PDKAQ310

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

GUATEMALA

PROJECT PAPER

BASIC EDUCATION STRENGTHENIN

AID/LAC/P-477

Project Number: 520-0374

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: ____

DOCUMENT CODE: 3

2. COUNTRY/ENTITY: GUATEMALA

3. PROJECT NUMBER: 520-0374

4. BUREAU/OFFICE: LAC — 05

5. PROJECT TITLE (maximum 40 characters): BASIC EDUCATION STRENGTHENING

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 07 DD 01 YY 95

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 89 B. Quarter 4 C. Final FY 94

8. COSTS ($000 OR EQUIVALENT $1 = Q.2.7)

A. FUNDING SOURCE	FIRST FY 89 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	2,603	897	3,500	21,546	8,454	30,000
(Grant)	(2,603)	(897)	(3,500)	(21,546)	(8,454)	(30,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country		1,618	1,618		31,916	31,916
Other Donor(s) Local Private					1,400	1,400
TOTALS	2,603	2,515	5,118	21,546	41,770	63,316

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) EHR	600	680				30,000		30,000	
(2)									
(3)									
(4)									
TOTALS						30,000		30,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 636 | 660 | 610 | 670 | 640

11. SECONDARY PURPOSE CODE: 624

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BRW	BUW	R/ED	EQTY	DEL		
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

To improve the efficiency, coverage, and administration of basic education services in Guatemala.

14. SCHEDULED EVALUATIONS
Interim MM 07 YY 92 | - - | - - | - - Final MM 07 YY 94

15. SOURCE/ORIGIN OF GOODS AND SERVICES
[X] 000 [ ] 941 [X] Local [ ] Other (Specify) ____

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)

I certify that the methods of payment and audit plans are in compliance with the payment verification policy.

Joe O. Hill
Controller

17. APPROVED BY
Signature: Anthony J. Cauterucci
Title: ANTHONY J. CAUTERUCCI
Mission Director
Date Signed: MM 07 DD 07 YY 89

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
MM DD YY

AID 1330-4 (8-79)

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PROJECT AUTHORIZATION

Name of Country: Guatemala

Name of Project: Basic Education Strengthening

Number of Project: 520-0374

1. Pursuant to Section 105 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Basic Education Strengthening Project for Guatemala, involving planned obligations of not to exceed $30,000,000 in grant funds over a six year period from date of authorization subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the project is six years from the date of initial obligation.

2. The project will assist the Government of Guatemala in improving the efficiency, coverage, and administration of basic education in Guatemala. This is anticipated to be the first phase of a multi-phased effort, spanning 10 to 15 years, to support basic education in Guatemala.

3. The Project Agreement which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

   a. Source and Origin of Commodities, Nationality of Services

      Commodities financed by A.I.D. under the project shall have their source and origin in the United States (A.I.D. Geographic Code 000), the cooperating country, or other countries included in the Central American Common Market, except as A.I.D. may otherwise agree in writing.

      Except for ocean shipping, the suppliers of commodities or services shall have the United States, the cooperating country, or other countries included in the Central American Common Market as their place of nationality, except as A.I.D. may otherwise agree in writing.

Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

b. Conditions Precedent to Initial Disbursement

Prior to the first disbursement under the Project, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, 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. the following:

(i) An opinion of the Ministerio Público or other counsel acceptable to A.I.D. that the Project Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a legally binding obligation of the Grantee in accordance with all of its terms; and,

(ii) A statement of the name of the person holding or acting in the office of the Grantee and of any additional representatives, together with a specimen signature of each person specified in such statement.

c. Conditions Precedent to Disbursement for Specific Activities

(i) Prior to any disbursement of funds for purposes other than the contracting of external technical assistance and the procurement of project-related goods and materials, except as may be stipulated in separate conditions precedent, the Ministry of Education will provide evidence that the Management Office has been created within the Ministry of Education and that an appropriately qualified Director of the Management Office has been appointed to assure proper functioning and coordination of the project within the Ministry of Education and with other participating institutions;

(ii) Prior to any disbursement of funds for the procurement of vehicles, the Ministry of Education will provide evidence that it has established a plan, in form and substance acceptable to A.I.D. for the care and maintenance of A.I.D. financed vehicles under this project;

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(iii) Prior to any disbursement of funds in support of the expansion of Bilingual Education, the Ministry of Education will provide evidence, in form and substance acceptable to A.I.D., that it has a plan for (a) MOE absorption of local costs, including project-funded personnel and operating expenses; (b) the creation, funding and filling of 500 bilingual teacher positions, with appropriately qualified personnel and on a schedule consistent with the planned implementation of the bilingual education expansion activity; (c) the phased integration of PRONEBI functions within the organizational structure of the MOE; (d) a curriculum which emphasizes the rapid and complete acquisition of Spanish language skills; and, (e) an overall national master plan for achieving full operational coverage of appropriate primary education services for the indigenous population of Guatemala.

(iv) Prior to any disbursement of funds in support of SIMAC, the Ministry of Education will provide evidence, in form and substance satisfactory to A.I.D., that it has created, funded and filled 16 new professional positions in SIMAC to produce distance education materials for in-service teacher training.

I. Covenants

The Ministry of Education shall covenant the following:

1. To ensure that all project-related private sector and contractor personnel have appropriate access to facilities and the cooperation of MOE personnel related to carrying out the activities of the Project agreed to in Annex A of the Project Agreement;

2. To ensure that sufficient budgetary resources are made available to cover the recurrent costs of the project and to sustain project activities at levels adequate to continue to improve the efficiency, expand the coverage, and improve the administration of basic education services in Guatemala beyond the PACD;

3. To give priority to (1) qualitative improvement of primary education rather than expansion of physical facilities; (2) use of low-cost methods to deliver

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primary school educational services; (3) adoption of standardized achievement testing in primary schools; (4) improving the collection and utilization of reliable and valid educational statistics, and (5) maximizing, to the extent feasible, the resources of the private sector in the delivery of primary educational services;

4. To delegate appropriate responsibilities and authority to sub-national units of the MOE to ensure that regionalization efforts are complementary to the objectives of this Project; and,

5. Use its best efforts to ensure that (1) the level of GOG budgetary resources in support of education approaches three percent of GDP by 1995, (2) the proportion of the GOG education budget allocated to primary education increases; and (3) the proportion of the MOE budget devoted to investment expenditures approaches ten percent by 1995.

Anthony J. Cauterucci
Director, USAID;Guatemala

7/7/89
Date

Drafter:
PDSO:JFLombardo/EBWarfield EBW Date 7/3/89

Clearance:

RLA:MWilliams Date 7/6/89
PDSO:CHSchoux Date
OHRD:LAyalde Date 7/6/89
PRM:TKellermann Date 7/6/89
CONT:JOHill Date 7/6/89
DDIR:PEWhite Date 7/7/89

(3719C)

BASIC EDUCATION STRENGTHENING PROJECT

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Draft Project Authorization

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I. SUMMARY AND RECOMMENDATIONS

A. Recommendation

The USAID Project Development Committee recommends authorization of an A.I.D. $30 million development assistance grant, under Section 105 of the Foreign Assistance Act of 1961, as amended, to support the Guatemalan efforts to improve the financing and delivery of basic education services. The grant will be obligated with the Ministry of Education (MOE), with contracts and sub-grants to private sector firms and non-profit organizations to carry out specific activities in support of the overall program.

B. Project Summary

The Basic Education Strengthening (BEST) Project is designed to improve the efficiency, coverage, and administration of primary education in Guatemala. The Project will be implemented within a policy framework to address the key institutional, financial, and technical constraints to basic education in Guatemala. While the level of investment resources allocated to education has been identified as a long-run constraint to providing universal primary education in Guatemala, the Project strategy recognizes the need to first overcome the short-run constraint of inefficient use of current resources. Thus, Project activities focus on the set of temporal priorities required for immediate improvements in the educational system. At the same time, the Project introduces a set of innovative delivery systems and supports analytic work designed to lay a foundation for future improvements in the financing, delivery, and management of basic education services. This approach is consistent with Mission and Agency education sector strategies which identify improving instructional quality and system efficiency as top priority for education sector programming.

Primary school education in Guatemala is costly and inefficient. Ministry of Education (MOE) statistics show that 50 percent of children who enter first grade fail and have to repeat the grade, only about half of entering students eventually finish primary school. The Guatemalan primary school system requires an average of 11.6 years of instruction to produce a sixth grade graduate. Needless repetition represents a waste of Q.59 million per year, about 20 percent of the MOE budget.

The principal cause of this inefficiency is low quality classroom instruction. Teachers perform poorly in the classroom because they are unsupervised, poorly supported, and poorly motivated. They are not provided with in-service training to stimulate them professionally or to sharpen their knowledge and teaching techniques. Administrative support is slow and bureaucratic. Books, teaching materials, and teachers' guides are in short supply. Parents often do not trust the teachers or value education. In much of Guatemala, the many indigenous languages spoken by the children further complicate the work of the teacher. Many teachers have to deal with more than one grade in a single classroom. Over 3,000 have to teach all six grades by themselves, in a single classroom.

The Basic Education Strengthening Project will provide $30 million in A.I.D. grant funds over a six year period to support Guatemalan efforts to improve basic education services. While the overall objective will be to strengthen the Government's national public school system, an effort will also be made to increase the involvement of the private sector and general public -- including businesses, universities, and parents -- in support of public education. The Project will be implemented in coordination with the $30 million World Bank "Second Basic Education Project," which will construct new primary school classrooms and print textbooks. The activities to be developed under this initial authorization are anticipated to be the first phase of a longer term effort spanning 10 to 15 years.

The Project will have four components. The first is bilingual education. This component will first "consolidate" the existing A.I.D. supported bilingual education program by upgrading instructional materials, streamlining the methodology, and developing a long-range expansion plan to achieve full coverage of the indigenous population. Following consolidation, the Project will support continued expansion of bilingual education services to 1,300 schools. It will also develop an experimental Spanish language instructional radio series to speed the learning of Spanish by indigenous children in the classroom.

The second component is support services to classroom teachers. This component will improve the quality of classroom teaching by providing new in-service teacher training to upgrade the knowledge, skills, and sense of professional commitment of teachers. The component will also provide teaching materials to students and teachers through a private sector businessmen's and women's program that supports public education. The existing network of school supervisors will be strengthened with training, vehicles, and supplies. Special emphasis will be placed on strengthening community participation and on promoting greater enrollment and retention of girls.

The third component is an R&D program to adapt and test two non-traditional instructional methodologies that appear to have potential for expanding access and improving the efficiency of basic education services quickly and at low cost. The first pilot project will be a test of the modern "interactive radio" instructional system as a means of strengthening Spanish language and mathematics instruction. The other pilot project will test an innovative low-cost package of techniques and materials for multi-grade teaching in one room schools.

The fourth component is support for administrative improvement in the Ministry of Education. This component will provide for development of a computerized management information system, an applied education research and policy analysis program, and a software package for automation of the MOE personnel administration system.

The main beneficiaries of the Project are the school age children, primarily in the rural areas and among the indigenous population. The Project is expected to have significant impact on key indicators of education. The national primary school completion rate is expected to improve 22 percent between 1989 and 1996, from 509 students per thousand to 621 students per thousand. The overall repetition rate will improve by 32 percent, falling from the present 1989 rate of 318 repeaters per thousand students to 215 repeaters per thousand. The dropout rate will decline by 17 percent, from 82 dropouts per thousand to 68 per thousand. Because of reduced repetition, the system will require an average 9.32 years to produce a sixth grade graduate in 1996, a 20 percent improvement compared with the 1989 level of 11.65 years.

The Project involves a significant policy dialogue agenda. On a general level, the Project will promote increased GOG investment in the education sector from just under 2 percent of GDP in 1988 to 3 percent in 1995. Within the MOE budget, the Project will promote greater budgetary emphasis on primary education and on investments rather than on recurrent expenses. Moreover, the Project will result in expanded private sector participation in national educational activities and programs.

On the level of specific, project-related educational reforms, the Project will promote greater emphasis on improving qualitative aspects of the primary education system, on adopting new models and technologies to reduce costs of education, on introducing standardized academic achievement testing, and on continuing priority attention to providing appropriate bilingual education services to the indigenous population.

