). HBCU'S, PRIVATE AND VOLUNTARY ORGANIZATIONS, AS WELL AS MINORITY ENTERPRISES, ARE GENERALLY CONSIDERED UNDER THE COMPREHENSIVE EARLY ALERT SYSTEM. IN ADDITION TO THE SET-ASIDE MECHANISM UNDER 8(A), IT IS POSSIBLE TO PROCEED (BUT WITHOUT BENEFIT OF SET ASIDE PROCEDURES) WITH HBCU'S AND MINORITY PVO'S EITHER SEPARATELY OR JOINTLY WITH OTHER UNIVERSITIES OR ORGANIZATIONS. GUIDELINES AND PROCUREMENT REGULATIONS SHOULD BE CONSULTED. WHILE WE ENCOURAGE FULL CONSIDERATION OF SUCH POSSIBILITIES, THE MISSION, IN CONSULTATION WITH REDSO, WILL HAVE TO CHOOSE WHICH PROCUREMENT MECHANISM IS MOST APPROPRIATE. A FOLLOW-ON ARRANGEMENT WITH IIR CAN ALSO BE CONSIDERED, SUBJECT TO THE PROCEDURES PRESCRIBED IN THE PROCUREMENT REGULATIONS.

4. LIBERIANIZATION: APPRECIATE MOE'S/GOL'S DESIRE TO "LIBERIANIZE" THE TITLE OF DONOR PROJECTS. (E.G. CHANGING TITLE FROM IMPROVED EFFICIENCY OF LEARNING II TO THE NATIONAL INSTRUCTURAL PROGRAM OR SOMETHING SIMILAR). WE ENCOURAGE MISSION TO REFLECT THIS DESIRE IN THE DEVELOPMENT OF THE PP.

ARMACOST

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**MINISTRY OF EDUCATION  
MONROVIA, LIBERIA**

OFFICE OF THE MINISTER

M-1653/66-M/'85

June 19, 1985

Dear Mr. Acting Director:

We have read the Project Papers presented to the Ministry of Education requesting for review the Improved Efficiency of Learning Project II. In principle, we have no objections to the goals and objectives of the Project as we are convinced it will have a great impact on the primary educational system of our Country.

It is therefore Government's request that USAID/Liberia gives favorable consideration to having the Project authorized for implementation.

Kind regards.

Very truly yours,

*G. E. Saigbe Boley*  
G. E. Saigbe Boley  
MINISTER

Mr. John Pielemeir  
Acting Director  
USAID/Liberia  
Monrovia, Liberia

BLOCK STAMP ROUTER		
ROUTE TO	ACT.	INFO.
D/CD		✓
DP/TRG		✓
SPPD		
ECCN		
HRD	✓	
CUN		
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ED		
PER		
CSG		
RF		✓
FILE NUMBER:	85	
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DATE RECD:	7 8	
ANSWER		
GRADED BY:		NAN

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5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable generally to FAA funds, and criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 481. Has it been determined that the government of the recipient country has failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully? NO
  
2. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government? No such case exists for Liberia

3. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? No. The GOL has taken no such action.
4. FAA Sec. 532(c), 620(a), 620(f), 620D; FY 1982 Appropriation Act Secs. 512 and 513. Is recipient country a Communist country? Will assistance be provided to Angola, Cambodia, Cuba, Laos, Vietnam, Syria, Libya, Iraq, or South Yemen? Will assistance be provided to Afghanistan or Mozambique without a waiver? No.
5. ISDAC of 1981 Secs. 724, 727 and 730. For specific restrictions on assistance to Nicaragua, see Sec. 724 of the ISDCA of 1981. For specific restrictions on assistance to El Salvador, see Secs. 727 and 730 of the ISDCA of 1981. N/A
6. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property? No.

7. FAA Sec. 620(l). Has the country failed to enter into an agreement with OPIC? No. Liberia has an Investment Guaranty Agreement with the U.S.
8. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters? No.
- (b) If so, has any deduction required by the Fishermen's Protective Act been made? N/A
9. FAA Sec. 620(q); FY 1982 Appropriation Act Sec. 517. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any AID loan to the country? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the appropriation bill appropriates funds? (a) Yes, but every effort is being made to repay the debt before the one year arrearage date is reached. (b) No.
10. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the amount of foreign exchange or other resources which the country has spent on military equipment? (Reference may be made to the annual "Taking into N/A

Consideration" memo:

"Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

11. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? No.
12. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? (Reference may be made to the Taking into Consideration memo.) Liberia is not in arrears in U.N. obligations
13. FAA Sec. 620A; FY 1982 Appropriation Act Sec. 520. Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed an act of international terrorism? Has the country aided or No.

abetted, by granting  
sanctuary from  
prosecution to, any  
individual or group which  
has committed a war crime?

14. FAA Sec. 666. Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA? No.
15. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device, after August 3, 1977? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.) No.
16. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Session of the General Assembly of the U.N. of Sept. 25 and 28, 1981, and failed No.

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to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.)

17. ISDCA of 1981 Sec. 721. N/A  
See special requirements for assistance to Haiti.

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria. No.

a. FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

2. Economic Support Fund Country Criteria No.

a. FAA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the country made such significant improvements in its human rights record that furnishing such assistance is in the national interest?

b. ISDCA of 1981, Sec. 725(b). If ESF is to be furnished to Argentina, has the President certified that (1) the Govt. of Argentina has made significant progress in human rights; and (2) that the provision of such assistance is in the national interests of the U.S.?

N/A

c. ISDCA of 1981, Sec. 726(b). If ESF assistance is to be furnished to Chile, has the President certified that (1) the Govt. of Chile has made significant progress in human rights; (2) it is in the national interest of the U.S.; and (3) the Govt. of Chile is not aiding international terrorism and has taken steps to bring to justice those indicted in connection with the murder of Orlando Letelier?

N/A

## 5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B.1 applies to all projects funded with Development Assistance Funds, B.2 applies to projects funded with Development Assistance loans, and B.3 applies to projects funded from ESF.

CROSS REFERENCE: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project;  
 (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that amount)?

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be

(a) A Congressional notification (CN) was forwarded on July 11, 1985. The 15-day waiting period expired on July 26, 1985.

- (a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance? (a) Yes.  
(b) Yes.
3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance? N/A
4. FAA Sec. 611(d); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.) N/A
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project? N/A

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.
- No.
7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.
- (a) No effect  
 (b) No effect  
 (c) No effect  
 (d) No effect over the long term.  
 (e) Will improve efficiency by increasing the educational level of the general population.  
 (f) Minimal or no effect.
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- This project will provide U.S. technical assistance and commodities. Most of these inputs will be obtained in the U.S. Project will have no effect in encouraging U.S. private trade and investment abroad.

9. FAA Sec. 612(d), 636(n);  
FY 1982 Appropriation  
Act Sec. 507. Describe  
steps taken to assure  
that, to the maximum  
extent possible, the  
country is contributing  
local currencies to meet  
the cost of contractual  
and other services, and  
foreign currencies owned  
by the U.S. are utilized  
in lieu of dollars. GOL contributions to this  
activity will be assured  
through normal budget al-  
locations.
10. FAA Sec. 612(d). Does  
the U.S. own excess  
foreign currency of the  
country and, if so, what  
arrangements have been  
made for its release? No.
11. FAA Sec. 601(e). Will  
the project utilize  
competitive selection  
procedures for the  
awarding of contracts,  
except where applicable  
procurement rules allow  
otherwise? Yes.
12. FY 1982 Appropriation Act  
Sec. 521. If assistance  
is for the production of  
any commodity for export,  
is the commodity likely  
to be in surplus on world  
markets at the time the  
resulting productive  
capacity becomes  
operative, and is such  
assistance likely to  
cause substantial injury  
to U.S. producers of the  
same, similar or  
competing commodity? N/A
13. FAA 118(c) and (d).  
Does the project comply  
with the environmental  
procedures set forth in  
AID Regulation 16? Does Yes.

the project or program take into consideration the problem of the destruction of tropical forests?

N/A

14. FAA 121(d). If a Sanel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

N/A

#### FUNDING CRITERIA FOR PROJECT

##### 1. Development Assistance Project Criteria

a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and

(a) The project will make elementary education (grades 1-6) available to the general population, including the poor in the rural and urban areas.

(b) & (c) The project will increase the literacy rate and the general level of education through giving individuals the opportunity for a higher quality of life and laying the foundation for democratic and private institutions.

otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

(d) The project will provide educational opportunities at the elementary level for all individuals including women.

(e) Minimal effect. Further training of supervisory staff may take place in neighboring countries rather than in U.S.

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

Yes.

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?

Yes.

e. FAA Sec. 110(b).  
 Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed?" (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.

N/A

f. FAA Sec. 122(p). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

The project intends to provide elementary education to a majority of the population through raising the educational level and productive capacity of the Liberian people. Liberia has a very high illiteracy rate and suffers from a lack of trained teachers. This project, at the request of the Ministry of Education, will expand a proven pilot program to a nationwide program of elementary education.

g. FAA Sec. 281(p). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage

- institutional development;  
and supports civil  
education and training in  
skills required for  
effective participation in  
governmental processes  
essential to self-government. Yes
2. Development Assistance Project  
Criteria (Loans Only) N/A
- a. FAA Sec. 122(b).  
Information and conclusion  
on capacity of the country  
to repay the loan, at a  
reasonable rate of interest.
- b. FAA Sec. 620(d). If  
assistance is for any  
productive enterprise which  
will compete with U.S.  
enterprises, is there an  
agreement by the recipient  
country to prevent export  
to the U.S. of more than  
20% of the enterprise's  
annual production during  
the life of the loan?
- c. ISDCA of 1981, Sec. 724  
(c) and (d). If for  
Nicaragua, does the loan  
agreement require that the  
funds be used to the  
maximum extent possible for  
the private sector? Does  
the project provide for  
monitoring under FAA Sec.  
624(g)?
3. Economic Support Fund  
Project Criteria N/A
- a. FAA Sec. 531(a). Will  
this assistance promote  
economic or political

stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

- b. FAA Sec. 531(c). Will assistance under this chapter be use for military, or paramilitary activities? No.
- c. FAA Sec. 534. Will ESF funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives? No.
- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

## 5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

- |  |   |
|--|---|
| 1. <u>FAA Sec. 602</u> . Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?   | Yes, small and minority business can participate in the project as sub-contractors to universities. |
| 2. <u>FAA Sec. 604(a)</u> . Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?  | Yes   |
| 3. <u>FAA Sec. 604(d)</u> . If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? | No  |
| 4. <u>FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a)</u> . If offshore procurement of agricultural commodity or product is to be   | N/A   |

financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? N/A
6. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per cent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates? No.
7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Yes.

9. FAA Sec. 612(p), 636(n);  
FY 1982 Appropriation  
Act Sec. 507. Describe  
steps taken to assure  
that, to the maximum  
extent possible, the  
country is contributing  
local currencies to meet  
the cost of contractual  
and other services, and  
foreign currencies owned  
by the U.S. are utilized  
in lieu of dollars. GOL contributions to this  
activity will be assured  
through normal budget al-  
locations.
10. FAA Sec. 612(d). Does  
the U.S. own excess  
foreign currency of the  
country and, if so, what  
arrangements have been  
made for its release? No.
11. FAA Sec. 601(e). Will  
the project utilize  
competitive selection  
procedures for the  
awarding of contracts,  
except where applicable  
procurement rules allow  
otherwise? Yes.
12. FY 1982 Appropriation Act  
Sec. 521. If assistance  
is for the production of  
any commodity for export,  
is the commodity likely  
to be in surplus on world  
markets at the time the  
resulting productive  
capacity becomes  
operative, and is such  
assistance likely to  
cause substantial injury  
to U.S. producers of the  
same, similar or  
competing commodity? N/A
13. FAA 118(c) and (d).  
Does the project comply  
with the environmental  
procedures set forth in  
AID Regulation 16? Does Yes.

the project or program take into consideration the problem of the destruction of tropical forests?

N/A

14. FAA 121(d). If a Sanel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

N/A

## B. FUNDING CRITERIA FOR PROJECT

### 1. Development Assistance Project Criteria

a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and

(a) The project will make elementary education (grades 1-6) available to the general population, including the poor in the rural and urban areas.

(b) & (c) The project will increase the literacy rate and the general level of education through giving individuals the opportunity for a higher quality of life and laying the foundation for democratic and private institutions.

otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

(d) The project will provide educational opportunities at the elementary level for all individuals including women.

(e) Minimal effect. Further training of supervisory Staff may take place in neighboring countries rather than in U.S.

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

Yes.

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?

Yes.

e. FAA Sec. 110(b).  
 Will grant capital assistance be dispursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed?" (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.

N/A

f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

The project intends to provide elementary education to a majority of the population through raising the educational level and productive capacity of the Liberian people. Liberia has a very high illiteracy rate and suffers from a lack of trained teachers. This project, at the request of the Ministry of Education, will expand a proven pilot program to a nationwide program of elementary education.