During intensive review, the Project Development Committee examined the issue of regionalization and its impact on the Project activities. The Committee concluded that regionalization will not materially affect the Project during the first two to three years of implementation. The initial phases of project implementation are compatible with current regionalization progress and are structured to respond to any policy shift that may result in decentralization of MOE functions. Although delegation of administrative and decision-making authority from the central Ministry of Education to eight regional offices remains a high priority of the MOE, the current implementation of regionalization has not progressed sufficiently to assess its practical effect on the Project. Therefore, the Project design incorporates monitoring of MOE regionalization efforts to identify key management issues that may surface with regard to the Project. The first evaluation, at the end of year three of the Project, will further assess regionalization's potential impact on the components and objectives of the Project.

Funds will be granted to the Ministry of Education, with the stipulation that A.I.D. will procure most project financed commodities and technical assistance services directly. Activities to be implemented directly by the Ministry of Education include in-service teacher training, bilingual education, the management information system, and improvement of field supervision. These are all traditional ongoing activities that are presently

being executed with reasonable success by existing MOE units. This decentralized approach using established, experienced MOE units gives the Mission confidence that these activities can be implemented by the MOE without undue delays or institutional problems. The Project's non-traditional, technically complex, and innovative activities will be implemented by various Guatemalan universities and private sector organizations. These activities include standardized testing, applied educational research, the one-room school pilot project, the interactive radio pilot project, and the social marketing campaigns. A single major institutional contract will be negotiated competitively for all technical assistance and training services. The institutional contractor will subcontract for the services of the local private sector organizations, assuring coordination of activities, efficient use of technical assistance resources, and simplified USAID Project management and contracting. The exception to this "umbrella" approach will be the private sector educational materials activity, which most likely will be awarded non-competitively to the local organization which runs the only ongoing program of this kind in the country.

C. Project Analyses

The proposed Project fully supports GOG and A.I.D. policies and strategies. The technical, administrative, financial, and social soundness analyses have assessed BEST activities as feasible. The economic analysis has determined the BEST Project to be a good investment of scarce resources, based on the internal rate of return for the Project calculated at 60 percent. No adverse environmental issues were identified, and a negative determination was approved by A.I.D./W.

D. Summary Financial Plan

Over the six year life of the Project, A.I.D. will provide $30 million in grant funds and the Government of Guatemala (GOG) will contribute the equivalent of $31.9 million in MOE salaries, some operational costs, and school furniture procurement. The equivalent of $1.4 million will be donated by the Guatemalan private sector thorough the basic student materials program of the Chamber of Industry. The total cost of the project is $63.3 million and will be distributed among components and other budget line items as shown in the table below.

Table 1

Budget Summary by Component

($000)

	AID	GOG	PRIVATE SECTOR	TOTAL
1. Bilingual Education	6560	22692	0	29252
2. Teacher Services	7247	7141	1400	15788
3. Alternative Methodologies	5461	1500	0	6961
4. Education Administration	3983	493	0	4476
5. Project Mgmt. & Administration	1480	90	0	1570
6. Inflation	2568	0	0	2568
7. Contingencies	1951	0	0	1951
8. Evaluation Audits Special Studies	750	0	0	750
Grand Total	30000	31916	1400	63316

E. Issues and Guidance

AID/W Guidance was received in two different documents, a review of the New Project Description that was submitted by the Mission (State 74953, March 10, 1989), and additional guidance based on the AID/W PID review (State 123826, April 20, 1989). These two cables are found in Annex A. The response of the Mission to the specific points of guidance in these two cables follows in this section.

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1. NPD Guidance (State 74953)

a. MOE BUDGET (Paragraph 2)

The first AID/W point of guidance to the Mission has to do with educational finance in Guatemala. As suggested in the Guidance Cable, the Mission consulted with the World Bank concerning who will take the lead on the issue of educational finance. The Bank was aware of the issue, but did not express a strong position with regard to using its project resources to attempt to leverage increases in the GOG education budget.

Subsequently, on several occasions during intensive project design activities, the Mission raised the issue of low levels of GOG investment in education with the Ministry. The Minister and his advisors explained that their efforts to increase the budget for the Ministry of Education have been meeting with some success in spite of a very tight GOG financial environment. Following these discussions, the Ministry informed A.I.D. that it had set an objective of raising the education budget from its current level of 1.8 percent of GDP to 3 percent over a five-year period. The Mission regards this as an aggressive and appropriate expression of intent, made in part in response to the dialogue with A.I.D. on this subject. The BEST Project will support achievement of this objective by including it as a Covenant in the Project Grant Agreement. The Administrative Analysis (Annex E.4) discusses the MOE Budget in more detail.

b. Donor Coordination (Paragraph 3)

The Project Paper Administrative Analysis (Annex E.4) explains that the MOE has established a special Management Office directly attached to the Minister of Education's Office to coordinate Donor activities and to promote quick and efficient implementation. The BEST Project will support this unit by providing funding for the Office Director's salary and by including the institutionalization of this Office as a C.P. The Mission has also agreed in writing with the World Bank to hold periodic direct consultations between A.I.D and the Bank to discuss implementation, policy, and coordination.

c. Project Implementation Unit (Paragraph 4)

As mentioned above, the institutionalization of the MOE Management Office will be by a C.P. and supported by Project funding for the Director's salary for the required life of the Project. The Unit will not be an "implementation unit," but rather a coordinating and liaison unit for this Project and other donor projects (including PRONEBI). Annex E.4 explains that the Project is supporting ongoing services of different, established, functioning MOE units. This approach greatly improves the chances that services will continue beyond the termination of AID assistance.

d. Technical Assistance (Paragraph 5)

Technical assistance levels have been negotiated with the MOE in the course of project design. The Mission has been encouraged by the Ministry's strong position in favor of more technical assistance than was originally planned for the management information system and for educational planning. The technical assistance component will be negotiated with the present Minister and his staff, who now plan to remain in the Ministry through the end of 1989.

e. Training (Paragraph 6)

The project provides for substantial on-the-job training to be provided by technical assistance advisors in the course of their advisory work. In-country short-term training for MOE staff is also contemplated. A long-term training plan is included in Annex H.4.

f. Decentralization (Paragraph 7)

Annex E.4 discusses the MOE regionalization program and the BEST Project approach to incorporating activities within the regionalization structure. Where appropriate, the Project description also includes references to the regionalization initiative. In brief, specific BEST Project activities will support and work through the regionalization structure when it is jointly decided by AID, the MOE, and the technical assistance contractor that it is prudent and advantageous for the project to do so. Most initial activities will take place through the Central Ministry rather than through the eight regional administrative offices. A covenant will encourage the GOG to gradually delegate significant administrative responsibilities to the regional offices. Regionalization progress will be monitored and evaluated during Project implementation to ensure that MOE organizational changes are compatible with the Project components and objectives. The Educational Administration Component will provide specific organizational and management research support to the MOE as it further defines the regionalization effort.

g. Private Sector (Paragraph 8)

The Project Paper describes a coordinated public-private sector program. At least five different local private sector organizations will participate in BEST Project implementation.

h. Length of Project (Paragraph 9)

P.I.D. guidance (State 123826) required the Mission to reduce the Project from ten to six years. The PP and authorization are for a six year project, with a plan for phasing in an amendment to this project or a follow-on project around 1994.

i. Delegation of Authority

The PID was reviewed and approved in AID/W on March 31, 1989. The PID approval cable (State 123826) authorized the Mission to approve the PP and authorize the Project subject to the guidance provided therein.

2. PID Review Guidance (State 123826)

a. World Bank Project

The Mission appreciates the AID/W suggestion that a book component might be added to the BEST Project should the World Bank "Second Basic Education" project not materialize. As the BEST PP was being reviewed, AID was assured by the Bank and the GOG that approval of the Bank project would be forthcoming. Donor coordination is discussed in Section 1.b. above.

b. Policy Dialogue (Paragraphs 4 and 5)

The PP (section II.D) discusses the Mission strategy for encouraging the GOG to increase investment in the social sectors, including education. Increased investment in education, especially primary education, will be negotiated as part of a covenant to the BEST Project Agreement. Negotiation of the Core Development Budget is another forum that will be utilized, as appropriate. The Project will provide technical assistance to help the MOE improve its budgetary analysis and reporting in an effort to increase its access to the Core Development Budget and other MOE budgetary resources. Progress toward meeting technical and policy objectives will be tracked through the project monitoring and evaluation system, and the Mission project team. The MOE has already accepted A.I.D.'s principal policy dialogue issue by agreeing to make an effort to increase the percentage of GDP dedicated to education from 1.8 percent to 3 percent over a five-year period.

c. Recurrent Costs (Paragraph 6)

Recurrent costs are analyzed in the PP Financial analysis and were found to be within GOG projected resources. A covenant requires the GOG to assume continuing recurrent costs upon termination of AID support.

d. Project Design

(1) Dual Tracks

The alternative primary education delivery systems that will be supported by the Project have been designed to work from a common curriculum and will be evaluated using common standardized tests. This approach means that the different delivery systems will be academically equivalent to each other. The exception is in bilingual schools, where students will not normally be able to shift into traditional schools until after the fourth grade.

(2) Cultural Diversity

The Social Soundness Analysis discusses the impact of the Project on the indigenous culture. Overall, AID's bilingual education projects have been a strong force supporting the conservation of Guatemala's indigenous cultures and languages. On the other hand, indigenous parents were found to be critical of the educational system for not doing a good job of teaching Spanish to their children. Balancing protection of the cultural heritage of the country against the growing demand by indigenous people for full access and participation in the political, social, and economic development of Guatemala is an ongoing challenge faced by the GOG.

(3) PRONEBI's Strengths and Weaknesses

The PP discusses the Programa Nacional de Educación Bilingue, (PRONEBI) including its accomplishments to date and problems that have been detected with its methodology and organization. Overall, PRONEBI is an important A.I.D. success story, worthy of the continued support and expansion that will be provided by the BEST Project. However, as with any complex and innovative new service, evaluations have identified some deficiencies. These will be addressed by the technical assistance to be financed under the PRONEBI "consolidation" phase. PRONEBI's strengths and weaknesses are discussed in more detail in the PP Technical and Administrative analyses.

e. Design Strategy (Paragraph 8 and 9)

Based on AID/W guidance the Mission shortened the planned BEST Project from ten to six years. The Project Paper outlines a second phase to begin following an evaluation in year five of the Project. The follow-on could either be an amendment to the BEST Project or a new project, depending on the degree of linkage and continuity between the activities in the two phases. The authorization, Grant Agreement, obligation schedule, and disbursement schedule for project 522-0374, however, do not presume any activities or funding beyond what is described in this PP, which will be fully executed by the 1995 PACD.

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f Private Sector (Paragraph 10)

The Project design includes five major private sector components. This approach has been accepted by the GOG.

g Technical Assistance (Paragraph 11)

Technical assistance requirements were carefully reviewed during project design. An effort will be made to employ local Guatemalan advisors, helping to hold the line on technical assistance costs.

h Congressional Notification (Paragraph 12)

A CN was submitted to Washington by the Mission in May 1989.

F. Project Development Team

The USAID/Guatemala Project Development Committee consisted of the following personnel:

- Richard Martin, General Development Officer, Chair
- Joe Lombardo, Project Development Officer, Cochair
- Mary Ott, Economist
- Tom Kellermann, Program Officer
- Mike Alban, Financial Analyst
- John McAvoy, Regional Contracting Officer
- Miriam Castañeda, Education Officer
- Gilberto Méndez, Education Officer
- Julio Díaz, Education Project Officer
- Gregorio Tum, Sociologist
- Susan Clay, AID/W Education Officer

This committee was assisted by a consulting team funded under the Central American Field Technical Services contract with the Academy for Educational Development. They were:

- Catherine Balsis, Team Leader
- Clifton Chadwick, Senior Technical Advisor
- Ray Chesterfield, Bilingual Education
- David Edgerton, Interactive Radio
- Louis Dahman, In-Service Teacher Training
- Jorge Martinez, Economic Analysis
- Kjell Enge, Social Soundness Analysis
- Bruce Newman, Educational Statistics and MIS
- Kurt Moses, MIS
- Michael Richards, Sociolinguistic Mapping
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II. PROJECT BACKGROUND AND RATIONALE

A. The Guatemalan Environment: Economic, Political, and Social Setting

Guatemala is significantly more progressive today, in overall political and economic terms, than it was in the early 1980s. January 1989 marked the completion of the third year of a democratically-elected national government, contributing to a growing confidence that, despite numerous problems, a democratic form of government is possible. Equally impressive has been the positive shift in macro-economic trends. Guatemala entered the 1980s trapped in a steep downward economic spiral. By the end of 1988 the decline had been halted. In 1987 there was a return to a real growth rate of 3.1 percent, while preliminary estimates for 1988 show at least a 3.5 percent growth rate. This exceptional economic progress is expected to continue well into the 1990s.

Whereas these political and economic gains contribute to a positive climate for development, they have not spread rapidly to the traditionally disadvantaged portions of the population: highland indians, the urban poor, and women. Understanding these dimensions of the development challenge in Guatemala requires an understanding of the social, cultural, and geographic diversity of the country.

Guatemala covers an area of 108,889 square kilometers, and has a population of 8.6 million inhabitants. It is the third largest Central American country, first in population size and second in population density. It is also the Central American country with the largest percentage of rural population (63 percent in 1985). The official language is Spanish. The population is 50 percent Indian with its largest concentration in rural areas (73 percent of the total rural population). It is largely an agricultural country with agriculture-related economic activity supplying domestic food consumption, providing employment, and accounting for the majority of export earnings. Principal crops are coffee, bananas, cotton, and sugar.

Guatemalans live in some 16,000 small villages that are satellites of 335 municipalities in 22 Guatemalan departments. At least half the population belongs to one of the many indigenous groupings. Twenty-three distinct languages are spoken. Political, social, and cultural jurisdictions are further separated by severe geographic barriers. The difficulty in establishing channels of communication (roads, language, shared knowledge) and delivering services (health, education, sanitation, etc.) is far greater in Guatemala than elsewhere in Central America. Solutions require consistently high levels of financial and political commitment over long periods of time.

The continued and long-term economic development of Guatemala will depend on improved educational attainment by the majority of Guatemalans. Evidence from a number of developing countries demonstrates the importance of basic education to economic and social development. China, Hong Kong, Israel, Japan, Korea, and Singapore all achieved near universal primary enrollment before embarking on periods of rapid industrial growth. Studies in Korea, Malaysia, and Thailand also have shown that education raises the productivity of farmers. They have clearly illustrated the effects of education on crop yields and other physical measures of farm output as positive, statistically significant, and quantitatively important. Agricultural experts have found that the first adopters of new technologies are those who can read and write. They also have stressed the difficulties of forming cooperatives with farmers who lack literacy and numeracy skills.

Primary education directly promotes progress in other sectors, as well. Studies throughout the world have concluded that maternal education is the strongest explanatory variable for reduction in infant mortality. Education of mothers positively influences the nutritional status of children and contributes to the lowering of fertility rates.

Finally, basic education is a fundamental prerequisite for constructive participation in the development of stable, responsible, democratic institutions. Without an informed, literate population, democratic systems will remain fragile and vulnerable. Basic education provides the fundamental skills, knowledge, and attitudes that citizens must have in order to understand and participate meaningfully in democratic processes.

The strong relationship between education and development has encouraged governments of developing countries, including Guatemala, and donors to renew their interest in improving educational opportunities, particularly in the area of basic education. Basic Education is defined by A.I.D. as the minimal level of skills, knowledge, and attitudes needed to live in a modern society. In its most rudimentary form, it consists of functional literacy and numeracy skills. As commonly used, basic education also includes additional knowledge and attitudes involving science (e.g. health and hygiene) and social studies. Delivery is usually to children through the primary level of the formal education system, but it also may be provided to adult school leavers through nonformal programs.

B. Problems of Basic Education in Guatemala

The Guatemalan public education system is highly inefficient, particularly at the primary school level. This inefficiency has hampered efforts to provide universal primary education for Guatemalans. Thus, while the lack of resources has been identified as a long-run constraint to increased access and coverage, inefficiency in the use of current resources has been identified as a short-run constraint that must take priority. The characteristics and consequences of inefficient resource use were identified and analyzed in the comprehensive Education Sector Assessment that was undertaken by USAID/Guatemala in 1985 and in the Basic Education Subsector Assessment of 1988.

In general, the quantitative and qualitative conditions of the education sector described in the Sector Assessments have not changed substantially between 1985 and 1988. There have been, however, some major changes in official policy and budgetary trends since the Sector Assessment was completed. Overall, the priority given to education has increased significantly under the new democratically elected government. Moreover, levels of public sector investment in education have risen, although the percent of the GOG budget and GDP allocated to education essentially have remained unchanged over the past decade at 13 percent and 1.8 percent, respectively.

Given the priority attached to improving the efficiency of current resource use as a pre-condition for the MOE to absorb larger levels of resources, the Mission and the MOE identified three major problem areas for basic education in Guatemala: (1) the low quality of primary school instruction and the resulting inefficiency of the system; (2) inadequate coverage of the primary education system; and (3) inefficient Ministry of Education planning and management practices. These three constraints are discussed in the following sections.

(1) Quality and Efficiency

The LAC Bureau has produced a set of indicators of efficiency to permit comparisons among the different AID recipient countries in Central America and to make projections into the 1990s. Among these six countries, Guatemala has the least efficient primary school system. According to that analysis, Guatemala had a 51 percent primary school completion rate for 1988, compared with 93 percent in Panama, 77 percent in Costa Rica, 62 percent in El Salvador, and 61 percent in Honduras. The Guatemalan school system requires an average of 11.6 years of instruction to produce one sixth grade graduate, compared to 7.6 years in Costa Rica, 7.5 years in Panama, and 9.4 years in Honduras.

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The Guatemalan education system is characterized by a highly inefficient flow of students with extremely high repetition and dropout rates, especially in the early grades. High repetition and dropout rates lead to a dismal record of the educational system's output as measured by standard cohort statistics. According to a new analysis done by the Mission in the course of BEST Project design, in 1987 the repetition rates in first and third grades were 45.8 percent and 32.3 percent respectively. For the same year, the dropout rates were 10.6 percent for first grade and 10.9 percent for third grade. As a consequence of the poor transition rates in 1987, only half of all primary students enrolled will eventually graduate from sixth grade, only 7 percent will graduate in six years, and it will take 12.15 years of schooling to produce a sixth grade graduate. Annex J presents more detailed historical data on repetition and dropout rates and projections, with and without the Project's interventions, to the year 2,000.

The poor performance of the primary education system leads to a waste of very scarce government resources and to unrealized human capital development. In 1987 some 367,714 primary school students repeated grades. This is about one third of the total primary school enrollment in that year. At an average cost (excluding facilities) of Q.160 per primary student in 1987, total repetition in primary school represented a waste of Q.58.8 million. This figure amounts to close to 20 percent of the MOE budget for 1987. An additional Q.3 million to Q.5 million for the use of school facilities should be added to the total figure. Because high repetition rates have been a structural phenomenon, the waste of resources over time has been very large. At 1987 prices, the MOE could have had an additional whole annual budget every five years through the elimination of repetition in primary schools.

Probably the single largest factor contributing to the waste and inefficiency in Guatemala's basic education system is the low quality of teaching. Poor teaching is the result of multiple factors, including teacher isolation and poor supervision, deficient teacher placements, lack of parental/community support, sporadic in-service training, lack of achievement standards, and minimal to no teaching materials and supplies.

A survey of teachers done during the 1988 Subsector Assessment revealed the lack of support and resulting low morale experienced by teachers. Among the rural teachers interviewed, only 25 percent live in the communities where they teach. Almost two-thirds (62 percent) want to transfer to another post. Only 25 percent reported that the local parents' organization functioned in a supportive way. Interviews with parents showed that parents' negative attitudes toward their local teachers was a major factor producing student absenteeism.

No effective quality control exists over teaching. Many of the three hundred supervisors in the Guatemalan system are unable to reach rural schools, even once a year, because travel to remote communities is so difficult. In-service teacher training consists of an uncoordinated series of special workshops and programs put on by different units of the Ministry. There are no objective standards nor tests for assessing student achievement, leaving teachers with their own subjective guidelines for evaluating student learning.

Lack of teaching materials is another difficulty. Teachers usually have to get by with whatever minimal supplies they can find or buy themselves. Permanent supplies such as books or maps are in extremely short supply in public schools, and expendable supplies such as notebooks and writing implements are often too expensive for students to buy. As a result, primary school teaching consists largely of tedious memorization and oral recitation. Classrooms without materials place an unnecessarily heavy instructional burden on the teacher, especially in multigrade classrooms.

There are also some qualitative deficiencies that need to be remedied in the model A.I.D. National Bilingual Education Program (PRONEBI). In interviews with PRONEBI teachers during the 1988 Subsector Assessment, one-third reported that they have difficulty reading and writing their own native Mayan language, and 45 percent cited problems of dialect incompatibility with the PRONEBI texts. Two recent reviews of the A.I.D. -funded Bilingual Education Program identified technical deficiencies in the bilingual materials, making them difficult for teachers and students to use. In addition to these technical problems, there is a concern that the PRONEBI program does not yet have an adequate master plan or methodology for expanding coverage to the entire population of indigenous children. The present PRONEBI approach is costly, requiring adaptation and streamlining to make widespread replication feasible and affordable. Finally, there is a perception among parents that the teaching of Spanish language skills to the indigenous children is inadequate.

(2) Access and Coverage of Primary Education Services

Official MOE statistics indicate that approximately 62 percent of the primary-school-age group was enrolled in school in 1988. This figure represents "net enrollment," the proportion of children aged 7 to 12 years enrolled in primary school. Equally important is the fact that enrollment opportunities are not equitably distributed. Enrollment is lower in rural areas, among indigenous children, and among girls. Table 2 summarizes these patterns of access to primary school services.

Table 2

SUMMARY ENROLLMENT STATISTICS

A. PRIMARY SCHOOL ENROLLMENT BY RURAL/URBAN (1987)

	Primary School Age Population (7-14 years)	Number Enrolled	Percent Enrolled
Rural	1,155,000	613,000	53%
Urban	615,000	484,000	79%
Total	1,770,000	1,097,000	62%

B. PRIMARY SCHOOL ENROLLMENT BY INDIGENOUS/LADING (1987)

	Primary School Age Population (7-14 years)	Number Enrolled	Percent Enrolled
Indigenous	761,100	267,211	35%
Ladino	1,008,900	829,789	82%
Total	1,770,000	1,097,000	62%

C. PRIMARY SCHOOL ENROLLMENT BY GENDER (1987 Est.)

	Primary School Age Population (7-14 years)	Number Enrolled	Percent Enrolled
Male	885,000	602,000	58%
Female	885,000	405,000	56%
Total	1,770,000	1,097,00	62%

Source: USIPE Statistics, 1988.

The historically low enrollment ratios in primary schools, coupled with high dropout rates, have led to low educational attainment levels in the Guatemalan adult population. As shown in Table 3, 87 percent of the Guatemalan labor force over 15 years of age has not completed primary school.

TABLE 3

Educational Status of the Guatemalan Labor Force

Status	%
Without Instruction	43
Incomplete Primary School	44
Incomplete Secondary School	10
Incomplete Higher Education	-

Source: World Bank Education Sector Memorandum, 1985.

Another consequence of the low coverage of primary education is the fact that Guatemala has the second highest illiteracy rate in the Western hemisphere, after Haiti. Fifty percent of individuals age 15 or older are illiterate. Seventy-three percent of adult indigenous males are illiterate and 91 percent of adult indigenous women are illiterate. (IBRD Education Sector Memorandum for Guatemala, 1985).

The low coverage of primary school services is caused by a number of factors. One is the distribution of much of the rural population in tiny, widely dispersed, and extremely remote communities, making provision of infrastructure and services prohibitively expensive. More than half of all rural schools have fewer than six grades, and about 75 percent have only one or two teachers. Another is the widespread pattern of seasonal internal migration of families in search of agricultural work, which makes it difficult to enroll and maintain children in school. Another factor is the low priority assigned to investment in education by a number of Guatemalan regimes prior to 1985. Finally, the perception by parents that schooling has little payoff or that school services are not good sometimes causes them to not enroll their children, even though schooling may be available in their community.

Enrollment figures are inflated by the extremely high repetition rates discussed in the previous section. Students are enrolling for more years than necessary because they have to repeat so many grades. By reducing repetition, space becomes available for more students in the system without having to add classrooms and teachers. Clearly, this is the most cost effective way to begin to expand access to educational opportunities. Until education is made more efficient, expanding coverage by expanding infrastructure simply increases the unacceptably high recurrent cost burden associated with operating the present inefficient system. By this logic, the first step in expanding coverage and access to educational opportunities should be improvement of the efficiency of educational services. Improving efficiency frees up space for new students within the existing system. Expansion of infrastructure is not a wise investment until the problems of inefficiency are under control. At the same time, new approaches and technologies that have the potential for increasing the coverage and cost-effectiveness of primary education, compared with the traditional formal school model, need to be assessed for possible future use in the Guatemalan system.