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage

- institutional development;  
and supports civil  
education and training in  
skills required for  
effective participation in  
governmental processes  
essential to self-government. Yes
2. Development Assistance Project  
Criteria (Loans Only) N/A
- a. FAA Sec. 122(b).  
Information and conclusion  
on capacity of the country  
to repay the loan, at a  
reasonable rate of interest.
- b. FAA Sec. 620(d). If  
assistance is for any  
productive enterprise which  
will compete with U.S.  
enterprises, is there an  
agreement by the recipient  
country to prevent export  
to the U.S. of more than  
20% of the enterprise's  
annual production during  
the life of the loan?
- c. ISDCA of 1981, Sec. 724  
(c) and (d). If for  
Nicaragua, does the loan  
agreement require that the  
funds be used to the  
maximum extent possible for  
the private sector? Does  
the project provide for  
monitoring under FAA Sec.  
624(g)?
3. Economic Support Fund  
Project Criteria N/A
- a. FAA Sec. 531(a). Will  
this assistance promote  
economic or political

stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

- b. FAA Sec. 531(c). Will assistance under this chapter be use for military, or paramilitary activities? No.
- c. FAA Sec. 534. Will ESF funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives? No.
- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

## 5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

- |   |   |
|---|---|
| 1. <u>FAA Sec. 602.</u> Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?   | Yes, small and minority business can participate in the project as sub-contractors to universities. |
| 2. <u>FAA Sec. 604(a).</u> Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?  | Yes   |
| 3. <u>FAA Sec. 604(a).</u> If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? | No  |
| 4. <u>FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a).</u> If offshore procurement of agricultural commodity or product is to be   | N/A   |

financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? N/A
6. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per cent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates? No.
7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Yes.

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Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

8. International Air Transport. Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? Yes
9. FY 1982 Appropriation Act Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? Yes.
3. Construction
1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services to be used? N/A
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value or assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)?

C. Other Restrictions N/A

1. FAA Sec. 122(p). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? N/A
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by a international organization, does Comptroller General have audit rights? N/A
3. FAA Sec. 620(n). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? Yes.
4. Will arrangements preclude use of financing:
- a. FAA Sec. 104(f); FY 1982 Appropriation Act Sec. 525: (1) To pay for performance or abortions as a method or family Yes.

- planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion? Yes.
- b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property? Yes.
- c. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes.
- d. FAA Sec. 662. For CIA activities? Yes.
- e. FAA Sec. 636(1). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes.
- f. FY 1982 Appropriation Act, Sec. 503. To pay pensions, annuities, retirement pay, or

adjusted service  
compensation for military  
personnel?

g. FY 1982 Appropriation  
Act, Sec. 505. To pay  
U.N. assessments,  
arrearages or dues? Yes.

n. FY 1982 Appropriation  
Act, Sec. 506. To carry  
out provisions of FAA  
section 209(d) (Transfer  
of FAA funds to  
multilateral  
organizations for  
lending)? Yes.

i. FY 1982 Appropriation  
Act, Sec. 510. To  
finance the export of  
nuclear equipment, fuel,  
or technology or to train  
foreign nationals in  
nuclear fields? Yes.

j. FY 1982 Appropriation  
Act, Sec. 511. Will  
assistance be provided  
for the purpose of aiding  
the efforts of the  
government or such  
country to repress the  
legitimate rights of the  
population of such  
country contrary to the  
Universal Declaration of  
Human Rights? No.

k. FY 1982 Appropriation  
Act, Sec. 515. To be  
used for publicity or  
propaganda purposes  
within U.S. not  
authorized by Congress? No.

VZCZCMVI \*  
 DD DDHHC  
 DD DDHHC #7549/71 183 \*\*  
 ZNY UUUUU ZZH  
 P 021532Z JUL 85  
 FM AMEMBASSY MONROVIA  
 TO SECSTATE WASHDC PRIORITY 7992  
 BT  
 UNCLAS MONROVIA 7549

ANNEX J F

CLASS: UNCLASSIFIED  
 CHRG: AID 27/6/85  
 APPRV: D:MKILGUR  
 DRFTD: SPPD:DKLINF:WA  
 CLEAR: 1.FPP:MSIMON  
 DISTR: AID AMB CEG ECOM

AIRAC

F.O. 12756:M/A  
 SUBJECT: LIBERIA IMPROVED EFFICIENCY OF LEARNING II  
 - (669-3166): REQUEST FOR SOURCE AND ORIGIN WAIVER  
 - FOR 125 CC MOTORCYCLES AND SPARE PARTS

SPPD-2  
 D/DD  
 HRD  
 DP  
 CHRON  
 RF

1. AS AID/W IS AWARE, MISSION PLANS TO AUTHORIZE AND OBLIGATE IEL II WITHIN THE NEXT THREE WEEKS. WE WOULD LIKE THE AUTHORIZATION TO INCLUDE A WAIVER FOR TRAILBIKES AS DESCRIBED BELOW. ACCORDINGLY, WE REQUEST AFR/PD PROCESS SUBJECT WAIVER FOR AA/ATR APPROVAL. THE FOLLOWING LANGUAGE IS SUGGESTED:

PROBLEM: YOUR APPROVAL IS REQUIRED TO WAIVE THE REQUIREMENT TO PROCURE U.S. MANUFACTURED VEHICLES UNDER FAA SECTION 676 (I) AND FOR A SOURCE/ORIGIN WAIVER FROM GEOGRAPHIC CODE 300 (U.S. ONLY) TO GEOGRAPHIC CODE 935 (SPECIAL FREE WORLD) FOR THE PURCHASE OF 144 MOTORCYCLES AND SPARE PARTS VALUED AT \$273,620.

- 1. COOPERATING COUNTRY: LIBERIA
- 2. PROJECT: IMPROVED EFFICIENCY OF LEARNING (IEL) II (669-3166)
- 3. NATURE OF FUNDING: GRANT
- 4. DESCRIPTION OF COMMODITIES: 144 MOTORBIKES (150 TO 125 CC DISPLACEMENT) PLUS SPARE PARTS
- 5. APPROXIMATE VALUE: \$273,620
- 6. PROBABLE SOURCE: U.S. OR LIBERIA
- 7. PROBABLE ORIGIN: JAPAN

DISCUSSION:

THE IEL II PROJECT WILL UPGRADE THE QUALITY OF EDUCATION IN PRIMARY SCHOOLS THROUGHOUT LIBERIA. WHILE THE IEL I PROJECT FOCUSED ON PREPARING AND VALIDATING LOW COST COPY INSTRUCTIONAL MODULES FOR PRIMARY SCHOOLS AND DISSEMINATING THESE MATERIALS IN A LIMITED GEOGRAPHIC

AREA, THE PHASE II PROGRAM WILL DISSEMINATE THESE MATERIALS NATIONWIDE OVER SIX YEARS. THE PROGRAM WILL ALSO IMPROVE THE CAPACITY OF THE MINISTRY OF EDUCATION TO SUPERVISE AND ADMINISTER THE EXPANDED IEL PROGRAM BY PROVIDING TECHNICAL ASSISTANCE, TRAINING, AND COMMODITIES. PRESENTLY, DISTRICT AND COUNTY EDUCATIONAL OFFICERS HAVE NO MEANS OF TRANSPORTATION TO PROVIDE NEEDED SUPERVISORY AND SUPPORT SERVICES. DUE TO THE HIGH COST OF FUEL AND VEHICLE MAINTENANCE, THE POOR QUALITY OF THE LIBERIAN ROAD NETWORK, AND THE REMOTE LOCATION OF MANY OF THE RURAL PRIMARY SCHOOLS, MOTORBIKES CLEARLY OFFER THE MOST EFFICIENT MEANS OF TRANSPORTATION FOR DISTRICT AND COUNTY EDUCATION OFFICERS. SUCH MOTORBIKES HAVE BEEN USED SUCCESSFULLY BY HEALTH WORKERS IN SIMOE AND GRAND BEECH COUNTIES UNDER THE AID-ASSISTED PRIMARY HEALTH CARE PROJECT. PROJECT FINANCED MOTORBIKES WILL BE USED BY DISTRICT AND COUNTY EDUCATION OFFICERS AND PEACE CORPS VOLUNTEERS WHO WILL ALSO BE INVOLVED IN SUPERVISING IEL SCHOOLS.

SECTION 275 (I) OF THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED, REQUIRES THAT VEHICLES FOR DEVELOPMENT ASSISTANCE PROJECTS BE MANUFACTURED IN THE U.S. FAA 275 (I) MAY BE WAIVED IF THERE IS AN INABILITY OF U.S. MANUFACTURERS TO PROVIDE A PARTICULAR TYPE OF NECESSARY VEHICLE, OR IF THERE IS A LACK OF ADEQUATE REPAIR FACILITIES AND SPARE PARTS FOR U.S. MANUFACTURED VEHICLES. HANDBOOK 1, SUPPLEMENT B, CHAPTER 402D STATES FORTH AN ADDITIONAL REQUIREMENT THAT PROJECT VEHICLES BE OF U.S. SOURCE/ORIGIN UNLESS ONE OF SEVEN CRITERIA FOR GRANTING A WAIVER IS MET. ONE OF THESE CRITERIA IS THAT THE PARTICULAR COMMODITY REQUESTED IS UNAVAILABLE.

THE TYPE OF MOTORBIKE NEEDED FOR PROJECT IMPLEMENTATION IS A 120 TO 125 CC TRAIL MOTORBIKE, WHICH IS NOT AVAILABLE FROM MOTORCYCLE MANUFACTURERS IN THE UNITED STATES. U.S.-MANUFACTURED MOTORCYCLES ARE HEAVIER, MORE POWERFUL, MORE EXPENSIVE, AND UNSUITABLE FOR THE PURPOSE OF THIS PROJECT. MOREOVER, THERE IS NO REPRESENTATIVE OF U.S.-MANUFACTURED MOTORCYCLES IN LIBERIA FOR REPAIRING U.S.-MADE MOTORCYCLES AND PROVIDING SPARE PARTS. THERE ARE PRESENTLY SUZUKI, HONDA AND

YAMAHA DEALERSHIPS IN LIBERIA; MAINTENANCE/REPAIR SERVICES AND SPARE PARTS ARE AVAILABLE FOR THESE TYPES OF MOTORBIKES. HOWEVER, TO INSURE THE AVAILABILITY OF ADEQUATE SPARE PARTS IN REMOTE RURAL PROJECT AREAS, A SUPPLY EQUIVALENT TO 25 PERCENT OF THE PURCHASE COST OF THE MOTORBIKE IS ADVISABLE.

RECOMMENDATION:

BASED ON THE JUSTIFICATION ABOVE, IT IS RECOMMENDED THAT YOU (1) DETERMINE THAT SPECIAL CIRCUMSTANCES EXIST TO JUSTIFY WAIVING THE REQUIREMENT TO PROCURE U.S.-MANUFACTURED VEHICLES UNDER FAA SECTION 636 (1); (2) CERTIFY THAT EXCLUSION OF PROCUREMENT FROM FREE WORLD COUNTRIES, OTHER THAN THE COOPERATING COUNTRY AND COUNTRIES INCLUDED IN AID GEOGRAPHIC CODE 241, WOULD SERIOUSLY IMPEDE THE ATTAINMENT OF U.S. FOREIGN POLICY OBJECTIVES AND THE OBJECTIVES OF THE FOREIGN ASSISTANCE PROGRAM; AND (3) WAIVE THE SOURCE/ORIGIN REQUIREMENTS SET FORTH IN HANDBOOK 1 SUPPLEMENT B, TO PERMIT THE PROCUREMENT OF 144 TRAIL MOTORBIKES AND SPARE PARTS FROM COUNTRIES INCLUDED IN GEOGRAPHIC CODE 235.

2. PLEASE ADVISE WHEN WAIVER IS APPROVED. SHURTLEFF

20

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ACTION: AID 5 INFO: AMB DEM TCON POL 2/8

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T.O. 10356: N/A

TAGS:

SUBJECT: LIBERIA IMPROVED EFFICIENCY OF LEARNING II

(669-0166)

SOURCE AND ORIGIN WAIVED FOR SUBJECT PROJECT FOR PURCHASE OF 144 MOTORBIKES SIGNED BY ACTING AA/AFR BURMAN ON JULY 11, 1985. COPY OF EXECUTED WAIVER POUCHED TO MISSION ON JULY 16, 1985. WHITFIELD

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CON		✓
ARC		
ED		✓
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GSD		
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ANSW BY: [Signature] 7/19/85		
DRAFTED BY: M.S. mo. NAN		

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ANNEX G-1: TECHNICAL ANALYSISA. Introduction:

This project is a follow-on to a successful six-year \$7.5 million effort to solve two of the major problems confronting Liberia's public elementary schools: 1) a severe lack of trained teachers and 2) an almost complete absence of appropriate and affordable textbooks and other learning materials.

The evaluation of IEL I indicated that these problems can be met most effectively by an instructional system that makes minimal demands on the pedagogical or subject area training and experience of the classroom teacher and that can be delivered at low cost.

B. Background to IEL

The IEL project in Liberia is a recent addition to a number of activities worldwide that uses programmed instruction to help solve problems in elementary education. These projects, which include IMPACT in the Philippines, PAMONG and PPSP (Development School Project) in Indonesia, RIT in Thailand, INSPIRE in Malaysia, and PRIMER in Jamaica, grew out of a concern that rapidly expanding enrollments and difficulties in financing education in LDC's would put extreme pressures on the capacities of those countries to provide effective primary education to the majority of its school age children.

The projects were developed to utilize programmed instruction, which emphasized self-directed learning. In each country, however, the problems and objectives were somewhat different, as were the resulting applications of programmed learning. For example, IMPACT aimed at reducing per pupil costs without reduction in academic achievement by increasing student/teacher ratios from the traditional 40 to 1 to 100 to 1. PAMONG developed a series of approaches to be used in the wide variety of educational environments existing in Indonesia. Extending primary education opportunities to out-of-school learners was an important objective. In-school, cross-age tutoring was encouraged, e.g., older students using programmed teaching materials to teach younger students. RIT in Thailand developed a series of locally produced, low-cost instructional materials to help reduce the amount of time required for instruction.