(3) Education Administration

The Ministry of Education is a highly centralized organization that requires top officials to attend to an abundance of trivial administrative details, preventing them from devoting their attention to major problems. Communication between operational units within the Ministry is also difficult, in part because they are located in approximately ten buildings spread over Guatemala City, and in part because of unclear lines of organizational communication and authority. Information management in the Ministry is highly inefficient and not linked to program planning, implementation, and evaluation. In trying to achieve its own goal of universal primary education, the Ministry faces the twin problems of inadequate financial resources for basic education and inefficient uses of current resources. The present GOG administration has been successful in increasing budgetary allocations to education. But, as described in section D of the Administrative Analysis (Annex E.4), the MOE budget has not been increasing fast enough. Present GOG resource allocations are increasing only

fast enough to sustain the present enrollment ratio by keeping up with population growth. These budget allocations are not increasing rapidly enough to get ahead of population growth in order to reach the objective of universal coverage.

Given the need to improve efficiency before undertaking expansion, the GOG has begun to introduce organizational and management changes. In an effort to deal with the problem of overcentralized administration in the public sector, the present Government has embarked on a regionalization program that includes decentralization of some central ministry responsibilities to the regions. In the education sector, the Ministry of Education has begun to delegate a number of significant administrative functions to eight regional administrative centers. While still in an embryonic stage, this program has received some cautious support from AID and initial implementation has been promising. If successful, the regionalization program in the education sector could reduce the administrative logjam at the Ministry of Education central headquarters and ultimately make educational services more responsive to local needs. The regionalization initiative is discussed in detail in Annex E.4, Administrative Analysis.

The Ministry's information management function is laborious and cumbersome. The Unidad Sectorial de Investigación y Planificación Educativa (USIPE) is the MOE unit responsible for educational statistics, planning, and budgeting. Although USIPE has developed systematic methods of data collection, sorting, and summarizing, it does all its tabulation and analysis by hand, causing inaccuracies and delays. Use of this information for deliberate and rational administrative and program decision-making is sporadic at best.

Related to the MOE's information management bottlenecks is the lack of reliable qualitative and quantitative information on the substantive dimensions of public education in Guatemala. The absence of rigorous research activities seriously impairs the efficiency of long-term planning, policy formulation, and decision-making efforts. This fact, combined with the lack of popular and community support for public education, keeps the MOE in a "system maintenance" role, rather than in a more active, progressive role of advocacy and change.

C. Overall Approach to Addressing Constraints to Basic Education in Guatemala

The Mission has long been concerned with the relatively low level of budgetary resources allocated to basic education by the Government of Guatemala. Although the Project cannot address the entire range of issues associated with the budget problem, it will form part of a larger Mission strategy to address this concern. The Project has been structured to support the GOG's commitment to allocate three percent of GDP to education by 1994.

Through the Missions's policy dialogue associated with the Economic Support Fund (ESF) program, the Mission will assist the GOG to increase the available investment budget resources allocated to education. The specific mechanism, known as the Core Development Budget (CDB), will assist the GOG to set priorities among the competing programs and projects submitted by line ministries for funding. Concomitantly, to implement the CDB process, the Ministry of Finance (MOF) will introduce more rigorous program and project analysis prior to setting the final priorities. Thus, line ministries will need to develop better planning and budget systems to effectively gain access to CDB resources to fund their priority development projects.

While the CDB provides immediate budgetary support to the GOG to fund critical development projects and programs, the long-term capability of the GOG to effectively raise and allocate the domestic resources will depend on the success of the Fiscal Administration Project (520-0371). In this Project the Mission will assist the MOF to achieve greater reliance on domestic resources to adequately fund the priority development activities of the GOG.

To effectively tap into the priority investment budget of the GOG, the Ministry of Education will need to improve its program development functions. The BEST project will assist the MOE to efficiently deliver basic education services and effectively present budget proposals to the MOF for inclusion in the CDB. The education administration component of BEST will assist the MOE to set its own priorities, adequately develop program and project proposals, effectively present these to the MOF for CBD funding, and efficiently execute its investment budget. The other components of BEST will improve the delivery of educational services to those groups that have largely been excluded from the benefits of the public educational system in Guatemala. Thus, while other Mission-funded activities will contribute to raising the level of resources available to funding priority social sector development projects, the BEST project will assist the MOE to make more credible claims on a significant portion of those resources. In this way, BEST will directly contribute to assisting the GOG achieve its GDP allocation target for education.

The USAID Mission and the Ministry of Education have agreed that a long-term commitment to basic education is an essential precondition for economic growth and democracy in Guatemala. Following study and extensive discussion of the 1988 Primary Education Subsector Assessment, MOE and USAID representatives agreed to embark on a long-term effort to strengthen key aspects of the basis education system in Guatemala. It was agreed that A.I.D. financing would be used to address "targets of opportunity" that reinforce and continue previous A.I.D. financed projects and complement ongoing Government of Guatemala, World Bank, and Inter-American Development Bank programs in primary education. Those targets are:

- Consolidating and expanding primary education for the indigenous population;

- Strengthening MOE field services to and for classroom teachers;

- Testing alternative low-cost delivery systems appropriate to the Guatemalan environment; and

- Improving the management and planning functions of the Ministry of Education.

The focus on the above areas will help the GOG to overcome the immediate constraints to providing adequate levels of basic education to a broad spectrum of the population. In this way, the Mission will assist the MOE to develop the institutional and management capability to effectively overcome the long-run constraints. This approach envisions a ten to fifteen year commitment by A.I.D. of assistance to the MOE. This Project Paper describes the first phase of the effort, spanning a six-year period, to be followed by a Project Paper Supplement to define Phase II and further assist the MOE to deal with the long-term issues. The combination of focusing on immediate efficiency issues and including policy covenants in the Project Agreement for the first phase will help lay the foundation for the MOE to meet the educational challenges of the future.

D. Relationship to A.I.D. Policies, Strategies, and Programs

Growing Congressional interest and concern about the importance of basic education in developing countries has led to Congressional guidance for increasing A.I.D. program resources to basic education. This action reverses the earlier trend of decreasing the share of aid to primary education within the education and human resources functional account (Section 105) of the Development Assistance Program. The result has been a $42 million earmark for basic education in FY 1988, about 37 percent of the total Section 105 account. It is anticipated that this earmark may increase to 50 percent of the Section 105 account in FY 1989, and that pressure will be placed on A.I.D. to increase the number of Missions with active basic education programs.

Based on a review of successful projects, as well as the need to respond to Congressional guidance, the LAC Bureau drafted an education strategy paper for the region recommending new programming in the basic education area. Based on research and practical field experience, the strategy presents a list of possible project areas appropriate for increased A.I.D. support. First priority is given to activities designed to improve the quality of classroom instruction (such as improved texts and teaching materials, alternative teaching methodologies, in-service teacher training, etc.). A second priority area is educational administration (including supervision, parent/community support, standardized testing, systematized information collection and utilization, etc.). A third category of possible programming is educational finance. This category includes policy dialogue on the commitment of government resources and the mobilization of non-governmental resources for public education.

26 The Basic Education Strengthening project (BEST) has been developed in response to Congressional and LAC Bureau education strategy guidance, and conforms to the USAID/Guatemala Education Sector Strategy adopted in February 1989. The Mission acknowledges the importance of an effective primary education system in helping Guatemala to strengthen democratic institutions, maintain a stable economy, foster rapid economic growth, and expand the participation of all Guatemalans in the generation and benefits of growth. USAID has given basic education programming a high priority in its Country Development Strategy Statement for FY 1990-1994, and anticipates a continuing commitment to basic education activities through the 1990s.

The proposed Project does not represent a major change for USAID/Guatemala in the education sector. Primary education has always been an important area of programming, as illustrated in the Summary Review of USAID/Guatemala Activities in Rural Education, attached as Annex F. This review describes nine major undertakings assisted by A.I.D. since 1968 in the areas of rural school construction; rural primary education (curricular reform, teacher training, textbook printing and distribution); non-formal education; bilingual education; and educational administration. It also includes a general listing of lessons learned. Several lessons stand out as particularly significant. First, providing basic education to all Guatemalans is an enormous task, requiring the ingenuity and assistance of many donors over a sustained period. Second, given the existing inefficiencies in the system, it is unrealistic to think the GOG can easily pick up the full financial burden of expanding the system. Third, the MOE as an implementation agency has administrative and technical limitations that need to be accurately assessed and incorporated into project design. Fourth, project design and financing should be sufficiently flexible to address unexpected, yet legitimate, project needs.

The design of the Basic Education Strengthening project builds on the experience of past USAID/Guatemala projects in primary education and is closely coordinated with other donor efforts in this subsector. This new project proposes a concentration of resources on very clearly defined areas of the basic education system. Selected activities reflect not only technical considerations, but also the administrative and policy environment of the subsector.

E. Relationship to GOG Policies and Strategies

The Guatemalan educational system is required by law to provide primary education through the sixth grade to the entire population. Traditionally, however, Guatemala has not invested heavily in education, compared with other developing countries. This historical trend of low and even declining expenditures has been dramatically reversed by the present democratically-elected government. GOG educational expenditures have grown in real terms in recent years, but not as a percentage of the gross domestic product or as a percentage of total government spending. (An Analysis of GOG investment trends in education is contained in Annex E.4, "Administrative Analysis," and in Bulk File 5, available in USAID/Guatemala.)

Whereas primary education receives a larger share of MOE expenditures than any other level of education, its share is not commensurate with its share of total students. This issue will be raised as an item for the policy dialogue agenda for this Project. On a more technical level, national planning and educational policy documents identify a series of education priorities, many of which focus on the quality and efficiency of the basic education subsector. They include:

(1) Institutional development, principally by means of decentralizing educational administration to respond better to local needs.

(2) Extending educational opportunities to the entire population, particularly children 7 to 14 years old and in rural areas.

(3) Reducing illiteracy through a program of continuing literacy training.

(4) Reforming curriculum in an effort to make it dynamic, relevant, and responsive to the needs, characteristics, and expectations of the population.

(5) Enhancing community participation through the creation of regional, departmental, and local school boards made up of parents and local school authorities.

(6) Strengthening and reorienting secondary education.

(7) Improving support services such as books, school supplies, school lunches, and subject matter content in areas such as health and nutrition.

(8) Coordinating to a greater degree with the university system.

(9) Systematically strengthening the teaching force by improving pre-service and in-service teacher training programs.

(10) Expanding non-formal education and seeking ways to integrate formal and non-formal educational services to improve educational opportunities.

The MOE has taken significant program steps to improve the quality, efficiency, and administration of primary education. First, the Ministry has been actively engaged in the GOG decentralization effort, a concept that has been mandated in the Constitution. It has created eight regional offices and named directors to each of them. The Ministry is seeking

international assistance to institutionalize the regionalization effort. They believe it offers important advantages in administration, supervision, and curriculum design, as well as economies of scale over the present highly centralized MOE structure. USAID has provided project support for the MOE regionalization effort. Progress to data under this project has been satisfactory and competent professionals have been assigned to head up each region. The BEST Project will strengthen and reinforce the regionalization of MOE activities.

Second, the MOE is in the final stages of negotiating a new project (Educación Mínima) with the World Bank. The project concept is to provide funding for the minimal coverage of educational services to the large numbers of children and communities with no access to schooling. The minimal coverage will consist of formal schooling only through grade three with the idea that grades four through six could be taught through some type of low-cost distance education system.

Third, the Ministry has undertaken a program of curriculum reform, in an effort to make learning more relevant and interesting to children. The program has three reform elements: reducing the total curriculum to a more manageable size by emphasizing language and mathematics; adapting the curriculum to a "process" approach to learning; and modifying the national curriculum to reflect local conditions. This "Readecuación Curricular" program received initial funding from A.I.D. and UNESCO and has been implemented by an MOE unit, Sistema de Mejoramiento de Adecuación Curricular (SIMAC). As SIMAC has produced curriculum guides and established a strong field organization of "multiplicadores," it has turned its attention increasingly to the process of in-service teacher training.

Fourth, the Ministry has continued its commitment to developing education programs that increase the participation of linguistic and ethnic minorities in the national economy and political structure. Both the regionalization effort and the National Bilingual Education Program (PRONEBI) are examples of this priority.

Last, the Ministry has established a new general management office (Oficina Gerencial) to coordinate international donor activities in education. This office will not only facilitate the implementation of the BEST Project but will also facilitate the implementation of the PRONEBI Project. This unit operates directly out of the Minister's office and enjoys a high level of visibility, influence, and authority. The Ministry is in the process of legally institutionalizing the management office. A condition precedent to disbursement will require permanent establishment of this office.

F. Relationship to Current A.I.D. and other Donor Education Activities

A.I.D. has provided assistance for improving Guatemala's primary education system since 1961, as fully outlined in the Summary Review of USAID/Guatemala Activities in Rural Education (Annex F). The projects most relevant to the proposed BEST project are the follow-on Bilingual Education project approved in 1985 and the Regionalization Grant signed in 1987.

The 1985 follow-on Bilingual Education project is expanding PRONEBI's program to 400 additional schools and extending teaching through the fourth grade. The program will end in 1991. Despite the success of the project, a recent review of the project detected a number of qualitative areas in need of strengthening prior to further expansion. The BEST project will overlap with the old project, addressing those areas of qualitative improvement while the ongoing bilingual project continues to support operational activities through 1991. A detailed description of bilingual education activities supported by the BEST Project is contained in Section III B.1 of this paper.

The 1985 Regionalization Grant has given the MOE initial assistance in decentralizing its operations, and in financing office equipment, vehicles, and staff training. Because of the technical, financial, and administrative importance of the MOE regionalization effort, the project development team looked at ways to rationally reinforce that process through each of the project components. Regionalization is discussed in different parts of the project description (Section III) and assessed as part of the administrative analysis in Annex E.5.

The other two major donors in the primary education sector have been the World Bank and the Inter-American Development Bank (IDB). Both have supported school construction, textbook printing, and, to a lesser degree, teacher training. Most recently, the IDB has provided $14 million in loan funds to Guatemala for constructing, furnishing, and equipping new rural primary schools under "Proyecto de Desarrollo de la Educación Primaria Rural" (PRODEPRIR). Simultaneously, the World Bank has provided a $9 million loan for printing textbooks and constructing urban primary schools under "Proyecto de Educación Primaria Marginal Urbana" (EDUPRIMUR).

As noted earlier, the newest World Bank effort is the $30 million "Educacion Minima" project, which is in the final stages of negotiation. The project will construct 1,100 small three-grade schools, and finance the writing and printing of new primary school textbooks for non-PRONEBI primary school children in the country. The BEST Project complements the minimum education project in that BEST focuses on improving the efficiency of the basic education system, while the World Bank project focuses on expansion. These two projects constitute a unique positioning of donor resources for the achievement of the common goals in primary education. The coordination of A.I.D. and World Bank funded activities will be assured by the MOE's management office.

III. DETAILED PROJECT DESCRIPTION

A. Project Design Overview

1. Project Goal and Purpose

The goal of the Basic Education Strengthening Project is to improve the productivity, quality of life, and democratic participation of the Guatemalan people. Indicators of goal achievement include: increases in real per capita income particularly in the rural areas; improved agriculture, health, and population practices; and increased popular participation in elections. The Project purpose is to improve the efficiency, coverage, and administration of basic education services. Indicators of purpose achievement are described in Section A.3 below, and include: improved academic achievement among primary school students; reduced dropout, repetition, and absenteeism rates; increased number of sixth grade graduates; reduced time to produce a sixth grade graduate; and more timely and effective MOE planning, budgeting, and decision-making.

As outlined in the Project logical framework, attached as Annex B, achievement of the Project goal and purpose is based on a series of assumptions about the larger economic and political environment, the policy framework for this project, and the attitudes held by key actors involved in the Project. These assumptions are:

(a) continuing political stability and democratic processes in Guatemala;

(b) growing employment opportunities for the traditionally disadvantaged;

(c) increasing allocation of significant GOG resources to education;

(d) increasing proportion of the education budget allocated to primary education;

(e) continuing favorable GOG policy orientation toward bilingual education, primary education improvement, and decentralized education administration;

(f) increasing value placed by parents and communities on children's completion of primary education;

(g) increasing commitment by teachers to improving instruction and to adopting appropriate innovations;

(h) increasing commitment by MOE administrators to efficient methods and rational decision-making;

(i) increasing willingness of MOE officials to cooperate with non Ministry groups in educational research, planning, implementation, and evaluation.

The first two assumptions raise issues beyond the parameters of this Project and are best addressed as part of a larger A.I.D., GOG, and other Donor policy dialogue forum. The other assumptions have been treated as important elements of the project strategy, and, therefore have been incorporated into the design of the Project either as part of the policy dialogue agenda, as discrete project activities, or as both. Indeed, A.I.D. has held extensive substantive discussions with MOE representatives, and a number of significant policy reforms are embodied in the components of the Project. These reforms represent important breakthroughs in Guatemalan educational policy and they will be formalized in the signed Project Agreement (see Section VIII). Furthermore, appropriate ways for measuring progress in policy reform are being discussed and will be incorporated into the Project evaluation plan (see Section VI, Monitoring and Evaluation).

2. Project Design Strategy

USAID's education strategy is to concentrate on long-range improvements in primary education in Guatemala. The activities proposed by the BEST project are intended to address key qualitative and efficiency issues in the system. Whereas initial funding is proposed for six years, USAID views its program of support for basic education as a ten to fifteen year effort. Because primary education encompasses six grades, at least seven years will be required to produce and measure the full impact of the Project. However, a number of intermediate indicators should show progress sooner. Project impact on retention and repetition in the early grades should become evident after two years. Improvement in academic achievement should begin to be apparent in the third year of the Project, after academic achievement tests have been administered for two consecutive years. The full impact of the BEST activities will not be seen until the services supported by A.I.D. have been implemented and operating long enough to benefit students who enter the system at age seven, and subsequently graduate from the sixth grade, six or more years later.

The Mission's strategy for supporting basic education involves several overlapping "phased" activities. The present "Rural Education Improvement" Project (520-0282) will provide ongoing support for bilingual education through 1991, providing funding support for routine operations and continuing expansion. Simultaneously, the Basic Education Strengthening Project (520-0374) will engage in "consolidating" the bilingual education program (improving curriculum and materials, school mapping, planning for expansion), and will subsequently pick up ongoing expansion costs when the earlier project phases out in 1991. It is planned that this same procedure of overlapped phasing will be used as a transition into another new basic education project to begin around 1995, one to two years before the BEST Project ends. This planned 1995 follow-on Project will probably provide for the following kinds of activities:

(1) Expansion of the one-room schoolhouse model, providing new materials and support services to 3000 existing one-room schools and supporting new one-room schools in communities that presently do not have schools.

(2) Development of a national educational radio service, providing interactive radio for primary schools, primary school equivalency for adults and school leavers, radio in-service teacher training, and adult non-formal education.

(3) Continued support for the expansion and improvement of bilingual education, if needed.

(4) Improvements in organization, management, and policy effectiveness, based on the results of the research and policy dialogue activities of the initial phase.

In choosing activities for the BEST Project, several general design principles were followed. First, it was determined that high impact, high visibility activities would be packaged together with long-term system building components. Second, innovative approaches and new technologies would be linked to support improvements in traditional formal school activities. Third, social marketing techniques would be used to promote the Project's objectives by creating more favorable attitudes among parents and the general public toward the benefits of primary education. Fourth, ways would be sought for mobilizing private sector participation and resources in support of basic education.

Project activities are organized into four major components. The first component is bilingual education. This component will consolidate the existing A.I.D. supported bilingual education program by upgrading instructional materials, streamlining the methodology, and testing a Spanish language instructional radio series to speed the learning of Spanish by indigenous children in the classroom. Once these improvements are made, the Project will develop a long-range plan for offering bilingual education to the entire indigenous population, and expand coverage of those services to 1,300 schools. Implicit in this component is the gradual integration of PRONEBI activities into the larger framework of MOE support services, particularly at the regional level.

The second component is teacher services. This component will address the issues of instructional quality by improving support services to teachers. In-service teacher training will be improved by developing new distance training activities. The existing network of school supervisors will be strengthened. The MOE will also work closely with a private sector organization in providing materials and supplies to students and teachers. Last, community participation and support for primary schools and teachers will be stimulated through a social marketing program.

The third component is an R&D program to develop and test low cost, alternative methodologies for expanding coverage and improving efficiency of primary education. Two activities are proposed: (1) development of interactive radio pilot projects in Spanish-as-a-second language (SSL) and beginning mathematics; and (2) an "Escuela Nueva" pilot project aimed at improving the curriculum, teaching, and materials in one-room schools. The MOE will rely heavily on the expertise and experience of private university and research groups to successfully implement this component.

The fourth component is a series of activities intended to improve educational administration in the Ministry of Education. Emphasis is placed on the functions of information management for planning and decision-making at the national and regional levels. Activities include automation and effective utilization of the MOE management information system, applied educational research and policy analysis, and support for improved personnel administration.

Seen together the four components form a matrix of interventions that will influence the productivity and quality of instruction of Guatemala's primary education system.

Intended beneficiaries of this project are principally Guatemalan primary school age children 7 to 12 years old. Activities will primarily benefit rural, low income children who are poorly served by the present public school system. While both ladino and indigenous children will benefit, greater emphasis will be given to supporting improvement and expansion of services to indigenous children. Since an important objective is to increase retention of children in school, girls, in effect, will receive priority over boys since overall dropout rates are higher for girls than for boys. Other beneficiaries will be out-of-school children, adults, and young people who are illiterate or who have completed primary school. Indirect beneficiaries include primary school teachers and Ministry of Education executive and administrative staff. The research and evaluation activities proposed as part of this project will attempt to track and assess the impact of project activities on the various beneficiary groups.

3. Expected Achievements and Accomplishments

As noted in the project strategy, the full measurable impact on the primary target group will not be seen until after year six, since it will be necessary to track the experience of students who enter the system at age 7 and eventually graduate from the sixth grade. The proposed BEST project will contribute to producing the following results (EOPS) over a six-year period, ending in 1995.

(1) 25 percent improvement in student achievement.

(2) 32 percent reduction in grade repetition rates.

(3) 17 percent reduction in drop-out rates.

(4) 20 percent reduction in school years to produce sixth grade graduates.

(5) 32 percent increase in number of sixth grade graduates.

These expected accomplishments are based on conservative projections made with the A.I.D. Primary Education Tracking System model. A discussion of the projected changes in the primary school system, both with and without the BEST project, has been included as Annex J.

B. PROJECT COMPONENTS

1. Bilingual Education

a. Introduction

The National Bilingual Education Program (PRONEBI) was institutionalized by government decree in December 1984. Consistent with national goals, the program is designed to accomplish three learning objectives. First, it teaches children how to learn by introducing basic subject matter in the language the learner knows best. Second, it creates an appreciation of cultural differences by using culturally appropriate materials. Third, it develops proficiency in the national language among indigenous children by teaching Spanish-as-a-second language. By teaching children how to learn with culturally relevant language and materials as well as ensuring that they gain Spanish language proficiency, this program significantly increases the amount of basic education acquired and facilitates subsequent participation in the productive sphere of the mainstream culture.

The present A.I.D. PRONEBI project runs through 1991, and is continuing the expansion of bilingual education services to the indigenous population. In new areas and schools, coverage is "phased in" starting with entering kindergarteners and progressing upward year-by-year until reaching the fourth grade. During 1989, the 400 schools that have been participating in the project will begin offering services at the fourth grade level for the first time, "completing" coverage in this first large group of bilingual schools. The PRONEBI Project provides in-service teacher training for the bilingual teachers, furniture for the classrooms, Mayan language textbook writers, curriculum developers, linguists, and project administrative staff. The present project has suffered from some problems, including GOG delays in determining which of two alternative Mayan alphabets should be used for the textbooks and slow and error-prone placement of bilingual teachers in bilingual schools. Also, several evaluations have criticized the complexity and content of the PRONEBI model and materials. On the balance, however, PRONEBI is considered a success story. It has successfully overcome the language barrier to schooling in Guatemala, providing good quality primary education to thousands of Mayan language speaking children who otherwise would have little hope of completing primary school. The Technical Analysis describes the PRONEBI approach in more detail, and the Administrative Analysis describes the institutionalization of PRONEBI.

The objective of the proposed bilingual education component is to work closely with the ongoing efforts of PRONEBI so as to qualitatively improve its methods of instruction, consolidate its resources and quantitatively expand these improvements to an additional 900 schools under the PRONEBI service umbrella. By the end of the project an additional 230,000 indigenous children in preschool through fourth grade will be served by PRONEBI. With the proposed improvements, it is anticipated that there will be substantial reductions in repetition and dropout rates, and significant differences in Spanish language proficiency when indigenous children enrolled in PRONEBI schools are compared to those in non-PRONEBI schools.