The application of programmed instruction in these countries was considered so effective, that in 1977 USAID invited a group of Liberian educators to visit Indonesia and the Philippines and examine their systems firsthand. The Liberian delegation returned and enthusiastically endorsed the programmed learning approach because it was convinced that the system could be applied to Liberia.

The experience of other countries using programmed learning techniques have helped planners design the IEL project for Liberia. As a result, IEL was able to establish a basis for a workable system of primary education in Liberia using programmed instruction. IEL, for example, focused on the quality of instruction at low cost. The Thai RIT system of reducing learning time gave the IEL planners in Liberia the idea of developing enrichment modules to allow brighter students to continue to sharpen their intellectual skills. The evaluation of Phase I has shown that programmed instruction is so effective, that the MOE has agreed to expand the system nationwide.

A major innovation for the adaptation of programmed learning in Liberia is that IEL I developed a full set of primary school curriculum materials (English, language arts, mathematics, reading, science and social studies). All materials were written in Liberia, are based on the official Liberian national curriculum and are the only complete set of locally developed elementary school materials in the country.

A second innovation was introduced through IEL's delivery system in the classroom. The curriculum is presented in units of increasing difficulty in the form of subject matter modules which are used with clustered groups of students. A teacher's guide is combined with the modules providing teachers with a built-in instructional methodology. In addition, teachers and school principals were given a three-week intensive course in how to use the IEL system in their schools. The course that relies upon practical training through techniques of role-playing and demonstration rather than upon theory delivered through lecture. Teacher skills in such areas as pupil motivation, classroom management and pupil evaluation are added to the techniques of using the IEL modules and are part of the teacher training course.

During the IEL I experimental, or pilot phase, a cadre of specialized teacher trainers was established. When teachers returned to their classrooms, these trainers became instructional supervisors who visited the classrooms at least twice each month during the first semester. The trainers, now eight in number, will be increased to twelve to train the 2,140 teachers scheduled for training during IEL II.

While teachers and school principals were trained together for the first three weeks, the school principals were given one week of additional training centered around problems of school administration and supervision because the IEL system requires effective and regular monitoring and/or supervisory assistance. Additionally, since many school principals were

having their first experience with programmed instructional modules, careful directions were provided in the use of these modules, their distribution and storage. Additionally, data collection methods as well as testing skills were stressed.

Because of the experimental nature of IEL I, Ministry of Education field education officers were not included in the program. However, as the system goes nationwide with an increased emphasis on supervision, the role of the field education officers is essential because they are the professional representatives of the Ministry of Education at all levels (district, county and regional). They will receive training every year during the life of the project. The education officers will also be assisted by field-based advisors to assure adequate and appropriate classroom supervision and professional upgrading.

The IEL II project will increase the training period for teachers to eight weeks. The increase in training time is intended to improve the teachers' skills in teaching methodology, subject matter and classroom management. The training will loosen the rigidity of programmed instruction, a criticism of the IEL system, because it will provide teachers with a broad range of instructional skills for teaching flexibility and a more comprehensive methodology. The IEL II project will also offer training for county and regional school officials at various training seminars taught by both the Ministry of Education and technical assistance personnel. Graduate long- and short-term training, both in-country and in the U.S., is planned for MOE officials in areas critical to the success of the project.

Long-term graduate training is planned specifically for trainees who will learn the skills and knowledge required for IEL leadership roles in administration, training/supervision, curriculum and evaluation. Short-term training will be used to send selected DEOs to short training and supervision courses. Furthermore, classroom supervision is scheduled once weekly for the semester following the eight-week training session for new teachers. All other teachers in IEL will be supervised once each month.

### C. Does IEL Work?

According to four evaluations completed between 1981 and 1984<sup>1</sup>/, the IEL project was found to be well-fitted to the current Liberian educational situation. Each evaluation has recommended continued investment in the IEL method on the basis of the improved academic performance of pupils, increased enrollments with no increase of instructional staff and lowest per pupil cost of any available alternatives, including textbooks.

<sup>1</sup> Evaluations conducted between November 1981 and April 1982: a) Dr. Robert Jacobs, "Formative Evaluation of the Improved Efficiency of Learning;" b) Drs. Grant V. Harrison and Robert M. Morgan, "An Evaluation of the Improved Efficiency of Learning Project;" c) Mid-Term Evaluation Committee, "Improved Efficiency of Learning Project: Mid-Term Evaluation Report." and d) Dr. Ed Kelly, "External Evaluation of the Improved Efficiency of Learning Report" (1984).

In April 1984, the project evaluation (Kelly, "External Evaluation of the Improved Efficiency of Learning Project") concluded that:

- 1) IEL is an instructionally effective program that produces achievement superior to conventional classrooms in Liberia;
- 2) IEL enrollment has increased significantly without requiring additional teaching faculty;
- and 3) IEL produces meaningful cost savings.

The first conclusion was in keeping with the findings of a multi-year tracking of the educational development of children in 45 schools. The second was reached by review of MOE and project records. The third conclusion was based on detailed analysis of both the Liberian economy and the fiscal effectiveness of its educational system, including the IEL system. The cost analysis was conducted in 1982-1983 by Douglas M. Windham of the State University of New York at Albany and corroborated by the Kelly report.

Windham's conclusion was that IEL is clearly cost effective when used with classes of 20 or more students in comparison with the cost of textbooks per student. However, IEL costs are still lower than textbooks with groups of under 20 when each pupil has his own book (which is most likely since pupils must buy their textbooks). Only when pupils in small groups share books, according to Windham, does the textbook become more cost effective than the IEL system (see Annex G-3).

There have been criticisms of IEL, e.g., it is too mechanical; brighter children are held back by slower ones; some teachers do not have the verbal skills to teach the IEL system; and materials cannot be taken home by students. However, these problems do not negate the value of the IEL system where most public primary schools operate with little or no instructional materials and with untrained teachers.

Nevertheless, these problems will be addressed through the eight-week teacher training course and through the courses for school principals and field supervisors. The increase of training time from four to eight weeks will provide opportunity to respond to these problems in some detail under the professional guidance of the regional U.S. technical advisors and by the IEL instructional supervisors. The additional training will stress verbal skills, student motivation and activity-based learning through programmed instruction.

#### D. IEL II Staffing and Organization

All project elements to be utilized in implementing IEL II will use the techniques refined during IEL I, e.g., materials design, production/ printing, distribution, evaluation and

teacher training. There will be no major changes in IEL II, but a switch of emphasis from design and production to training and supervision will be necessary at this stage in the project. Production and distribution of materials will also be increased. As IEL I concludes, a well-trained, highly motivated group of 20 IEL Unit professionals will move from the project site in Gbarnga to a newly established IEL Division in the Ministry of Education in order to integrate the IEL system into the mainstream of the Ministry.

The IEL staff will operate as an official division directly under the supervision of the Deputy Minister of Instruction. The IEL Unit will receive policy direction from the IEL Project Steering Committee which, in turn, will be responsible to the Minister of Education.

The Monrovia Consolidated School System (MCSS) is included in the IEL project because the majority of its schools have the same problems of schools nationwide -- lack of qualified teachers and lack of instructional materials. The MCSS will be phased into the project on the same basis as other counties in coordination with its supervision staff and the PCVs. Discussions on MCSS participation have taken place and the MCSS superintendent has agreed in principle to be included in Phase II of IEL.

#### E. Why IEL II is Technically Feasible

1. The personnel required to implement the project are already a part of the Ministry of Education. The majority of the IEL I curriculum design technicians also have had training and experience in the areas required for IEL II: training/supervision, administration/management, curriculum/evaluation and production/dissemination management. About twelve of 46 District Education Officers will be selected for short-term participant training to improve and strengthen the supervision capability. In addition, all education officers will receive two week workshops in supervision annually.

Qualified staff of the IEL Unit will be selected for long-term participant training to improve and update the capability of the MOE/IEL. In addition, the existing staff of regional, county and district education officers form the corps of supervisors to visit schools, offer workshops and help teachers and principals improve the quality of teaching. The regional education officers will be assigned field-based U.S. advisors in training and supervision. The county education officers will have IEL instructional supervisors as project resources. The district education officers will have PCVs working with them in classroom supervision. MCSS is considered a district for this project and the MCSS supervisors will be assigned PCVs as counterparts.

2. The teacher support system is intended to give regular supervisory coverage to every IEL classroom. All project classrooms will be visited once each month throughout the project. However, for the semester following the initial eight-week training, classrooms will be visited weekly by the DEO and/or the PCV.

When problems are identified, e.g., need for special workshops in subject matter, special teacher problems or a dysfunctional aspect of IEL, the county education officer and the instructional supervisors will respond to them. The regional educational officers and the U.S. technical advisor counterparts will develop the training and implementation materials such as training guides; manuals for teachers, principals and EOs; and otherwise assure satisfactory progress in IEL development. Table II-8 in Chapter II illustrates the task of classroom supervision for the entire project period and the number of PCVs required for each year.

The supervisory teacher support system is designed to differentiate the tasks of MOE personnel who will work in IEL. Table IV-2 in Chapter IV describes this differentiation in detail.

3. The Peace Corps Volunteers (PCVs) will coordinate the supervision of classrooms with the DEOs. The PCVs will provide guidance and counsel to teachers and principals for IEL and offer direct IEL assistance to individual teachers through visiting a specific number of original schools weekly.

The PCVs' tasks will include the following:

- a. Assist teachers in the application of Programmed Teaching (PT) and Programmed Learning (PL).
- b. Give demonstration lessons.
- c. Conduct workshops on subject matter.
- d. Conduct workshops on teaching methods.
- e. Offer IEL assistance to principals on techniques of teacher evaluations and school administration.

4. The MOE has endorsed the IEL project and agrees that it will expand nationwide and incorporate the IEL system into all public schools in Liberia in a phased manner. Private schools will have access to IEL training and materials as available.

5. Under IEL II, 21 person years of long and short-term participant training will be funded for participant training to strengthen MOE management and educational capabilities. When the participant trainees return from study, they will utilize their knowledge and new skills to improve the MOE. Specifically, the three trainees in training and supervision will replace the regional technical advisors. The curriculum trainees will help modify the instructional materials used throughout IEL II for post-project activities. The tests and measurements person will help further refine the testing of student achievement, year after year, to determine the improvement level of pupils in IEL. The administration/ management trainee will have a broad perspective in the articulation of the administrative needs of primary education.

6. The plan of supervision in IEL II is to improve effective techniques in the established MOE supervisory structure. The REOs, CEOs and DEOs will be responsible for the integration of supervision with IEL methodology. These education officers will receive workshop and technical training to function effectively in their respective roles. The technical advisors will be responsible for planning the EOs workshops. In effect, all EOs will receive a total of 12 weeks of supervision training during the LOP (two weeks annually for six years).

The present system of school supervision is limited because education officers do not have the necessary training in classroom supervision. In addition, most of them do not have the means to visit the schools.

7. Four-wheel drive vehicles or trail bikes will be provided to education officers to supervise the schools. The DEOs and CEOs will be assigned trail bikes. Instructional Supervisors and REOs will be assigned four-wheel drive vehicles which will also serve to deliver IEL materials. The three field-based U.S. technical advisors will also have vehicles to fulfill their training/supervisory responsibilities. In addition, Peace Corps volunteers, assigned to district education officers will be given trail bikes to assist in classroom supervision.

The use of an adequate number of vehicles is one way to assure the improvement of teaching and supervisory skills in the effective use of modules. With vehicles the various supervisors will monitor the progress and problems of the classroom teachers and school principals.

8. The school principal is seen as the instructional leader of his school. To strengthen his skills, the project will provide additional training for principals in instructional methods. In this matter, the principal will have the training and skills to offer day-to-day supervision to the staff. The technical advisors will be responsible for planning and implementing these workshops with assistance from the instructional supervisors, the PCVs and DEOs.

9. The IS will be available as a resource to all supervisors to offer advice on pertinent IEL matters. The IS will function at the county level. He and the CEO will also respond to problem schools and conduct workshops in subject matter or other special needs as required.

10. IEL II will be further supported by radio through the Liberian Rural Communication Network when the radio facilities are scheduled to be available in late 1986. IEL will be able to offer supplementary teacher in-service programs through the local LRCN stations. Inservice programs are to be broadcast on Saturdays and after school hours to respond to teachers' and principals' problems. The radio medium will be community based so that school personnel can share problems, exchange views and improve their knowledge and skills on a local basis.

11. The project is also feasible because the MOE has agreed that IEL expansion nationwide will no longer conflict with the textbook approach or with the MOE upgrading teacher inservice programs. IEL schools will use IEL approved materials only. The MOE will not include primary level textbooks in their proposed World Bank V Project.

#### F. Planning Considerations of Major Components of Project

The training and materials dissemination activities of IEL II will pose a combination of technical and administrative challenges to the project management as well as to the MOE administrative staff. Table G-1-1 is presented in terms of how the major components of the project will be accomplished, who will be responsible for them and possible constraints. The major components are the following:

1. Teacher training for staff new to IEL; supervision training for principals and education officers.
2. Supervision of schools by regional, county and district education officer.
3. Dissemination of IEL materials from regional or county offices to schools.

The Chief of Party for the contractor will prepare detailed plans for each of the activities noted here. The IEL II technical services contract will include materials production and distribution, teacher training and supervisor training. Each of these activities are discussed in the project design.

An important dimension of the IEL II project will be the quantity of printed materials (and the logistical capacity to package and transport them) necessary to reach schools with approximately 80 percent of primary school enrollment. Study of this situation points to a strong reliance on the private sector; IEL and MOE personnel indicate that adequate printing facilities are available if coordinated and supervised effectively.