Four activities are proposed under this component (i) mapping of socio-linguistic variations; (ii) revising student texts and teachers' guides; (iii) testing Spanish as a second language by radio in PRONEBI schools; and (iv) expanding the PRONEBI model. The intention of the first three activities is to streamline the PRONEBI methodology prior to expanding its geographical coverage on a massive scale. In different ways these activities will help PRONEBI create a more flexible and economical model. As the results of these activities become available, long-range planning will commence and, by 1992, new expansion activities will begin. In addition to these activities financed by the A.I.D. grant, PRONEBI is planning to regionalize certain functions in an effort to better coordinate with other divisions of the Ministry of Education.

b. Activity Descriptions

(i) Mapping of Socio-linguistic Variations

The Project will support a detailed mapping exercise to provide information for effective expansion of bilingual education services and adequate coverage of existing schools in the PRONEBI program. A representative sample of three thousand communities in the eight language areas of K'iche, Kaqchikel, Q'eqchi, Mam, Q'anjobal, Ixil, Tzutujil, and Pohomchi will be surveyed. Levels of bilingualism among community members, teachers, and students will be determined as will be community attitudes toward use of native languages and Spanish. Schools with monolingual indigenous students will be identified to receive the full, intensive PRONEBI approach. Other schools with a high percentage of bilingual students will be identified to receive a set of services combining instruction in the vernacular with special attention to improving the Spanish language skills of the indigenous students from the time they enter school.

A detailed plan for the mapping study was developed during the project design stage and is on file at the USAID/OHRD office (bulk file). The study will be carried out over an eighteen-month period and will require a high level of technical capability, some of which is not available in Guatemala. Thus, the Project will include a team leader for the study who will be an international consultant. This individual will have a background in Mayan linguistics and will have extensive experience in conducting surveys in rural Latin America. The consultant will be supported by a local team made up of an associate study director, a statistician, 10 field staff, two data entry personnel, secretarial support, and local consultants in Mayan dialectology and language planning. PRONEBI staff will participate in the study as team members to promote institutionalization of the mapping process.

The mapping effort will be supported by both training and physical inputs. Training will consist of a short-term course in cartographic programming taught by an international specialist in that area and basic courses in wordprocessing, database management, and spreadsheet management for team support staff. Physical inputs will include one four wheel drive vehicle, 10 motorcycles, computers, printers, software, an optical scanner, and office equipment. These inputs will remain with PRONEBI to aid the bilingual education expansion efforts once the mapping study is completed.

PRONEBI will be involved in all phases of the mapping exercise. Management personnel and technicians from PRONEBI will assist in the survey design to ensure that all policy and technical information needs of the organization are addressed. Technical staff from the evaluation unit will also work with the mapping team to ensure that the technicians of this unit can successfully manipulate the database for decisions about program expansion. However, owing to the limited space in the PRONEBI offices and the workload of the technical staff, the project will be housed in some other institution such as a university or NGO with sufficient space. The chosen organization will have ties to PRONEBI and experience in conducting socio-linguistic research related to education.

The result of the mapping activity will be information that will facilitate selection of 400 additional schools in the core language area as well as the 500 schools to be selected in the additional language regions. This information will increase the probability of success by:

- determining the level of bilingualism in approximately 3000 communities in eight language areas and ascertaining community attitudes toward native language and Spanish language;

- determining the number of bilingual teachers in schools to be chosen, and the specific indigenous language they speak; and

- identifying the economic cycles of the community including the agricultural activity cycle, migratory labor practices, and demand for child labor in the household.

With this information the efficacy of school selection will be increased resulting in higher efficiency in the allocation of material and human resources for bilingual instruction.

(ii) Revising Student Texts and Teacher's Guides

Technical assistance advisors will work closely with the Ministry of Education is PRONEBI staff to overhaul and modernize the curriculum and teaching materials developed under previous projects. Text materials currently in use are unnecessarily complex, and difficult for teachers to understand and use, require extensive training of teachers, and are not intrinsically motivating for teachers or students. A curriculum revision committee will be formed, composed of members from each of the curriculum development teams of PRONEBI and the curriculum consultants. A major emphasis will be placed on recent developments in cognitive and affective psychology applied to textbook design to recast existing materials into formats which make them self-instructional. In so doing, the textbooks will be easier to use by PRONEBI and non-PRONEBI students and teachers. The development of the instructional materials will be coordinated with the activities of SIMAC and will be consistent with the integrated process approach being used by that organization in renovating the national curriculum.

A specialist in early childhood bilingual education, with knowledge of recent developments in textbook design, will be contracted to work with the PRONEBI curriculum development teams in revising the student texts. Assistance will also be given to revise teachers' guides, particularly with recommendations for creative activities that are varied and that require the direct involvement of the students using the texts. The guides will include detailed lesson plans for suggested activities.

A specialist in qualitative classroom data collection and analysis will be contracted to work with the curriculum revision effort and with the evaluation unit of PRONEBI. This individual will train the evaluation unit field staff to collect systematic observational data on the naturally occurring activities in which the prototype texts are used in the classroom. Based on this information and that collected from the mapping exercise, the curriculum revision committee will develop revised prototypes of the student texts and teachers' guides. These prototypes will also provide instructions for incorporating the Spanish-as-a-second language radio module into the curriculum, discussed as activity (iii) of this component.

As prototypes are developed, they will be tested in the field in a range of bilingual classroom settings. The findings from observations of teachers and discussions about the revised texts will lead to exercises for teachers to use with classes that are linguistically heterogeneous. The field testing and adaptation will take place in the third year of the Project.

The technical assistance team will be housed in the offices of the group with which they are working. It is likely that some advisors will be international consultants since both an external evaluation and PRONEBI's internal review of the evaluation findings have suggested that appropriate expertise does not exist within the country. Revising and field testing of student textbooks will require technical assistance with experience in Guatemala rural schooling, child development, classroom interaction, and the development of creative pedagogical materials.

Short-term technical assistance in applied linguistics, bilingual test development, and language planning will support the revision effort. Specialists will aid PRONEBI technicians in developing strategies for dealing with dialect variations and in creating a bank of test items in native languages that is consistent with the overall achievement testing effort of the Project (see applied research activity under Component 4).

The Project also will support five national consultants currently working in the areas of administration, training, supervision, evaluation, and social marketing, as well as highly specialized staff members who would not otherwise be incorporated into the Ministry of Education in the near future. This support will be continued in the expansion activity during years 5 and 6. This will include the nine training specialists to be hired under the reprogramming of funds, nine individuals in the curriculum development unit, eight members of the evaluation unit, and 16 administrative support staff. Additionally, operating costs for vehicle maintenance, supplies, rents, and insurance will be covered through the Project.

The results of this activity are:

- flexible child-centered student texts that are easy to use by both monolingual and bilingual students and that are attractive and consistent with the national curriculum objectives; and

- teacher guides that are self explanatory and that provide clear sets of activities for use with children of different degrees of bilingualism.

(iii) Testing Spanish-as-a-Second Language by Radio

This activity will support the development and testing of a radio course in Spanish-as-a-second language (SSL) for indigenous children in pre-primary through grade three. Experience in other countries has proven that language learning by radio is an effective methodology, even when teaching a major language to a multi-linguistic minority group. Because of past experience, it is believed that SSL by radio can help PRONEBI and the MOE accomplish three major objectives: (1) reduce the total time necessary to produce students capable of participating in regular classroom instruction in Spanish; (2) provide SSL instruction superior to present conventional methods; and (3) provide SSL instruction at lower per learner recurring costs than conventional SSL instruction.

During the project design stage, a detailed implementation plan for piloting a radio Spanish course was devised and is on file in the Mission's OHRD office (Bulk Annex 6). The radio SSL course will be developed in concert with the radio mathematics pilot proposed in the interactive radio activity in Component 3, Alternative Methodologies. In this manner, both pilot projects will be developed together within the private sector, most probably at one of the local Universities where a distance-education production facility could be established.

The SSL radio pilot project will be developed as a service to the MOE, and in close coordination with PRONEBI. The University chosen to develop radio programming for the MOE will establish a Radio Spanis linguistic and cultural technical advisory committee. PRONEBI staff members will participate on this committee and will assign members full-time to the SSL pilot activity.

Further details and a budget for this activity are found under Component 3, Activity i: Interactive Radio.

(iv) Expanding the PRONEBI Model

The results of the mapping study will be used to develop a detailed expansion plan that will include both horizontal expansion (more schools in other geographic areas) and vertical expansion (more grades included in schools that already have the PRONEBI program). A language planning specialist will be contracted on a periodic short-term basis to work with PRONEBI in the development of this plan. A number of criteria will be established for expansion. These will include: the availability of teachers who speak the native language; the closeness of the local dialect to the texts; the degree of bilingualism of the community; the attitude of the community toward bilingual education; and the physical condition of the classroom in which bilingual education is to take place. In addition to the sociolinguistic aspects of this expansion plan, the Ministry will detail how PRONEBI will be integrated into regular MOE operations at the central and regional levels. It will include the MOE's projections for absorbing the local costs of the PRONEBI program, including those for personnel and operations.

The vertical expansion will concentrate initially on those schools in the four core language areas that encompass over 80 percent of Mayan speakers in Guatemala. The first priority will be schools presently in the PRONEBI program. A second priority will be schools in those language groups that are under the jurisdiction of PRONEBI supervisors but not in the PRONEBI system. Where a lack of bilingual teachers is identified through the mapping study, or where incongruency is found between the language spoken by the teacher and that spoken by the students, PRONEBI and the Ministry will make the necessary assignments and reassignments to assure that teachers will be supplied in such a way that the conditions of effective expansion can be met. A condition precedent in the Grant Agreement will require that teachers meeting the linguistic requirements of the community be assigned to PRONEBI expansion classrooms.

The horizontal expansion begun with the development of preschool materials for four additional language groups in the 1989 reprogramming of funds will be continued as part of this bilingual education component. The writers for these languages will produce texts consistent with the model created in the revision activity. These texts will be distributed in schools in the four additional language areas meeting the expansion criteria developed as a result of the mapping exercise. The approximately 500 "extensive" schools in the PRONEBI program will make up the bulk of the targets for this expansion.

Since expansion to the principal eight language groups will include all Mayan tongues with 50,000 or more speakers, it will not be cost effective to develop a complete set of texts for other groups. the mapping study will, however, identify individuals who speak other Mayan languages and express interest in developing curriculum materials on their own. Such individuals will be provided technical assistance through the PRONEBI curriculum team members based in the regions.

In addition to the commodities transferred to PRONEBI from the mapping study, the Project will finance five four-wheel drive vehicles to aid PRONEBI in expanding appropriate bilingual education to indigenous children. The Project will also continue to provide operating cost support for PRONEBI and pay the salaries of those individuals who have not been incorporated yet into the Ministry of Education budget, but who will be by the PACD.

With the assistance of a textbook design and production specialist, to be contracted under the Project, the revised student texts and teachers guides will be prepared and printed during the expansion activity. Text distribution will be phased by grade and will follow the distribution of furniture to PRONEBI schools where a need has been identified by the mapping study. Both furniture and text distribution will be completed by 1995.

The A.I.D. grant will finance the printing of textbooks through competitive procurement practices. The MOE will finance the procurement of furniture for this expansion activity as a counterpart cost by tapping resources available through the Core Development Budget. In both cases, firms will be chosen on the basis of cost and the speed of production. Pending the MOE projections for absorbing PRONEBI operations into its (operational budget, there may be some shifting of local costs to the GOG during the expansion phase.

Training in the use of the revised materials will take place prior to their distribution. The training will be coordinated with the the SIMAC training efforts and will be carried out by the PRONEBI training staff based in the region. The Project will support the local travel of the teachers to the regional centers where training is provided.