## ANNEX G-2 - FINANCIAL ANALYSIS

### A. Introduction

The GOL's ability to provide its contribution and meet recurrent costs are the principal issues of financial viability confronting the IEL II project. The current GOL financial crisis is severe and expected to continue for several years. In order to avoid overburdening the already constrained GOL budget, no new GOL positions were created in the designing of IEL II.

### B. GOL Fiscal Position

Substantial budget deficits have plagued the GOL since the 1978/79 budget year, as shown in Table G-2-1. The expenditures incurred as a result of hosting the 1979 OAU summit meeting and the salary increases and new hiring following the 1980 coup d'etat were among the major contributing factors to the enormous increase in the GOL deficit. In only three years the recurrent expenditures grew over 95 per cent reaching a level of \$300.6 million in 1981/82. Meanwhile, the negative domestic business climate caused a decline in commercial activity and decreasing world market prices caused export earnings to fall, thus continuing the stagnation of GOL revenues. All of these factors combined in 1981/82 to produce a GOL deficit of \$117.7 million.

The GOL has made substantial sacrifices to counter this deficit trend, albeit as conditions to AID ESF program assistance and five IMF Standby Agreements. The GOL instituted a hiring freeze in 1981/82 and salary cuts of 16.7 to 25 percent for all government workers in January 1983. However, even with these measures, control of the deficit has yet to be accomplished.

In view of this budget deficit trend, we can at best expect a continued hiring freeze and no growth in the recurrent or development budgets. Additional cost cutting measures will be necessary, as each ministry must tighten expenditure controls to eliminate spending beyond allotment levels.

### C. Financial Implications of the Project

Of increasing importance in this period of fiscal crisis are possible mechanisms to minimize the GOL recurrent costs of the IEL II Project both during and after implementation. There are three specific recurrent cost areas where the project design attempts to minimize the recurrent cost burden on the GOL, as discussed in the subsections which follow.

### 1. Redeployment of Existing Personnel

The salaries of the GOL personnel -- teachers, REOs, CEOs, DEOs and headquarters staff -- necessary to implement and sustain the IEL teaching method represents a major project related recurrent cost for the GOL. Given the GOL fiscal position and anticipated cuts in the recurrent and development budgets, IEL II was designed without creating any new GOL positions or schools. GOL/MOE employees in existing teacher and supervisory positions will be redeployed and trained in the IEL II method, thus increasing educational effectiveness and cost efficiency in the classroom without increasing the salary burden on the GOL.

### 2. Phasing of Commodity Costs

The GOL's current fiscal position will make it difficult for the GOL to fund the costs for the IEL materials, gasoline and vehicle maintenance during the initial years of the project. In order to ease this burden, the project design incorporates a phasing plan whereby the GOL will contribute 25 percent of the costs of the IEL materials, gasoline and vehicle maintenance in year 4, and 50 percent and 75 percent in each of the remaining two years. This phasing of costs in year 4 comes at a time when the World Bank IV project will be completed and thus, in principle, making available those funds which will no longer be budgeted for the World Bank project. The project contains a contingency which will give some assistance for recurrent expenditures if USAID determines that the GOL cannot provide these funds.

### 3. Motorcycle Purchase Scheme

The motorcycle purchase scheme is a system in which the project funded motorcycles will be sold by the GOL to MOE staff at lower than market cost. Based on a contract with each MOE employee, payments are made through a monthly payroll reduction scheme. The nature of this scheme encourages the employee to be more responsible for the equipment and, at the same time, provides the MOE with 50 percent or more of the replacement cost. The funds generated by the sale of the motorcycles may be used for the purchase of new motorcycles or other mutually agreed project generated recurrent costs. Similar motorcycle purchase schemes of other AID-funded projects have recently been approved by the GOL: however, no experience has yet been gained so that a modification to this approach may be required.

Although this recurrent cost problem will be difficult to overcome, there are several possible sources of funding available to meet some of these costs. Most significant among these are the proceeds from the sale of PL-480 Title I rice, the proposed World Bank SAC (Structural Adjustment Credit) program and funds made available through the discontinuance of GOL subsidies to private schools. In the case of PL-480 Title I counterpart funds, the GOL has already scheduled \$450,000 to

be provided to IEL from the GOL FY 84/85 agreement. Similar to the PL-480 program, the proposed World Bank SAC program, if approved, will provide 16 million in structural adjustment counterpart development funds from commodity importations over a two-year period. A third possible source, is the GOL's intention to phase out its subsidies to private schools. As the plan has not been finalized, the number of schools and resulting cost savings has yet to be determined. One should note, however, that expenditures for all subsidies and scholarships were \$6.24 million and \$3.97 million in GOL FY 82/83 and FY 83/84, respectively, and are estimated to be \$3.9 million in FY 84/85.<sup>1</sup> Once the institutions are identified the full impact of this plan can be measured.

Finding ways to minimize the GOL recurrent costs will continue to be an issue during implementation of this project. The MOE and USAID are investigating various cost recovery measures such as user fees or allocation of a portion of registration fees to help finance replacement of the IEL modules and material. The recurrent costs and, indeed, all project costs will be reviewed during the mid-project evaluation. For this review, a financial analyst will be a member of the evaluation team.

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<sup>1</sup> Source: Ministry of Education

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Table G-2-1  
 GOL REVENUE AND EXPENDITURES  
 1978/79 - 1984/85  
 (in \$ millions)

	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85 <sup>1/</sup>
Revenue <sup>2/</sup>	224.9	225.8	242.4	279.3	257.4	275.2	264.0
Expenditures							
Recurrent	152.9	179.7	232.8	300.6	265.3	244.4	302.3
Development	212.8	134.0	124.2	96.4	95.8	90.6	43.0
Balance <sup>3/</sup>	<u>(140.8)</u>	<u>(87.9)</u>	<u>(114.6)</u>	<u>(117.7)</u>	<u>(103.7)</u>	<u>(59.8)</u>	<u>(81.3)</u>

Source: GOL-Ministry of Finance

<sup>1/</sup> Latest est. revision 4/1/85

<sup>2/</sup> Includes Foreign Grants

<sup>3/</sup> Dericit on a checks issued basis

ANNEX G-3 - ECONOMIC ANALYSISA. Benefit Cost Analysis of the IEL II Project

This analysis will attempt to measure the costs and the benefits of this project, with a monetized value of each as the analysis's numeraire. Thus, only those costs and benefits that can be monetized will be included in the numerical portion of this analysis. Since the costs of the project are rather straightforward and we do not expect any indirect costs to society, the cost figures arrived at in the financial analysis along with estimated longer-term recurrent costs of the project will be used directly in this benefit cost analysis (see Table G-3-1).

As is normally the case, the benefits of this project will include both direct benefits and indirect benefits. Also, the value of some of these benefits can be given a monetary value as they represent actual quantifiable savings to the Ministry of Education, to the students involved in IEL or improvements in potential worker productivity and to the overall national production. Other benefits derived from this project include the direct but unquantifiable benefit that the nation realizes from a better educated populace. Surely, being better educated through IEL offers intangible benefits of advancing the net condition of society. However, there is no way to monetize the benefit or utility derived by a student who better understands his world, the great philosophers, mathematics, etc. Nonetheless, this is a major direct nonquantifiable benefit. Since this benefit cannot be reduced to a monetized numeraire it must be neglected in the numerical portion of this analysis but still considered a benefit.

Another unquantifiable but indirect benefit is realized through the training of the IEL teachers. These teachers also become better educated and represent an improvement in society's welfare.

The quantifiable benefits derived from this project include: 1) savings to the MOE due to a reduced number of years required to get a student through the sixth grade; 2) savings of the opportunity of the student's chance to begin his work-a-day life a year earlier because it now takes, on average, one less year to complete the sixth grade than it would have under the current teaching method; and 3) it is claimed that IEL trained students become potentially more productive workers and so potentially make Liberia a more productive Country, increasing national product and income.

Once the costs and the benefits are calculated they will be discounted to account for time value, a net present value (NPV) will be calculated. NPV is similar to the net profit that a businessman hopes to earn on his investments. NPV greater than zero indicates that this is indeed a profitable investment. Once the NPV has been calculated the Internal Economic Rate of Return (IRR) can also be calculated. The IRR represents the economic rate of return realized on each dollar's worth of expended resources. The IRR is a useful calculation since it allows comparison among projects and alternative uses of resources.

### 1. Calculations

All monetized values, both benefits and costs, are calculated and have a letter heading. Each of these values is explained below:

A - This merely refers to the number of teachers scheduled to be trained in the use of IEL materials over the period FY 1986 through FY 1990.

B - This represents the number of new students that are being taught by these IEL trained teachers.

C - This represents the total number of students being taught by IEL trained teachers, topping out at the 74,469 level (total 1-6 grade population). In the rest of this analysis this population is assumed to remain constant.

D - This represents the number of students leaving the sixth grade who have completed a full six years of education under the IEL method of instruction. Since IEL is expected to take seven years for the average student to complete through the sixth grade, the figure 1,628 is estimated by taking one-ninth of the entire IEL educated beginning population of 14,649 in the first year and allowing for an abnormally distributed student population where although we might otherwise expect the ratio to be one-seventh instead we use the ratio one-ninth.

E - This increase in GDP is calculated by considering the graduates of the IEL method as being more productive workers and having the capacity to increase their average per capita production by five percent. Currently, GDP per capita in Liberia comes to roughly \$500 per year. For the purpose of this exercise, we can expect each IEL graduate to improve productivity at \$25 per year. Column E, then, represents \$25 times column D. Note this \$25 is a very conservative figure, since the implicit assumption here is that over the next twenty years there will be no other improvements in productivity.

In Windham's earlier Benefit-Cost Analysis (1984) of this project it was estimated roughly that IEL graduates due to improved reading, writing and comprehension skills, would become potentially 20% more productive workers than their non-IEL educated contemporaries. However, considering the lack of employment opportunities in the urban areas, and the seasonality of employment in rural areas we can reduce this potential 20% improvement to 10%. This 10% must be further discounted to account for disincentives to productivity, particularly in public sector employment and traditional agriculture. Five per cent or an average value of \$25 per IEL graduate then becomes the prudent economist's expected improvement in productivity.

F - This column shows the number of students finishing the sixth grade who have had some education through the IEL method.

G - This is a participation coefficient. This coefficient is used as a weight indicating what part of the sixth grade leavers' education has been provided through the IEL method. A student who leaves the sixth grade with only one year of IEL is assigned the participation coefficient of .167, or one-sixth.

H - This opportunity cost is the savings accrued by students who under IEL will, on the average, require 7 years rather than 8 years to get through the sixth grade. This opportunity cost is the expected value of one year's earnings to the student leaving school one year earlier.

I - This is the savings realized to the Ministry of Education due to the reduction in time needed to educate a student through the sixth grade. The Ministry of Planning and Economic Affairs estimated in its Liberia Education and Training Sector Assessment that the average per graduate cost for the public primary education cycle comes to about \$910. This analysis holds that one-tenth of this cost is saved due to the IEL method reducing class repetition. Some of this savings can be realized in the long run while the rest may be applied to increased primary school enrollment. This value is arrived at by multiplying the number of IEL graduates by their respective participation coefficients and then multiplying this by \$91, which represents the average per student savings to the MOE (i.e.,  $H \times I \times \$91 = N$ ).

J - This is the nominal cost to AID as presented in the Financial Analysis and Plan.

K - This is the nominal cost to the GOL presented in the Financial Analysis and Plan.

L - This is the net cash flow of benefits and costs in nominal terms. It is this cash flow that provides us with the NPV and IRR.

## Conclusion

As indicated in Table G-3-1 the NPV of this project, applying a social discount rate of 10%, comes to \$11,516,299 indicating that this project is economically feasible and socially profitable. The calculated IRR of 19.2% allows us to compare this project with other development projects. Although risk assessment of projects is necessary when making a thorough comparison, it appears on surface that this project, conservatively estimated, offers an attractive net yield.

### B. The Relative Least Cost Analysis

The analysis draws heavily upon a series of cost analyses and comparisons of effectiveness sponsored by USAID (see Windham, Reports 1, 2 and 3 on The Relative Cost-Effectiveness of the Liberian IEL Project, 1983). The original intention of these studies had been to compare costs of IEL versus two forms of the traditional curriculum: status quo (SQ) schools which were to be "typical" non-metropolitan elementary schools and optional conventional (OC) schools which were to represent an "ideal" example of the traditional teacher and textbook based curriculum. Because the OC schools have not received the full set of textbooks nor teacher training support as originally planned, the resultant cost and effectiveness evaluation reflected a contrast of IEL and SQ schools.

Earlier cost effectiveness studies contrasted cost differences with achievement differences (with the value of achievement differences being subjectively determined). This least cost analysis considers various alternatives to achieve an output, without comparing the various outputs, i.e., a comparison of per student costs of materials. While IEL's design is to economize on teacher demand (i.e., make do with current teacher basic quality and number), the overall program emphasis is to be justified not in terms of cost savings but of achievement enhancement. In comparing the IEL system to the SQ-type schools (even if materials were supplied in full), the ability of teachers to utilize the materials remains as the binding constraint to quality education.

The policy question posed for the cost effectiveness analysis was whether resources would be better expended in IEL dissemination or in wider dissemination of traditional textbook materials. Earlier analyses include the option of using IDA provided textbooks at half-cost as an alternative. However, while the World Bank was willing to provide these textbooks to the GOL at half-price this is not a true resource savings; the total amount of resources must still be provided. Only a pecuniary benefit would be realized by the GOL since the IDA textbook project funding represents only a portion of donor aid to Liberia. If USAID provided textbooks or IEL materials at no cost to the GOL, still this would not make this choice any better. Instead, this is a choice of pecuniary effects.

Table G-3-2 indicates a comparison of relative per student costs for IEL versus two versions of the textbook alternative. The data are provided by grade level and for three class-sized groups. The textbook alternatives are as follows:

Textbook (A): Per student cost of the official MOE-required texts for each grade; costs are based on the 1983 price list and assume one copy of each text for each child.

Textbook (B) - Identical to alternative (A) except two children share each text.

As shown in Table G-3-2 IEL materials can be provided cheaper on a per student basis for the medium to large size classes as compared to either the textbook (A) or textbook (B) alternatives. For small classes IEL is more costly on a per student basis than the textbook (B) alternative, although it is still less costly than the textbook (A) alternative.

IEL shows a high fixed cost but constantly declining marginal cost structure, while the textbook alternatives show no fixed costs but consist entirely of a constant marginal cost. This cost structure then enables IEL to take advantage of economies of scale, i.e., the larger the class size within a relevant range, the greater the relative efficiency of IEL versus the other alternatives.

These comparative cost figures might lead one to conclude that for smaller classes the textbook (B) alternative might be more appropriate than IEL. However, in many smaller schools the use of IEL (along with adaptive training of teachers) with multigrade classrooms, IEL could be adapted and prove to be more cost efficient.

It is a concern that IEL is a high cost choice for smaller classes as it now stands, however, IEL addresses not only the materials constraint to education in Liberia but also the teachers' capacity constraint as well.

Table G-3-1

Benefit-Cost Analysis IEL II Project												
<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>
teachers	students	incrstdt	IEL wkrs	incr prod	fin gd	coeff	appty cst	MOE svng	AID cst	BOE cst	csr	flw
431	14,654	14,649							2,470,000	871,000		(3,341,000)
429	15,015	29,669			1,628	0.167	108,750	24741	2,467,000	883,000		(3,216,509)
428	14,980	44,649			3,297	0.333	439,160	99909	2,365,000	895,000		(2,720,931)
428	14,840	59,489			4,967	0.5	993,400	225999	2,403,000	907,000		(2,090,602)
424	14,840	74,469			6,610	0.667	1,763,548	401207	2,328,000	918,000		(1,081,245)
					8,274	0.833	2,756,897	627194		310,000		3,074,091
					8,274	1	3,309,600	752934		310,000		3,752,534
			1,628	40,692	8,274	1	3,309,600	752934		310,000		3,793,226
			4,924	123,106	8,274	1	3,309,600	752934		310,000		3,875,640
			9,885	247,131	8,274	1	3,309,600	752934		310,000		3,999,665
			16,495	412,378	8,274	1	3,309,600	752934		310,000		4,164,912
			24,769	619,236	8,274	1	3,309,600	752934		310,000		4,371,770
			33,044	826,094	8,274	1	3,309,600	752934		310,000		4,578,628
			41,318	1,032,953	8,274	1	3,309,600	752934		310,000		4,785,467
			49,592	1,239,811	8,274	1	3,309,600	752934		310,000		4,992,345
			57,867	1,446,669	8,274	1	3,309,600	752934		310,000		5,199,203
			66,141	1,653,528	8,274	1	3,309,600	752934		310,000		5,406,062
			74,415	1,860,386	8,274	1	3,309,600	752934		310,000		5,612,920
			82,690	2,067,244	8,274	1	3,309,600	752934		310,000		5,819,778
			90,964	2,274,103	8,274	1	3,309,600	752934		310,000		6,026,637
											IRR:	0.152
											NPV:	11516299 at 10%

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Table G-3-2  
 Relative Per-Student Costs of Instructional Materials  
 IEL vs Textbook Requirements by Grade  
 Level and Class Size

## Grade Level

Instructional Material	Number of Students in Class		
	20	40	60
Grade one			
IEL	\$6.29 / <u>1</u>	\$3.15	\$2.10
Textbook (A)	9.38	9.38	9.38
Textbook (B)	4.69	4.69	4.69
Grade Two			
IEL	6.29	3.15	2.10
Textbook (A)	10.88	10.88	10.88
Textbook (B)	5.44	5.44	5.44
Grade Three			
IEL	6.29	3.15	2.10
Textbook (A)	<u>10.73</u>	<u>10.73</u>	10.73

Textbook (B)

5.37

5.37

5.37

## Grade Four

IEL	6.29	3.15	2.10
Textbook(A)	9.42	9.42	9.42
Textbook(B)	4.71	4.71	4.71

## Grade Five

IEL	6.29	3.15	2.10
Textbook(A)	11.65	11.65	11.65
Textbook(B)	5.83	5.83	5.83

## Grade Six

IEL	6.29	3.15	2.10
Textbook(A)	9.02	9.02	9.02
Textbook(B)	4.51	4.51	4.51

1/ Table G-3-3 indicates the per year cost of IEL materials.

The cost of IEL is an average cost for all grades, although actual costs will probably rise along with grade.

Table G-3-3

Average Cost of IEL Materials 1/

Item	Item Cost	Life	Per year cost
Module	341	3 / <u>2</u>	113.67
Semester Boxes	50	5	10.00
Chalkboards	10	5	2.00
Lapboards	<u>1</u>	5	<u>.20</u>
Total	402		125.87

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Note: 1 Cost of materials as in GOL Recurrent Budget section of the PP.

2 Earlier analyses indicated an expected life of only 2 years for the modules, however, subsequent investigation by the project design team indicates that a three year life span is more realistic. Note that this change in assumed life span does not significantly alter this least-cost analysis.

ANNEX G-4 - SOCIAL SOUNDNESS ANALYSISA. Introduction

The demonstrated efficiency and effectiveness of the IEL I project offers a significant opportunity for widespread improvement of the GOL/MOE primary education system without adding substantially to the fiscal burden already borne by the GOL. The expansion of the IEL instructional system in Phase II should continue the process of raising teacher and supervisor/administrator skills, and improving student achievement within the existing system. In effect, it can improve the quality of education being offered in Liberian public schools.

The Education and Training Sector Assessment, April 1983, outlines the basic problems the MOE experiences in primary education today: how to improve the quality and efficiency of instruction and to strengthen the administrative and supervisory capabilities of the Ministry of Education -- all within severe fiscal constraints and limited resources. The IEL program was designed to work within the economic constraints of Liberia and to produce positive educational gains.

The 1979 MOE estimate that 59 percent of Liberian schools were operating without a curriculum and that 60 percent of the children had no textbooks may still be a significant indication of the existing situation in most rural areas. Despite MOE efforts to attack this problem, rural Liberian children have not had opportunities in the schools available to them to receive the same education as their peers in urban areas. IEL has employed the technology of programmed instruction to insure complete uniformity of instruction at all grades and in all schools. The IEL program and the uniform training of its instructors is designed to give all Liberian children the same educational opportunities whether they be in small schools or large and whether their schools are urban or rural.

In addition, the IEL instructional system does not rely on parents to purchase the necessary texts, thus denying some children opportunity to participate in learning either because their families cannot afford the texts or because the texts are not available in their remote areas. All IEL instructional materials, including lapboards for individual work and chalkboards for group work are provided within IEL schools. This consistent system of instruction is a significant advance in educational opportunity for rural children in Liberia.

### B. Increased Literacy, Numeracy and Levels of Functional Literacy

Although this project has not been designed as a national literacy, numeracy, or functional literacy program, it can be expected to ameliorate these problems as it increases the rate of retention of students and expands into rural areas of the country where these capacities are below the level necessary for self-sufficiency of the individual and collective improvement of the community. The adult literacy rate for Liberia is given nationally as 25 percent, but rural counties are known to be significantly below this figure. Rural Lofa County, for example, is estimated at 11 percent. The large number of Liberian children leaving primary school programs before acquiring basic skills is directly related to these low figures.

Of the total number of children coming into the primary system, MOE figures indicate that two-thirds of these children leave prior to completing the upper primary grades, generally regarded as necessary to acquire literacy and numeracy. The percentage of females leaving the primary grades is much higher than male students. Whether male or female, it is clear that literacy, numeracy and functional literacy rates in Liberia are being affected by the number of students not completing the primary grades.

While economic and cultural reasons for this situation are available especially in rural areas, the schools and the instructional programs offered in them should also be examined. The expansion of the IEL system into rural towns and villages during the life of this project can be expected to have a positive effect on the national literacy rate as greater numbers of students are retained to complete upper primary grades, thus gaining basic skills which will better serve them as adults.

It is anticipated that the increase in female retention rates and increased success in school through the IEL technology will have a positive effect toward increased enrollments of female students. MOE data show that the enrollment percentage of girls has slowly increased since 1970. Table V-1 illustrates that in 1970 only 27 percent of all government primary school enrollments were girls. In 1984, the percentage increased to 36.1 percent, rate of increase of less than 1 percent per year.

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The IEL system as it now exists serves only primary grades, but data collected during the life of IEL I, as well as anecdotal observations of supervisors and visitors to IEL schools, confirm that many of these upper grade primary students are 16 years of age or older. They are, in fact, adults in their communities in the process of acquiring basic literacy and numeracy skills. It is observable that the IEL system, by the inherent characteristic of its design, is capable of supporting and advancing the literacy, numeracy and functional literacy levels of the adult students in the primary grades. It is known that the materials are capable of supporting the acquisition of these skills by the teacher also in this learning context. The significance of this process, widely observed during IEL I, should not be underestimated during the implementation of this project.

C. Increased Training for Unqualified and Underqualified Teachers

IEL I was planned to address the problem of the widespread incidence of unqualified (less than high school formal education) and underqualified (high school, but less than teacher training education) teachers prevalent throughout the GOL/MOE system, especially in rural areas. The increase in numbers of public schools involved in IEL II will reduce the negative effects of the large numbers of unqualified and underqualified teachers on school outcomes. The planned and frequently scheduled training and supervision programs of this project will build a large cadre of teachers better prepared for further inservice programs in other areas, or higher-level training at the University of Liberia; Cuttington College and Teacher Training Institutes.

D. Inculcation of Supervisory and Administrative Skills

This project targets training in supervisory and administrative skills as a main objective. IEL I demonstrated the success of the instructional system. It also revealed the need for the creation of a cadre of trained supervisors and administrators. Liberia's growing educational system depends upon the quality of both these professional skills. The 1983 Sector Assessment cites a serious shortage of trained and experienced administrators, for example, who can plan, manage, supervise and evaluate programs. These are precisely the skills which the planned expansion activities of this project will require. To meet these requirements, the project implementation plan includes extensive training programs and technical assistance in supervisory and administrative skills.

It is evident that these skills, however, will be more difficult to inculcate than were the specialized instructional design and experimental procedures which formed the core of IEL I activities. It is also evident that these skills will be far more powerful in promoting the development of the national educational system, as they are eminently transferable to both instructional and administrative tasks of all kinds at all educational levels. Therefore, the widespread and systematic plan of training has a potentially exponential effect in the GOL/MOE. For this reason the technical assistance component of this project includes three experts in training and supervision to remain field-based during the life of the project. In this manner, a uniformity of instruction nationwide without sexual bias can be realized.

#### E. More Efficient Use of Existing Resources

The project expansion of the IEL program to primary schools nationwide should be recognized as an increase in the efficient use of both manpower and physical plant resources with little increase in expenditure to the MOE. The demonstrated success of the IEL instructional system to produce gains in student achievement and retention in the primary system will now affect a large number of schools which are currently producing much lower achievement gains. This increase in student achievement using existing resources represents a strong social argument for the IEL program.

In most countries when teachers become better qualified they will demand an additional pay increment. The IEL training in Liberia would justify a pay raise for teachers under normal circumstances. However, given the limited economic situation during the next several years, Liberian teachers have been made aware that the Ministry of Education cannot afford financial recognition for study. Teachers are aware that they will be more effective teachers and that the pupils will learn more in IEL than under the traditional pattern. Learning with incentives may be required to satisfy teachers under normal circumstances. In Liberia today, learning without financial incentives is the only option.

F. Other Social Dimensions

The Mission believes that the project should go forward in spite of the economic crisis which Liberia faces and will probably continue to face through the life of the project. Education is a social good that usually shows results years after the education is taught. Primary education, in particular, has been shown by World Bank and USAID studies to have the best payoff record for the educational investment made. As a result of IEL II, the following will be the minimum number of beneficiaries of the project:

Pupils	75,000
Teachers	2,140
Principals	600
Education Officers	60
Participants/Long & Short-term	20
Refreshers for Teachers & Principal	1,666
TOTAL	<u>79,486</u>

To bring about the benefits described, the project will provide instructional materials and teacher training where materials are lacking and teachers are untrained. The teachers will be upgraded when the GOL can provide little or no support in this area. The effect of this move may encourage more parents to send their children to school since they will become aware that learning is taking place.

Since 1981 the enrollments at all levels have decreased in Government schools and have increased slightly at private schools (See Table V-3). The drop reflects the economic situation among other factors, in Liberia. Many parents cannot afford the various fees at public schools in addition to the recent breakage fee. For lack of funds, ranging from \$5 to \$21 per child per semester, many primary children will be deprived of an education.

A difficult problem for this project arises in the process of change from traditional to IEL methodology. The "know-book" tradition in Liberia has been the accepted pattern of education. Primary and secondary private schools in Liberia are the key users of textbooks and are considered the trend setters and will probably continue to use textbooks. Some observers will note that

even if the pupils use the IEL methodology they will have to face the textbook methodology in secondary school private or public. Apparently, that most public schools in Liberia have no instructional materials and few trained teachers has not been a convincing argument for some MOE leaders who prefer the continuance of the present pattern of education. It must further be emphasized that for most Liberians, primary education is the only education they will receive.