In order to assess the impact of the expansion effort, a short-term evaluation specialist will be contracted. This individual will work with PRONEBI on an intermittent basis to develop a systematic impact evaluation design that will determine the effects of the expansion effort.

c. Bilingual Education Input Summary

Table 1: Component 1 Activity Budget ($000s)

Activity	A.I.D.	GOG	Total
(i) Mapping	435	0	435
(ii) Revising Texts and Guides	1377	8131	9508
(iii) SSL Radio (see Component 3)			
(iv) Expanding	4746	14561	19307
TOTAL	6558	22692	29250

Table 2: Component 1 Input Budget ($000s)

Summary Inputs	A.I.D.	GOG	TOTAL
1. Technical Assistance			
(a) 6.5 years of Int'l Long-term TA and 20 years of Guatemalan long-term TA	1459		1459
(b) 13.5 months of Int'l short-term TA and 4 months of Guatemala short-term TA	205		205
2. Local Salaries	585	21600	22185
3. Commodities			
(a) Vehicles (6) and motorcycles (10)	122		122
(b) furniture	3	1008	1011
(c) equipment	26		26
4. Printing textbooks	2877		2877
5. Operation Costs			
(a) maintenance, gas	194		194
(b) supplies	392	84	476
(c) office rent	82		82
(d) insurance	53		53
6. Training	13		13
7. Local Travel	547		547
Component I Total	6558	22692	29252

2. Teacher Services

a. Introduction

Teachers are the most critical element in any primary education system. It is their knowledge and behavior that most directly affect student learning and attitude development. In Guatemala, the low quality of instruction has been identified as the principle factor contributing to the waste and inefficiency of the primary school system. The purpose of this component is to improve the teacher's performance and effectiveness in the classroom by strengthening four key teacher support services: in-service training; supervision; materials; and community participation.

The teacher services component is somewhat complex due to the scope of activities and the number of entities involved in implementation. The Ministry units with responsibility for implementing this component are SIMAC (Sistema de Mejoramiento y Adecuación Curricular) and DGEE (Dirección General de Educación Escolar). In addition, these units will work with various local private sector and university organizations to implement the proposed activities.

b. Activity Descriptions

(i) In-Service Teacher Training

In 1986-7 the Ministry formed SIMAC. Although SIMAC has mainly focused its attention on curriculum reform and revision, it is also designated the permanent in-service teacher training unit in the MOE. Currently SIMAC is developing teacher training materials, seminars, and workshops to keep primary school teachers apprised of changes in the curriculum. The new program establishes a core curriculum (the Minimum Curriculum Guide), reducing considerably the encyclopedic nature of the existing program of study. It emphasizes the development of structures for organizing information and teaches cognitive learning processes to help students master both the content and form in which subject matter can be learned. While some concerns have been raised regarding the "process approach" offered by SIMAC, it is also recognized that the new curriculum is a "back-to-basics" approach emphasizing language and mathematics. The methodology being used in the new curriculum is a significant change from the old-fashioned approach of rote memory, favoring much more active participation in the learning process.

The procedure used by SIMAC to train teachers in the use of the curriculum guides is through the "multiplier" system. Key SIMAC personnel train 284 district supervisors and 415 selected teachers (called technical orientors), for two day periods. The curriculum guides are used as the main element in the training. These supervisors and technical orientors then train approximately 13,000 teachers from 8,820 primary and 550 pre-primary schools for one day (about thirteen schools and twenty teachers for each trainer). This face-to-face training, supported primarily by the World Bank, is expensive, too short, and requires careful coordination of materials delivery (which often does not function adequately). While the majority of the teachers are in agreement with the philosophy and methodology presented in the curriculum guides, they generally feel that the amount of training is deficient for understanding and implementing the guides. It is estimated that only 19 percent of the teachers have adopted the new approach. These results have led SIMAC to consider supplementary teacher training through correspondence courses.

Two interventions will be implemented under this component for improving in-service training activities on a sustained basis: strengthening the training of teachers, by means of distance education and by creating a teachers' magazine. The distance training intervention was chosen because it offers an economy of effort in delivering in-service teacher training. It provides instruction that can be applied immediately to the daily problems encountered in the classroom without separating the teacher from his/her professional responsibilities. Teachers are not required to travel and indeed, may learn at their own rate.

Distance training courses combine self-instructional learning modules with organized small group discussions. Upon enrolling in a distance course, the participating teacher receives the module (a carefully designed text of between 100 and 150 pages that provides objectives, contents, suggested practice activities that teachers can try out in their classrooms and formative evaluation tests to help teachers measure their progress). While taking the course, teachers are encouraged to participate in periodic group meetings organized by district supervisors or local technical orientors to exchange ideas with them and other teachers, clarify or resolve problems they have in learning the materials, and conceptualize ideas that will help to solidify their learning. Training through the distance modality will strengthen the learning process, provide more detail, cover new topics, and extend the face-to-face training. In order to ensure active participation of teachers, particularly in isolated rural areas, the Ministry will offer incentives through points accrued in the regular promotion system so that successful completion of distance courses will lead to more rapid salary increases.

During the first two years of the BEST Project, two or three courses will be developed and implemented. Once the initial distance in-service courses are successfully field-tested, it will be possible to offer three or four courses per year (repeating some courses and adding new ones) by the fourth year of the project. The exact implementation of courses will be a function of SIMAC's institutional capability and of the success of the Ministry's incentive system.

Grant support for in-service distance teacher training wi include three person years of technical assistance for the development of th basic distance education system: needs assessment; course design; materials development; delivery mechanisms; and quality control and assurance procedures. It is anticipated that initial modules would cover such areas a formative student evaluation, local level curriculum adaptation and active learning methodologies, and motivation of community participation. Other subjects would be developed based on the results of the needs assessment and the results of other activities under this project, including proposals for increased community participation. The technical assistance proposed for th intervention would work directly with a core staff of six SIMAC personnel, financed by counterpart funds. Their work would be augmented by grant financed vehicles (5), basic desk top computer and publishing equipment, and local travel expenses for technical orientors who would lead discussion grou and evaluate teacher/participant progress in distance courses.

The teachers' magazine would complement distance training by providing a regular dissemination mechanism for continuing education, as well as general support and motivation to teachers in the field. As present envisoned, the magazine will be published six times a year and respond to th diverse needs of teachers, supervisors, and other professional members of th primary education system. Such items would include: general ministerial information (rules, regulations, decrees, etc.); technical articles on subjects of importance to teachers, "how-to" articles on learning activities ideas and innovations; school, district, and regional highlights; and a teacher information exchange column. The magazine also could serve to promo information sharing between different units within the Ministry (e.g., PRONEBI, SIMAC, DGEE, USIPE, etc.).

To develop and disseminate the magazine on a sustain basis, the MOE will allocate a staff of 13 people (eight technical and five support). The A.I.D. Grant will finance one year of long-term technical assistance in the overall design of the magazine, photographic and desk-top publishing equipment, support for printing and distribution, and short-term technical assistance in the systematic evaluation and feedback of the magazine's impact. It is planned that production of the magazine will initially be fully funded with BEST Project grant funds. In the fourth year of the Project, once the magazine has established itself, grant funding for the magazine will be reduced gradually and the MOE will begin to sell it to teachers in order to recover production costs.

The results of the in-service teacher training activity include:

- MOE institutional capability to design, implement, and evaluate distance training for teachers;

- completion of four distance training courses, with at least 1,000 rural and urban teachers successfully graduating from each course and using their learning in the classroom.

- MOE institutional capability to design and evaluate a teachers' magazine.

- a teachers' magazine published and disseminated four to six times a year.

- increased and up-dated knowledge by teachers pedagogical and administrative issues relevant to their job.

(ii) Teacher Supervision

Despite past efforts to improve school and teacher supervision, it is widely recognized that this function is not meeting expectations. There is abundant evidence that supervisors do not visit schools with adequate regularity, nor oversee the quality of teachers' work in the classroom. Just as teachers are critical to improving student learning, supervisors are a critical factor in improving the instructional capability of teachers. Supervisors are chosen because of their leadership capabilities and their proven knowledge of pedagogical issues. They are like master teachers, but they do not have adequate facilities for exercising their proposed functions. District supervisors often do not have desks, typewriters, or file cabinets in which to store their records. Adequate operating procedures such as visitation schedules, observation guides, pedagogical guides, and leadership information are not available. They have no transportation available and do not have adequate per diem assigned to them. To a great extent, because of these problems, 80 percent of the supervisors' time is spent on administrative rather than pedagogical matters.

In order to revitalize the field supervisory system, the Project will work with the (DGEE) and with the Regional Supervisors in the field. The task will be to review and revise the existing job description for supervisors, build upon it in terms of recent developments in regionalization and in growth in the number of technical orientors under SIMAC, develop a new profile for supervisors, prepare intensive annual training courses, and create a systematic approach to evaluating supervisors' performance.

The A.I.D. grant will finance two years of long-term technical assistance in the area of supervisory training, and four months of short-term assistance in evaluation and system development; vehicles for 22 departmental supervisors and motorcycles for the 300 district supervisors to enable them to maintain regular and effective personal contact with the teachers they supervise; office equipment including desk, chair, manual typewriter, file cabinet and basic supplies; costs of in-service training activities; and operational support in the form of per diem and vehicle maintenance.

The major results of the teacher supervision activity will be a revitalized supervisory system, where supervisors emphasize and fulfill the following responsibilities:

- pedagogical support - guiding the teacher in curriculum planning and evaluation, in the use of new and innovative methodologies, in the importance of academic time on task, and in formative student evaluation and feedback;

- administrative coordination - to insure that teachers are in their classrooms and are dedicating the required amount of time and effort to student learning;

- supervision of teacher orientors - supervision of and cooperation with the technical orientors who form part of the overall coherent supervisory system;

- research and data collection - to link the schools to the district and regional administrative offices;

- in-service teacher training - assisting, coordinating, and actively participating in all in-service teacher training efforts in relation with SIMAC;

- evaluation - assessing teacher and principal effectiveness;

- community commitment - stimulating and coordinating efforts to increase community commitment and participation in school activities; and,

- academic achievement testing - coordinating and providing general supervision of the academic achievement testing program that is to be developed.

(iii) Student Materials

One of the factors contributing to the low quality of instruction is the lack of educational materials in the classroom. The absence of materials frequently reduces the learning process to a rote memory exercise, with little opportunity for creative expression by students or for development of dexterity skills.

The Project will encourage the participation of the private sector to provide basic school materials (canastas escolares). This project element is modeled after the current activities of the Guatemala Cámara de Industria (Chamber of Industry). However, while the Project will initially begin with an expansion of the Chamber's successful program, this pilot effort will provide experience on which to base future expansion to include other private sector entities.

The Chamber of Industry, one of seven chambers affiliated with the umbrella organization, the Cámara Empresarial, (Chamber of Business) has provided basic educational materials to school children in metropolitan Guatemala City each year since 1986 (20,000 in 1986, 25,000 in 1987, and 30,000 in 1988). The canasta escolar includes basic school materials such as notebooks, pencils, crayons, scissors, textbooks, and teachers' guides. The program presently run by the Cámara de Industria is small but efficient. Books and other supplies are obtained at low cost from members' companies. They are packed in plastic bags by volunteers and distributed to poor schools, mostly in the Guatemala City area, by Rotary Club members. The project is coordinated with the Ministry of Education, which reviews and approves the textbooks and makes sure that distribution does not duplicate the coverage of its own materials program. Distribution of the canastas receives considerable, favorable coverage in the local news media.

The involvement of the private sector in this activity is particularly advantageous. The members of the Chamber provide materials at lower costs because their companies produce supplies at preferential rates. Their involvement develops within the business Community higher levels of awareness of the importance of education and its many problems. The contact these businessmen/women have with the children in rural schools sensitizes them to the necessity of improving the conditions of the poor sectors of the nation, and their involvement mobilizes new resources from the private sector not previously available to the public educational system.

The Project will offer an economic stimulus to the Cámara de Industria, through an AID grant that will provide matching funds for each $1 given by the Cámara up to $350,000 per year during the six year life of the Project. Initially, the current program will be geographically expanded to reach more first grade students. During the second year the materials package will be changed to include a mathematics book for first grade. It is recommended that in 1991 the canasta include a reading book for second grade, and in 1992 a mathematics book for second grade. Subsequent expansion of the package will be determined on the basis of the degree of coverage of rural schools, and the availability of funds.

The Cámara de Industria has run its program successfully to date with voluntary contributions and voluntary staff, but on a small scale. To meet the additional workload implied in this activity, the Cámara anticipates hiring permanent staff for this program. Assuming USAID approval of a sole source waiver for this activity, the Mission would enter into a Handbook 13 Agreement with the Cámara to implement this activity. Over the life of the Project, USAID would also explore the possibility of enlisting other private sector groups into similar activities.