Nevertheless, the MOE top leadership is convinced that Liberia will no longer be able to sustain a conventional system of education within economic constraints and its present professional capability. For this reason, MOE leaders are willing to expand the IEL system nationwide as an alternative to the desperate economic situation and to the existing low level of educational quality in the schools. The nationwide expansion of programmed instruction represents the first such attempt in the world. IEL II represents a bold decision on the MOE leadership because of the risks involved.

IEL II anticipates these and other implementation problems and will address them as a priority by the technical assistance team, USAID and the MOE. Even with the inputs of IEL II there is no guarantee that the goals of this project will be fully realized. Nevertheless, the inputs are intended to face some of these problems. One measure of success will be the test results of children who have received this instruction.

A further concern is that the IEL methodology requires more effort and work on the part of the teacher. A teacher or an education officer whose salary checks are behind for months could be resentful asked to work harder. Nevertheless, a "Hawthorne effect" is at work. The teachers will be receiving attention - heretofore absent. They will receive training and instructional materials and will be visited frequently. There is some expectation that most teachers will work harder because of the children and the attention.

The threat of change to officials in the Ministry and in the field must be faced. The project is high-risk and can easily be side tracked by authorities who may feel antagonistic toward the project or by changes of leadership in the MOE. To address the problems of change, the Project Director, the COP and the USAID Project Manager must remain alert to the attitudes in the field and in the MOE and to promote a positive climate for IEL II.

## ANNEX G-5

Administrative Feasibility Analysis

This analysis assesses the administrative capabilities of the Ministry of Education (MOE) in the areas relevant to the execution of the project and demonstrates that the project design incorporates the necessary resources to assist the MOE in implementing the project and achieving its purposes. In addition, the analysis summarizes the project management capabilities of USAID/Liberia as they affect the Mission's role in this project.

A. MOE Organization

The MOE is the GOL Ministry responsible for supervising nearly all public and private education in Liberia. The only exceptions are the several vocational training schools and other specialized training (e.g., nursing) which fall outside the purview of the MOE.

The MOE's present organization does not have a centralized office for primary education. Rather, responsibility for primary education is diffused throughout a number of offices within the Department of Instruction, headed by a Deputy Minister. The project design team has given some thought as to how IEL II can best be implemented by the MOE. It has been decided that a new IEL Division located in the Department of Instruction and incorporating the functions of the former IEL Unit in Gbarnga would be the most effective organizational mechanism.

A condition precedent to initial disbursement will be the establishment of an IEL Division in the Ministry. A related condition precedent will require that IEL Senior Staff and their support staff in Gbarnga be relocated in the Ministry of Education in Monrovia by 1985.

B. MOE Management

Historically, MOE management has been viewed as a problem area. IEL II cannot by itself be a management reform activity, but the design can acknowledge the problem and introduce measures in the project which will seek to alleviate or work around management-related problems. One such measure is to move the IEL Unit from Gbarnga and place the functions of the Unit in the Ministry of Education in a newly created IEL Division. Another measure to insure coordination will be the establishment of an IEL II Steering Committee.

The Education and Training Sector Assessment (USAID 1983) and Snyder and Ju's "Management of the Liberian Educational System" (1984) cite several management weaknesses within the Ministry of Education.

These include a lack of skilled personnel, a lack of funds with which to perform assigned functions and the lack of a cohesive administrative network. Snyder and Ju provide a clear description of the existing situation in which "local authorities make decisions by default in the absence of easy or clear lines of communications." The result has been inequitable growth of educational facilities and programs across the country, a condition which is counter to GOL education policy intentions. Communication difficulties are inherent in Liberia's unreliable phone and transport system, but the real problem for the Ministry is the lack of a cohesive organization which can responsibly operate within these isolated conditions.

The direction and objectives of the Ministry as a whole, and the sub-units in particular, are ambiguous at best and unknown for the most part. Without clearly delineated decision-making authority and guidelines for the education program and its management, there is likely to be no overall system development. The AID-funded Education and Training Sector Assessment (December 1983) describes the situation in very similar terms. While pointing to improvements in previous years, the assessment indicates a need for considerable opportunity to improve further the administrative and supervisory operations of the Ministry. The problem of MOE communication is one which will not be easily resolved given the present situation in the country. Both the Sector Assessment and the Snyder and Ju report direct special attention to the difficulties confronted by a centralized educational system in a country where communication problems thwart attempts at establishing organizational development as well as the daily routine of directives, reporting and recordkeeping. Because IEL I was considered experimental, these obstacles did not affect project implementation in this way. However, with nationwide expansion of the IEL approach, the obstacle presented will diminish with the placing of IEL II project functions within a new IEL Division (MOE/Monrovia) and in the three regional education centers. This move promises both to increase the ease and frequency of communication and to help remove any perceptions within the MOE that the IEL project is not a national education program.

IEL II has been planned to take full advantage of the organization plan of the MOE which has created the new Regional Education Offices at Gbarnga, Zwedru and Paynesville. These offices, funded under the Bank's Fourth Education Project, will house the Regional Education Officers (REOs) who will have a key responsibility for supervising and providing MOE regional information links to local schools. Office space (sufficient for 3-4 people) in each of these centers will be assigned to the IEL project plus storage space (provision of office space will be linked to a CP). For ease of communication the project will also fund a radio communication network among the MOE, each of the three regional centers and USAID.

The MOE's Project Director and the contractor's Chief of Party, will provide advice and counsel as requested by the Steering Committee and will serve as non-voting members of the Committee. The authority and functions of the Steering Committee will be clearly defined prior to the inception of IEL II through approved by-laws. The Project Director will carry out policy instructions received from the Steering Committee and periodically report to it on the progress made in institutionalizing IEL and meeting the specific outputs (i.e., number of students reached, teachers trained, etc.) established for the project.

The printing/dissemination unit, transferred from Gbarnga to Monrovia, will be part of the IEL Division and oversee printing and distribution of IEL materials. It will see that orders for materials to be printed and distributed are issued with enough lead time to meet the implementation schedule and ensure the quality of the materials produced before they are sent to the CEOs for distribution to schools. The TA specialist for this area will be present on a short-term basis each year during the LOP (total 6 PM). He will assist the printing/dissemination unit in evaluating the printed product and the dissemination process, making recommendations at each visit to improve the system. The Administrative Assistant to the technical assistance team will also assist with the coordination of printing and the distribution of materials.

The field-based technical advisors will be part of the IEL Division and will assist in the training activities envisioned in IEL II. These activities include inservice teacher training courses at the beginning of each year for teachers new to IEL, and refresher courses for current IEL teachers. The refresher courses will provide teachers a one-week course that will be offered three years after their initial training. Also, the trainers will assist with IEL-related segments of training programs for school principals, education officers (regional, county and district), MOE/Monrovia staff and staff from other educational institutions.

When not in training activities, the teacher trainers will be seconded to County Education Officers. They will assist in the supervision of IEL classrooms and will serve as a resource colleague to the county and district education officers and the Peace Corps volunteers. When LRCN facilities are available, the teacher trainers will help plan radio programs dealing with inservice education and instructional enrichment.

### C. Field Supervision

IEL I has made progress in the field in terms of reaching and incorporating MOE personnel. Through IEL's expansion into 70 schools (as of March 1985), some REOs, CEOs and DEOs already have seen IEL in a school setting. A World Bank-USAID co-financed training workshop for education officers and principals held in January 1984 included five days of IEL orientation. In general, the response to IEL by education officers and principals as a concept and in practice has been positive.

The primary focus of IEL II is to transform IEL from an experimental project to a nationwide operational program of the MOE. MOE education officers and principals will be given full responsibility for the introduction and supervision of IEL in their schools.

In the field, where some of the MOE supervisory personnel lack professional skills, IEL familiarity and availability of field-based advisors, instructional supervisors, CEOs, DEOs and Peace Corps volunteers will conduct training programs for all levels of supervisory personnel in the field. The program will impart general instructional concepts and practices and training in supervisory and administrative skills based on the IEL system.

### D. Capability to Fulfill Implementation Responsibilities

As indicated in the Implementation Plan, the MOE is the primary implementing agency for this project. The series of actions necessary to implement the institutionalizing and expansion of IEL II indicate the importance of a strong implementation capability.

The position descriptions of the long-term technical assistance team members have been carefully composed so that the experience and skills of the members, individually and collectively, will complement those of the MOE staff members at both MOE/Monrovia and in the field. Similarly, short-term consultants will be used to provide specialized skills in certain areas. Taken together, these inputs should provide the necessary assistance to the Ministry so that the project will be implemented in accordance with the implementation plan.

In terms of USAID ability to manage the project, a key individual will be the PSC Project Manager. The individual will be a critical bridge between the MOE/contractor personnel and the USAID Mission by providing the day-to-day routine contact for USAID with project activities. While this individual cannot, as a PSC, negotiate on behalf of the USG or approve vouchers for payment, the AID Project Officer will in large part be guided by the PSC Project Manager's recommendations. It is to the PSC that the USAID will look for the detailed familiarity with all phases of project operations.

The USAID/Liberia PSC Project Manager for IEL II will be supervised by the Mission's Chief Education Officer. The Controller, and other Mission staff, as well as REDSO/WCA regional specialists in relevant areas (e.g., contracting, legal) will provide support as needed. All activities, whether conducted under the project implementation contract or the external evaluation contract, will be approved and supervised by the USDH project officer as the designee of the USAID/Liberia Mission Director.

The USDH Project Officer will have principal responsibility for project monitoring. USAID will conduct the AFR semi-annual internal reviews which measure progress to date and pinpoint actions to be taken over the following six months.

USAID/Liberia will also coordinate and participate in all project evaluations, in accordance with the evaluation plan. The Mission will also develop and execute project implementation orders, contracts and supportive documents in accordance with AID standard procedures. The PSC project manager is being provided under a personal services contract financed by the project so as to reduce the administrative burden IEL II will place on the HRD office and other Mission staff. The procedures as outlined here and in the sections on financing and implementation are such that the USAID/Liberia administrative capability will be adequate to fulfill its responsibilities under IEL II.

ANNEX H-1

DETAILED PROJECT

IMPLEMENTATION SCHEDULE

IEL: II Consolidated Calendar, Continued.

	1985		1986		1987		1988		1989		1990		1991		1992	
	JFMAMJ	JASOND														
<u>Printing/Dissemination</u>																
Printing Modules 1st Semester		XX	X													
Dissemination Modules 1st Semester			X		X	X		XX	X		XX	X		XX	X	
Printing Modules 2nd Semester			XXX		XXX	XXX										
Dissemination Modules 2nd Semester				X		X		X		X		X		X		X
<u>Classroom Supervision</u>																
ILW IEL Schools (weekly)			XXXX		XXXX	XXXX										
Other IEL Schools (monthly)			XXXX													
<u>Testing</u>																
Criterion Ref. Tests		XX														
GRE Results			X		X	X		X		X		X		X		X
<u>Selection of IEL</u>																
Teachers & Schools for following year		X		X		X		X		X		X		X		X
<u>Quantities to Arrive on</u>																
4 Wheel Drive			x(10)		x(10)			x(8)		x(47)		x(10)		x(10)		
Motorcycles			x(47)		x(16)							x(22)		x(4)		
Office Furniture and Equipment			X													
Regional Intercoms			X													
Classroom Radios			x(100)		x(500)			x(500)								
Professional Books		X		X		X		X		X		X		X		X
Audio Visual			X					X		X		X		X		X
Training Cassettes			X													
Peace Corps Volunteers			XXXXXX													
			(18)		(26)			(30)		(39)		(46)		(43)		

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IEL II  
Consolidated Calendar for  
Detailed Project Implementation Schedule  
1985 - 1992

	1985		1986		1987		1988		1989		1990		1991		1992	
	JFMAMJ	JASOND														
<b>A. Technical Assistance</b>																
1) Chief of Party			XXXX	XXXXXX												
2) Administrative Assistant			XXXXXX													
3) TA Training/Supervisor 1			XXXX	XXXXXX												
4) TA Training/Supervisor 2			XXXX	XXXXXX												
5) TA Training/Supervisor 3			XXXX	XXXXXX												
6) Printing/Distrib. Specialist																
7) Tests/Measurement Specialist				X		X		X		X		X		X		X
8) Curriculum Dev./Design Specialist				XX												
9) Unspecified			X		X		X		X		X		X		X	
<b>B. Participant Training</b>																
1) Administration/Management					XXXXXX											
2) Training/Supervision 1				XXXXXX												
3) Training/Supervision 2				XXXXXX												
4) Training/Supervision 3				XXXXXX												
5) Tests/Measurements				XXXXXX												
6) Curriculum/Design 1					XXXXXX											
7) Curriculum/Design 2					XXXXXX											
8) Institutional Evaluation					XXXXXX											
9) Specialized Training			XXXX													
<b>C. In-Country Training</b>																
1) Teacher Training (8 weeks)			XX													
2) Principal Training (8 weeks)			XX													
3) Refresher Trg.-Tchr/Prin. (1 wk)						X		X		X		X		X		X
4) Education Officers (2 weeks)			X		X		X		X		X		X		X	
5) Information Seminars (3 2-day)				X		X		X		X		X		X		X
<b>D. Evaluation</b>																
External Evaluation					XXX											
Semi-Annual Review (USAID)			X	X	X	X	X	X	X	X	X	X	X	X	X	X

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ANNEX H-2

Scopes of Work Technical Assistance Personnel

The following is a list of long-term and short-term technical advisors for the IEL project and their scopes of work:

A. Long-Term

NUMBER OF LONG-TERM ADVISORS	AREA OF EXPERTISE	PERIOD PER ADVISOR	TOTAL PERIOD
1	Educational Administration and Management (Chief of Party)	5.83	5.83
1	Teacher Training and Supervision	3.33 PY	11.0 PY
1	Teacher Training and Supervision	3.33 PY	
1	Teacher Training and Supervision	4.33 PY	
1	Administrative Assistant (Local Hire)	6.00 PY	6.00 PY
Total 5			22.83 PY

B. Short-Term

NUMBER OF SHORT-TERM ADVISORS	AREA OF EXPERTISE	TOTAL PERIOD OF ADVISOR - LOP
1	Tests and Measurements	12 PM
1	Printing/Distribution	6 PM
1	Curriculum Development/Design	12 PM
1-6	Specialized Needs*	6 PM
Total 4-9		36 PM

\* Specialized needs are six person months of unspecified short-term consultation. The six person months will be assigned as these needs are identified.

NUMBER OF SHORT-TERM ADVISORS	AREA OF EXPERTISE	TOTAL PERIOD OF ADVISOR - LOP
<u>C. Other Personnel</u>		
1	PSC Project Manager	6 PY
1	Evaluation	9 PM
<hr/>		
Total	2	6.75 PY
<u>Summary of Technical Assistance</u>		
	Long-Term	22.83 PY
	Short-Term	3.00 PY
	Other Personnel	6.75
<hr/>		
Total		32.58 PY

Except for the project management position (PSC/USAID contract), all advisors/consultants will be selected in collaboration with the contractor, MOE and USAID. However, the project evaluation consultant will be selected jointly by USAID and the MOE, excluding the contractor.

A. Long-Term Technical Assistance

1. Specialist in Educational Administration and Management (Chief of Party) (5 years 10 months)

The Chief of Party (COP) has overall responsibility for the technical assistance component of the IEL project. He is responsible for the performance of the members of the technical assistance advisory team and of all contract funded consultants to ensure that the project's objectives and targets are met as scheduled. The COP assists members of the TA team to develop their individual work requirements and objectives, and reviews and updates them semi-annually. He is also responsible for coordinating the logistical support to the TA team.

The Chief of Party also serves as the project's chief counterpart to the Director of the IEL project. In this capacity he advises on professional matters relevant to the project's implementation and management which include, but are not limited to, such areas as teacher training, school supervision, curriculum development and educational evaluation. The COP will also assist

the Director of IEL to apply professional management techniques to the project including planning and budgeting, personnel evaluation and counseling. The objective of this assistance is to assure the scheduled phase-in of IEL as a predominant method of instruction in public elementary schools nationwide.

The Chief of Party also reports to the USAID project officer and/or his designee on project progress and problems in order to keep USAID informed so that it may assist in project implementation when appropriate.

a. Duties: In order to attain the above objectives, the following specific duties are required of the Chief of Party:

1) Prepares project workplan including critical path indicators with specific dates for completion of tasks. Updates and presents project workplan annually to USAID and Steering Committee.

2) Prepares quarterly reports of project activities and problems with recommendations to the USAID Project Officer or designee.

3) Assists the Director of IEL and field technical advisors to plan and develop the IEL 8-week inservice training program for teachers, school principals and school supervisors. Also assists in developing refresher courses for teachers and annual information workshops.

4) Assists in the planning for the utilization of inservice radio broadcasts to schools through the Liberian Rural Communications Network.

5) In conjunction with the IEL Project Director, monitors the work of the field staff including IEL Instructional Supervisors, Regional, County and District Education Officers, contract technical advisors and Peace Corps Volunteers assigned to the project. Purpose is to assure that their work is clearly defined, differentiated and coordinated in order to create and maintain an effective field support system for classroom teachers using the IEL methodology.

6) Assists the IEL Project Director to institutionalize IEL at the Ministry of Education through: 1) reorganization of the offices in the Ministry of Education responsible for elementary education and 2) maintaining continuous policy dialogue with the three Deputy Ministers, key Assistant Ministers and the Minister of Education.

7) Participates in various committees related to the project, e.g., Project Steering Committee, Participant Training Sub-Committee and Technical Sub-Committee.

8) Assists the IEL Project Director in all other tasks required for the implementation of the project.

b. Professional Background, Experience Required

The Chief of Party should be a senior faculty member of a school or college of education of a recognized U.S. university. He should possess a doctoral degree in education with a minimum of 10 years teaching experience in school administration and supervision. Experience as a school administrator as well as experience in program or project management is required especially in developing countries, preferably in Africa.

2. Advisors in Teacher Training and School Supervision (3)  
(Two advisors - 40 months each; one advisor 52 months)

This is the key field advisory position for the project because it is at the center of the network of the field staff responsible for implementing the project's teacher support system, which is composed of the regional, county and district education officers, IEL instructional supervisors as well as Peace Corps volunteers assigned to the project.

Each Teacher Training and School Supervision Advisor will be located in one of the three Ministry of Education regional education centers in Paynesville, Gbarnga and Zwedru. The regional education officers, who are the highest field officials for the Ministry of Education, will be located in each of the regional education centers and will be counterparts of the U.S. advisor.

This U.S. advisor's assignment will be particularly challenging because he will have to coordinate the work of separate individuals in a newly established decentralized system of support to teachers. For example, the Ministry of Education's field supervisors do not yet function as a unit with clearly defined responsibilities. In addition, the role of the IEL instructional supervisors (IS) is also unclear in relation to the work of the cadre of the education officers of the Ministry of Education.

Phase I of the IEL project lasted for 6 years and introduced IEL into a limited number of schools. It was viewed by MOE officials as a pilot, or experimental, program. As such, it did not involve the participation of the MOE's education officers and, as a result, was never fully integrated into the structure of the Ministry of Education as an integral part of its instructional system. The advisor will be responsible for developing this aspect of the project.

Finally, a new element, the PCV, will become part of the project's field support operation. Slated as direct counterparts to the district education officers, this relationship will need to be clarified and amplified among the TAs and MOE personnel if the classroom teacher is to receive the optimal supervisory support required under a new and unfamiliar method for delivery of elementary education.

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a. Duties: The specific tasks of the advisor in teacher training and school supervision include, but are not limited to, the following:

- 1) Determines the professional level of effectiveness in supervision of education officers, IEL instructional supervisors, school principals and Peace Corps volunteers.
- 2) Prepares appropriate workshops and seminars for the above personnel to strengthen their professional skills. These will include the following activities:
  - a) Prepares annual 8-week inservice workshops for teachers; will teach part of this workshop.
  - b) Develops short-term informal workshops in supervision methods on a regular basis for education officers, IEL instructional supervisors, school principals and PCVs.
- 3) Clarifies the operational responsibilities of the teacher support field personnel, e.g., education officers, IEL instructional supervisors, school principals and PCVs. Develops operational manuals for field personnel.
- 4) Develops a plan for coordination of the above to avoid duplication and to promote reinforcement to the classroom teacher.
- 5) Oversees the delivery and distribution of project materials, i.e., modules, training materials and audio-visual items.
- 6) Visits IEL schools on a scheduled basis to observe how IEL program works. Discusses problems with teachers, students, principals, education officers, instructional supervisors and PCVs.
- 7) Assists in the selection of project participants for U.S. study. Works closely with returned participants to assure that they are phased into their new jobs as Liberian replacements for the U.S. advisors.
- 8) Helps coordinate and integrate the teacher inservice radio broadcasts of the Liberian Radio Communications Network with the IEL project in the classrooms where the radio broadcasts will be received.
- 9) Reports directly to the contractor Chief of Party on all matters concerning the field implementation of IEL.
- 10) Prepares semi-annual workplan for the Chief of Party and the IEL Project Director.
- 11) Prepares quarterly reports on project problems and progress for the Chief of Party.

b. Required Professional Qualifications

The advisor in Teacher Training and School Supervision should possess a minimum of a master's degree in Education. A doctorate would be preferred. A minimum of 5 years of professional experience as a member of a faculty of education of a recognized university is required. Experience as a district supervisor of a local school system is desirable. A background in teacher training methods and classroom supervision is also required. Experience in developing countries, especially in Africa, is highly recommended.

3. Administrative Assistant

This is a local hire position which could be filled by a qualified Liberian or American. This position will last through the life of the project (6 years). The administrative assistant will work directly under the supervision of the Chief of Party and will have the responsibility of providing logistical and administrative support to the contract team.

The position requires an individual with extensive skills and experience in handling the logistical requirements of programs or projects which involve significant numbers of employees or contractors who require administrative backstopping in the field. Examples of such support include locating and negotiating housing for contract team members, ordering and distributing household furniture and appliances ordered under the contract and expediting shipment and delivery of project commodities including project vehicles.

The administrative assistant will be located in Monrovia but will spend a good deal of time visiting the site of the three field advisors in Paynesville, Zwedru and Voinjama.

Specific tasks include, but are not limited to, the following:

- a. Coordinates project logistics in support of the contract team with the contract backstop in the United States.
- b. Coordinates with USAID/Liberia on such matters as housing for contract staff, leasing and maintenance arrangements, expediting shipments of personal and project commodities including vehicles, obtains required registration and licenses and gasoline coupons. Arranges for essential services such as water, electricity and bottled gas for contract employees.
- c. Arranges for visas of contract personnel including renewals.
- d. Coordinates the shipment, arrival and warehousing of project commodities with USAID/Liberia.

e. Coordinates the ordering of project equipment to be utilized by the contract and IEL staff including negotiation of service contracts for repair and replacement with U.S. or local suppliers.

f. Hires and supervises project office help including drivers.

g. Establishes, maintains and updates an inventory of project commodities.

h. Develops and maintains bookkeeping system for gasoline usage and vehicle repair including receipts for expenditures.

i. Manages the transfer of project commodity shipments from point of arrival in Monrovia to appropriate field sites.

#### B. Short-Term Consultants

This group of approximately 4-6 consultants will be required to bring specific skills to the contract technical assistance team over the six year life of the project. These consultants will not be full-time members of the technical assistance team and will be brought to Liberia for varying periods of time and will then return to the U.S., although repeat visits will be required in some cases as specified below. The list of short-term consultants and their scopes of work follows:

##### 1. Tests and Measurements Specialist

This individual will serve for a total of 12 person months over the life of project according to the following schedule:

1986 - 2 PM  
 1987 - 2 PM  
 1988 - 2 PM  
 1989 - 2 PM  
 1990 - 2 PM  
 1991 - 2 PM

The tests and measurements specialist will have overall responsibility for constructing appropriate test instruments which will assist the project to measure the efficacy of the IEL system of self-paced learning through the use of the instructional modules. Instruments will also be devised to measure the success of teachers and supervisors in their utilization of the IEL system.

This specialist will also be responsible for training Liberian project personnel to administer tests and evaluate scores. Specific tasks of the tests and measurements specialist include, but are not limited to, the following:

a. Evaluates the present IEL testing system to determine its degree of effectiveness and to make specific recommendations for change or refinement where necessary.

b. As appropriate, constructs tests for IEL pupils to measure cognitive skills and subject matter mastery.

c. Constructs appropriate questionnaires for IEL teachers and supervisors to determine specific difficulties they may have with the IEL method.

d. Compares the objectives of the IEL criterion referenced tests to those of the West African Examinations Council.

e. Trains personnel assigned to the research section of the IEL unit in the construction, administration and evaluation of tests.

f. Recommends candidates for long- or short-term training in tests and measurements.

## 2. Printing and Distribution Specialist

This specialist will be contracted for 6 person months over the life of the project as follows:

1986 - 1 PM  
 1987 - 1 PM  
 1988 - 1 PM  
 1989 - 1 PM  
 1990 - 1 PM  
 1991 - 1 PM

Because the IEL modules constitute a key component of the IEL system the development of efficient and cost-effective methods for their printing and distribution is essential. As the project expands to provide nationwide coverage to most public primary schools, the printing and distribution systems must be able to handle a markedly increased load. This will require technical advice in the area of printing, e.g., selection of printers, costs, evaluation of formats as well as in alternative distribution systems. Most important is that IEL modules are printed and bound to last at least three years with normal use and are delivered to teachers on time.

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The printing and distribution specialist will work with the IEL printing/dissemination unit. His advice will be sought about whether or not the Ministry of Education's printing operation should ultimately take over printing and distribution of the IEL modules. He will also be required to review the present staffing of the IEL printing unit and make recommendations concerning its possible expansion and organization as well as to identify training needs for selected personnel.

The specific tasks of the printing and distribution specialist include, but are not limited to, the following:

- a. Reviews and evaluates the existing system of printing and distribution of IEL materials. Makes appropriate recommendations for improvement.
- b. Develops an inventory system for IEL materials to assure adequate supply and timely replacement.
- c. Evaluates printing capacity and quality of existing printing firms in Monrovia with specific emphasis placed upon amount and quality of equipment, adequacy of personnel, management and cash flow.
- d. Evaluates the format of existing modules regarding design, print size and design, style, bindings and packaging. Makes appropriate recommendations for improvement.
- e. Investigates alternative methods of module production to improve their cost effectiveness. Determines how modules are handled in the classroom and recommends ways of increasing their useful life without significant increase in cost of production.
- f. Reviews and evaluates existing procedures for ordering IEL modules from solicitation of bids to delivery in the classroom.
- g. Develops a long-term plan for an efficient system of materials printing and distribution.
- h. Makes recommendations concerning training needs of the personnel of the IEL printing/dissemination unit.

### 3. Curriculum Design/Development Specialist

The curriculum specialist will be contracted for 12 person months over the life of the project as follows:

1986 - 2 PM  
 1987 - 2 PM  
 1988 - 2 PM  
 1989 - 2 PM  
 1990 - 2 PM  
 1991 - 2 PM

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This specialist will be responsible for determining if the IEL modules reflect the goals and objectives of the national elementary school curriculum. He will also compare the content of the eight-week IEL inservice teacher training course with the IEL modules for articulation and consistency.

Most classrooms lack instructional materials of any type and the majority of teachers are unqualified. In most cases, the IEL modules will be the only curriculum-related materials that teachers will have. IEL training may be the only formal training that many teachers will receive. If those teachers fail to understand curriculum goals and objectives, the effort to train them will be diminished. The curriculum specialist must be sensitive to these conditions and evaluate the content of the modules in this light.

He will work with IEL personnel and with members of the curriculum and evaluation unit of the IEL Division. The specific tasks of the curriculum specialist include, but are not limited to, the following:

- a. Appraises the revised national curriculum for primary education for relevance to the stated goals and objectives of the Ministry of Education.
- b. Compares the IEL modules with the national primary school curriculum by subject area and grade. Evaluates the content of the modules for its appropriateness to the age group for which it is intended as well as for its scope and sequence. Recommends changes or re-design of the IEL modules as appropriate.
- c. Compares the content of the 8-week inservice teacher training course with that of the IEL modules to determine if they are consistent with each other. Recommends adjustments/improvements for the eight-week inservice training course.
- d. Evaluates the PT and PL methodologies of IEL to determine how they advance the objectives of the curriculum.
- e. Determines degree of teacher resistance to adaptation of the IEL methodology in terms of their perception of its "official validity," vis a vis, the Ministry of Education.
- f. Recommends specific training programs for IEL personnel in the area of curriculum design.

C. Other Personnel

1. PSC Project Manager

The PSC Project Manager has overall coordination responsibility for the project and reports to the Chief of the Human Resources Development Division. The Project Manager will monitor and guide the initiation and implementation of IEL II and will coordinate IEL activities with officials of the MOE, Peace Corps, LRCN and the technical assistance.

a. Duties:

- Oversee GOL compliance with AID policies, procedures and regulations.
- Provide direction and guidance to contractor technical assistance team.
- Monitor adherence by the implementation and external evaluation contractors to contract requirements and timetables.
- Oversee initial commodity procurement until contractor assumes procurement responsibilities.
- Insure the timely provision of AID financing and/or other inputs.
- Monitors flow of project funds ensuring proper usage by contractor, GOL, PSA etc.
- Assist GOL to insure the effective utilization of resources and early awareness of potential problems.
- As required, drafts Amendments to the Project Agreement and Project Implementation Letters.
- Identify and assist in resolving implementation issues.
- Monitor the vehicle control plan and enforcement of all vehicle operation and maintenance policies.
- Insure that the external evaluation plan is carried out in accordance with the schedule.
- Develop a historical record of implementation for the official AID project files.
- Coordinate the activities of the GOL, Peace Corps, LRCN, the contractor and other groups as it relates to USAID activities in IEL II.

b. Required Professional Qualifications:

The Project Manager should possess a minimum of a master's degree in Education or a related social science. A doctorate would be preferred. A minimum of ten years of professional experience in educational administration or related areas with field experience in developing countries, preferably in Africa is required.

The Project Manager should have knowledge or experience with USAID projects in the field and with USAID procedures. This person should possess good communication and coordination skills for maintaining relationships with several GOL, U.S. Government and private agencies during the LOP.

2. Evaluation Specialist

The evaluation specialist will be contracted for a total of 9 person months over the life of the project as follows:

1987 - 3 PM  
 1988 - 3 PM  
 1990 - 3 PM

The evaluation specialist will have primary responsibility for the systematic appraisal of the project including such areas as student achievement and the professionalization of teachers, school principals and education officers. In general, he will design an evaluation procedure to determine if the project has achieved its stated objectives.

The tasks of the evaluation specialist include, but are not limited to, the following:

a. Interviews key project personnel, e.g., teachers, school principals, education officers, technical advisors and specialists to determine their perceptions of project progress and problems.

b. Compares targets of project workplan with actual achievements. Documents problems and their causes.

c. Determines degree of integration of the IEL project into the Ministry of Education and coordination of the project with other agencies or units.

d. Determines if the IEL methodology resulted in increased learning.

e. Evaluates the cost-effectiveness and cost-benefit of the IEL project.

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ANNEX H-3

Commodities List

This annex provides the commodities planned for IEL II. All items listed will be funded by the project except for gasoline, vehicle maintenance and instructional material printing costs which will be governed by an MOE/USAID agreed formula. A portion of the commodities will be ordered by USAID/Liberia for 1986 requirements. All other procurement activities will be the responsibility of the selected contractor.

SUMMARY OF COMMODITIES  
AND ESTIMATED COSTS:

<u>ITEM</u>	<u>COST</u>
A. Vehicles	\$ 905,600
B. Material Production/Distribution of IEL Materials	1,176,719
C. Regional Intercommunication System	10,000
D. Classroom Radios	55,000
E. Professional Books	43,000
F. Gasoline and Vehicle Maintenance	565,646
G. Video Cassette Players, TVs and Training Video Cassettes	11,250
H. Office Furniture and Equipment	20,000
I. Computer Equipment	<u>110,000</u>
TOTAL	<u>\$2,897,215</u>

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## COMMODITY LIST:

EST. UNIT COMMODITY	COST	WHEN & QTY QUANTITY	REQUIRED	TOTAL COST
<b>A. Vehicles</b>				
1) Four-wheel drive: Jeep AMC - Cherokee including spare parts helmets and shipping	\$15,800	40	1986 - 10 1987 - 10 1990 - 10 1991 - 10	\$ 632,000
2) Motorcycles: Yamaha 125 cc including spare parts, helmets and shipping	\$1,900	144	1986 - 47 1987 - 16 1988 - 8 1989 - 47 1990 - 22 1991 - 4	<u>\$ 273,600</u>
				<u>\$ 905,600</u>
<b>B. Material Production/ Distribution of IEL Materials</b>				
1) Printing of modules (new units) (USAID input)	\$341	1,585	1986 - 250 1987 - 350 1988 - 350 1989 - 338 1990 - 225 1991 - 73	\$ 540,485
2) Printing of modules (replacement units) (USAID inputs)	\$341	1,064	1987 - 249 1988 - 192 1989 - 187 1990 - 175 1991 - 88	\$ 362,824
3) Semester Boxes (USAID inputs) 2 @ \$25	\$50	2,649	1986 - 250 1987 - 599 1988 - 542 1989 - 525 1990 - 400 1991 - 160	\$ 132,450
4) Additional Paper, Tapes, binding			1986 - 20,000 1987 - 10,000	\$ 30,000

COMMODITY	EST. UNIT COST	QUANTITY	WHEN & QTY REQUIRED	TOTAL COST
4) Chalkboards	\$10	1,586	1986 - 250 1987 - 350 1988 - 350 1989 - 338 1990 - 225 1991 - 73	\$ 15,860
5) Lapboards	\$1	95,100	1986 - 15,000 1987 - 21,000 1988 - 21,000 1989 - 20,300 1990 - 13,500 1991 - 4,900	\$ 95,100
Subtotal				<u>\$1,176,719</u>
<u>C. Regional Inter-Communication System</u>				
1) Two-way intercom radios	\$2,000	5	1986	<u>\$ 10,000</u>
<u>D. Classroom Radios</u>				
1) 10 Radio receivers	\$50	1,100	1986 - 100 1987 - 500 1988 - 500	<u>\$ 55,000</u>
<u>E. Professional Books</u>				
1) Varied titles as selected by Selection Committee	\$10	4,300	1986 - 1,070 1987 - 1,070 1988 - 1,080 1989 - 1,080	<u>\$ 43,000</u>
<u>F. Gasoline and Vehicle Maintenance</u>				
1) Gasoline	\$3 gal.	133,282 gals.	1986 - 19,175 gals. 1987 - 24,775 " 1988 - 26,575 " 1989 - 25.163 " 1990 - 22.163 " 1991 - 15,531 "	\$ 399,846

COMMODITY	EST. UNIT COST	QUANTITY	WHEN & QTY REQUIRED	TOTAL COST
2) Maintenance	N/A	all vehicles	1986 - \$ 27,300 1987 - 34,500 1988 - 37,200 1989 - 32,000 1990 - 23,300 1991 - 11,500 <u>\$165,800</u>	<u>\$ 165,000</u>
Subtotal				<u>\$ 565,646</u>
<u>G. Audiovisual Equipment and Supplies</u>				
1) Video Cassette Players and TVs	\$1,000	3	1986	\$ 3,000
2) Prerecorded Training Cassettes	\$165	50	1986	<u>\$ 8,250</u>
Subtotal				<u>\$ 11,250</u>
<u>H. Office Furniture and Equipment</u>				
1) 4 sets of office furniture for TA team (desk, chair, bookcase, visitors chair, ditto machines), desk, chair, manual typewriter, storage closet and files for administrative assistant	\$4,000	5 units	1986	<u>\$ 20,000.</u>
<u>I. Computer Equipment</u>				
1) Scanner	\$100,000	All Equipment	1986	\$110,000
2) 3 Terminals	10,000			

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**ANNEX A I**

PID  
13 SEP 84 11:31  
Lames

UNCLASSIFIED STATE 270469

ACTION: AID 5 INFO: AMB DCM ECON E/J

VZCZDMVO98E  
RR RUTFMV  
DE RWIIC #2469 2562034  
ZNR UUUUU ZZH  
R 121846Z SEP 84  
FM SECSTATE WASHDC  
TO AMEMBASSY MONROVIA 1673  
BT  
UNCLAS STATE 270469

15-SEP-84  
TCR: 08:10  
CN: 10960  
CEFG: AID  
DIST: AID

AIDAC

A.C. 12356: N/A

TAGS:

SUBJECT: PID REVIEW: IMPROVED EFFICIENCY OF LEARNING II  
669-4186

REF: (A) MONROVIA 22425, (B) STATE 162200, (C) STATE  
197556

1. SUBJECT IEM APPROVED BY AID/W ON MAY 24, 1984.  
COPY OF APPROVAL IEM FORWARDED MISSION SEP. 13, 1984.

2. AID/W COMMENTS THAT PID APPROVAL OF SUBJECT PROJECT,  
NOTED IN RIFES 2 AND 3, PROVIDES FOR CHE PP TO BE  
APPROVED BY MISSION PURSUANT TO DOA NO. 147. SHELTZ

BT  
#2469

BLOCK STAMP ROUTER		
ROUTE TO	ACT.	INIT.
D/DD		✓
OP/TRG		✓
SPPD		✓
ECON		
HRD	✓	
CON		
ARD		
EG		
PEK		
GSO		
RF		✓
FILE STATION = 05		
C&R Chcon		
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CRAFTED BY: [Signature]		

UNCLASSIFIED STATE 270469

**Best Available Document**

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ANNEX V

Examination of Nature, Scope and Magnitude  
of Environmental Impacts

A. Project Description

The purpose of this project is to assist the COL in upgrading its elementary education system; and is the second phase of an ongoing educational project. Under Phase I a system has been developed to ensure effective education of elementary school-aged children, increase the number of pupils in each classroom and improve the professional and academic quality of elementary school teachers. Phase II will continue and expand the work begun during Phase I, aiming to provide elementary educational opportunities at costs commensurate with available resources through developing a means to reproduce and distribute the systems developed during Phase I to an estimated 14,000 students in approximately 1,000 schools. Additionally, 4,000 teachers and over 1,000 principals will be trained.

Under 22 CFR 216.2(c)(2)(i), projects involving education, technical assistance, or training programs; except to the extent such programs include activities directly affecting the environment, such as construction, are not subject to requirements for an Initial Environmental Examination. This project has no construction components, and thus meets the criteria set forth in 22 CFR 216.2(c)(2)(i) eliminating requirements for an Initial Environmental Examination.

INITIAL ENVIRONMENTAL EXAMINATION (IEE)

Project Location : Liberia

Project Title : Improved Efficiency of Learning II

Funding : \$9,000,000

Life of Project : Five Years (1985-1990)

IEE Prepared by : Robert Braden, PE  
USAID/Liberia Engineer

Environmental Action Recommended : Negative Determination (see attached)

Mission Director's Concurrence : Date: *John Delencin Acting*  
*5/6/87*

Assistant Administrator's Decision : Date: \_\_\_\_\_

Approved: \_\_\_\_\_

Disapproved: \_\_\_\_\_

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Mission Director's Concurrence : Date: *John Delancia Acting*  
*5/1/84*  
Assistant Administrator's Decision : Date: \_\_\_\_\_

Approved: \_\_\_\_\_

Disapproved: \_\_\_\_\_



IMPACT IDENTIFICATION AND EVALUATION FORM

C. Atmospheric

- 1. Air addition -----           N
- 2. Air pollution -----           N
- 3. Noise pollution -----           N
- 4. Other factors:
- \_\_\_\_\_
- \_\_\_\_\_

D. Natural Resources

- 1. Diversion, altered use of water -----           N
- 2. Irreversible, inefficient commitments -----           N
- 3. Other factors
- \_\_\_\_\_
- \_\_\_\_\_

E. Cultural

- 1. Altering physical symbols -----           N
- 2. Dilution of cultural traditions -----           N
- 3. Other factors
- \_\_\_\_\_
- \_\_\_\_\_

IMPACT IDENTIFICATION AND EVALUATION FORM

F. Socioeconomic

- 1. Changes in economic/employment patterns ----           N
- 2. Changes in population -----           N
- 3. Changes in cultural patterns -----           N
- 4. Other factors:


G. Health

- 1. Changing a natural environment -----           N
- 2. Eliminating an ecosystem element -----           N
- 3. Other factors:


H. General

- 1. International impacts -----           N
- 2. Controversial impacts -----           N
- 3. Larger program impacts -----           N
- 4. Other factors:


IMPACT IDENTIFICATION AND EVALUATION FORM

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I. Other possible impacts (not listed above)