The results of this activity will include:

- up to 810,000 new canastas produced and used by students in the classroom;

- new non-governmental resources mobilized for primary education, without increasing taxes;

- increased awareness among the Guatemalan business community of school problems;

(v) Community Participation

There is evidence that when community members are more involved in the schooling of their children, when they participate more directly in school-related decisions, and when they help to maintain the physical infrastructure of the school, they increase their support of the goals and objectives of education. An essential ingredient for improving the quality of primary education is the development of positive attitudes toward education by the public, particularly by parents of school-age children.

The primary objective of this activity will be to increase school enrollments and retention through social marketing campaigns. The principal target will be parents, both Spanish speaking and indigenous, in rural areas. The basic message of the campaigns will be to convince the parents of the economic and social benefits of increasing the education levels of their children, particularly girls.

The social marketing campaigns will complement and reinforce several other components to increase community parcicipation. Under the distance training for teachers activity, a module will be developed to instruct teachers on how to involve their communities in support of their school. Also, a methodology to help teachers foster community involvement will be included in the in-service training developed for supervisors. Ideas and issues related to community participation and parental support will be included in the proposed teachers' magazine. Also, the "Escuela Nueva" program, proposed as a pilot project under Component 3 of this Project, includes specific steps to ensure community involvement.

The purpose of the social marketing effort is to build positive attitudes toward education and the Guatemalan education system among parents. The Project will provide five months of short-term technical assistance and the costs of a local publicity agency contract to conduct three campaigns during the life of the Project.

Initial technical assistance will help the Ministry establish a social marketing strategy and a scope-of-work for the advertising agency contract. In turn, the agency will conduct market research, produce media programs, purchase media time (televisión, radio, newspapers) and assess the campaign's penetration prior to designing the next campaign. The MOE and USAID will review the progress of these campaigns to assure that the purposes of the MOE social marketing strategy are being met.

The intended results of this activity will be:

- parents and communities, including individuals of influence, more informed about the education process generally and about their local schools specifically;

- increased initial enrollment of children in school, and increased retention of children already enrolled (especially girls);

- understanding among target groups that education contributes to the national economy, to personal incomes, and to personal and family health and well-being; and

- a growing belief among target groups that investment in public education is a wise investment.

c. Teacher Services Input Summary

Table 3: Component 2 Activity Budget ($000s)

Activity		A.I.D.	GOG	Other	Total
(i)	In-Service Training	1714	1069	0	2783
(ii)	Supervision	2938	6072	0	9010
(iii)	Materials	2100	0	1400	3500
(iv)	Community Participation	495	0	0	495
	Total	7247	7141	1400	15788

Table 4: Component 2 Input Budget ($000s)

Summary Inputs	A.I.D.	GOG	Other	Total
1. Technical Assistance				
(a) 6.0 years of Int'l long-term assistance	900			900
(b) 12.0 months of Int'l short-term assistance	180			180
2. Local Salaries	0	6919		6919
3. Commodities				
(a) vehicles (27)	459			459
(b) motorcycles (300)	600			600
(c) equipment	410			410
(d) student baskets "canastas escolares"	2100		1400	3500
(e) advertising sub-contract	420			420
4. Operational Costs				
(a) maintenance, gas, insurance	855			855
(b) printing, composition	550	150		700
(c) material, supplies	315	72		387
5. Training	197			197
6. Local Travel	261			261
Component II Total	7247	7141	1400	15788

3. Alternative Methodologies

a. Introduction

The alternative methodologies component is a research and development program intended to help the Ministry of Education test and choose low-cost methods for expanding coverage and improving the efficiency of its primary education system. As noted in Section II, providing traditional educational infrastructure and services to the widely dispersed rural population of Guatemala is prohibitively expensive. Alternatives must be found if Guatemala is to have any hope of expanding enrollments and reducing illiteracy.

Two activities will be undertaken in this component. The first is to develop and test the application of interactive radio to two subject areas: Spanish-as-a-second language (SSL) and mathematics. The use of interactive radio for instructing children in mathematics, reading, and foreign languages has been refined over the past eighteen years and proven successful in countries throughout the developing world. It is believed that interactive radio has a high probability of success in the Guatemalan primary education curriculum. The application of interactive radio methodology is designed to improve educational efficiency and quality, with a secondary impact on access and coverage. It was chosen because it offers improved instruction at low cost.

The second activity of this component is the testing of the Escuela Nueva methodology for one-room/one-teacher schools. Currently, Guatemala has 3,257 one-room or one-teacher schools, which account for one-third of the primary schools in the country. Retention and promotion are serious problems in these schools, as is access to a full six grades of education. The Escuela Nueva approach includes seven major characteristics: (i) flexibility in the teaching-learning process; (ii) active student participation; (iii) teaching within specific learning objectives; (iv) independent student projects ("discovery" learning); (v) formative student evaluation; (vi) flexible promotions based on individual learning gains; and (vii) significant student-community involvement. This methodology has been used successfully in one-room or one teacher schools throughout rural Colombia since 1976, and in many other countries including Spain, France, Italy, and the United States.

Because of the research nature of this component, the A.I.D. grant will finance the full costs of pilot project development, testing, and evaluation. Careful monitoring of the pilot effort over the first two or three years will be conducted to determine whether efforts should be made to obtain funds to expand this activity to other schools. This question, as well as other types of project evaluation issues, will be articulated during the joint USAID/MOE project management planning seminar (see Section V, Implementation Plan).

b. Activity Descriptions

(1) Interactive Radio

The interactive radio activity will develop two pilot radio courses. The SSL radio course will be developed for indigenous children in pre-primary through grade three. The radio math course will teach arithmetic for use in grades one through three. A single technical and administrative operation will be established at a local university to develop both radio courses. The pilot phase of the project should be carried out by an appropriate private agency because of the hiring and contracting flexibility required for an experimental effort, the research orientation and experience needed, and the special anthropological interest required for adequate indigenous education. Existing MOE agencies such as the Junta Nacional de Educación Extra-Escolar does not have appropriate technical facilities, is heavily loaded for studio time, and does not have the appropriate technical staff for interactive radio programming.

As presently planned, the radio Spanish course will consist of 550 broadcasts, a teachers' guide for each year of instruction, and student texts for grades one through three. It will be designed as a classroom teaching tool for use by teachers and their students. The radio lessons will be broadcast during hours convenient for school use, for reception in classrooms equipped with radio receivers.

During the pilot phase, the SSL radio course will be broadcast over Radio Zamaneb, a thousand-watt MOE owned regional station developed under an earlier non-formal education project. The course will be tested in 50 schools within range of Radio Zamaneb. If the pilot project is successful and the methodology accepted, it would be possible to implement the SSL radio course nationally, year by year, beginning with pre-schoolers in 1992. Alternatively, the entire series, through grade three, could be implemented as a package beginning in 1995.

Whereas the intended beneficiaries of the SSL radio course are Guatemala's indigenous primary school students, it is expected that the radio course may be of interest to other Latin American nations, either as produced or with appropriate modifications.

The radio math course pilot project will be developed by adapting, for use in Guatemala, an existing interactive radio course called La Familia de los Números. This radio course was financed by A.I.D. and is a production of AVANCE, a private non-profit media agency in Honduras. The La Familia program is an intensive three year course in mental arithmetical calculation. The series consists of 465 twenty-four minute broadcasts (155 broadcasts per year). The course includes a teacher's guide for each of the three years of instruction, quadruled notebooks for each student, and sets of

counters to be used during the broadcast lessons. La Familia de los Números is in its second production year and is proving successful in terms of user popularity and learning gains. Costa Rica is using the original Honduran recordings and also achieving similar successful results.

Except for office and studio space, A.I.D. grant monies will finance all costs of the interactive radio pilot projects. This includes long and short-term assistance, local technical and support staff, studio and computer equipment, vehicles (3) and motorcycles (3) operational and evaluation expenses, and basic training for locally hired staff. About 80 percent of the required technical assistance will be long-term. One interactive radio expert, with extensive field experience, will be provided for 4-1/2 years; and one radio specialist in socio and applied linguistics will be contracted for 3 years. Twenty-six and a half months of short-term TA will be needed to augment the work of the long-term advisors.

The results of the interactive radio activity are the following:

- Experience with and evidence of the effectiveness of interactive radio in Guatemalan primary schools for foreign language and math learning.

- Technical and financial information for MOE/GOG decision-making regarding the expansion of interactive radio courses.

- Procedural models for full national implementation of SSL and radio math courses.

- A local operational distance education agency, specializing in interactive radio, capable of generating educational and public service radio materials of high quality for domestic use and international sale and distribution.

(2) Escuela Nueva

This activity will test the Escuela Nueva methodology in 100 one-room schools under optimum conditions. A formative evaluation system will be put into place that will assess the cognitive and affective effects of the methodology on students, teachers, and the community, as well as determine the true costs of this innovation. Because of the costs of the materials, present projections show that there would be dramatic drops in per student (school) costs if the methodology was found successful and expanded to over 500 schools.

Several important steps will be taken to implement this pilot project.

- Site selection and needs assessment;
- curriculum adaptation based on the model developed by SIMAC;
- development of active classroom methods;
- in-service training for teachers and supervisors;
- procurement of materials, furniture, and equipment;
- printing of learning materials and guides;
- organization of student councils;
- development of teacher support procedures and mechanisms; and
- creation of community involvement programs or exercises.

Schools will be chosen in clusters, in different parts of the country, to represent a variety of conditions and circumstances. Special evaluation procedures will be designed and developed to track, document, measure, and evaluate all important aspects of the Escuela Nueva experiment. Student cognitive learning data will be systematically evaluated using the tests prepared by the applied research activity in component 4, and other measures specifically prepared for the experiment, such as problem-solving tests, will be used. Student affective measures (self-image, satisfaction, locus of control, etc.) as well as teacher and community satisfaction will be evaluated. All cost factors in relation to the experiment will be carefully calculated and compared with student gains, retention, promotion, and related variables.

The MOE will provide the 100 schools, teachers, and required supervisors while A.I.D. grant monies will cover all other costs of developing, implementing, and evaluating this pilot project. These expenses include adaptation of materials, printing, and reproduction; one vehicle and three motorcycles; school furniture and desk-top publishing equipment; teacher and supervisory training; and operational costs and technical assistance. It is estimated that two years of long-term foreign technical assistance will be needed in administration/supervision and curriculum/evaluation during the second year of the project. Four months of short-term TA is anticipated for

follow-up during years three through six. A local staff of seven employees will be required to oversee the implementation of the pilot project and follow-up activities.

The results of the Escuela Nueva activity will include:

- thorough and complete information regarding the costs and effectiveness of this one-room, one-teacher methodology;
- eighteen self-learning guides for use in grades one through six;
- detailed teachers' guides;
- self-learning cards and related students' guides;
- the basic minimum library for use in the country school;
- prototype teacher training design for possible expansion of the Ministry one-room school system.

c. Alternative Methodologies Input Summary

Component 3 Activity Budget ($000s)

Activity	A.I.D.	GOG	Totals
(1) Interactive Radio	4143	0	4143
(2) "Escuela Nueva"	1318	1500	2818
Totals	5461	1500	6961

Table 6

Component 3 Input Budget ($000s)

Summary Inputs	A.I.D.	GOG	Totals
1. Technical Assistance			
(a) 9.5 years of Int'l long-term assistance	1696		1696
(b) 30.5 months of Int'l short-term assistance	458		458
2. Local Salaries	1214	1500	2714
3. Commodities			
(a) vehicles (5) and motorcycles (6)	97		97
(b) furniture	210		210
(c) equipment	349		349
4. Operational Costs			
(a) maintenance, gas	48		48
(b) office expenses	254		254
(c) radio support costs	779		779
(d) supplies	156		156
5. Training	126		126
6. Local Travel	74		74
Component 3 Total	5461	1500	6961

4. Educational Administration

a. Introduction

The Ministry of Education is a massive bureaucracy that relies on a number of unintegrated, inefficient systems to supply information for educational decision-making. The Unidad Sectorial de Investigación y Planificación Educativa (USIPE), which was created by law in 1976, is responsible for research, planning, evaluation, administrative development, and programming within the Ministry. It does not, however, have mechanized systems to support planning activities, budgeting, or economic analysis. The MOE computer center (Centro de Cómputo), was the data analysis division of USIPE until 1985. At that time, it was made an independent entity directly under the Minister. As such, the computer center has been given the job of processing teacher employment and placement applications. Although the Centro also has responsibility for analyzing data collected by USIPE, the low priority of this task has meant a lag time that has limited the usefulness of the information. Another organizational variable in the MOE information management system has been its decentralization effort, started in 1986. A USAID supported project has assisted the establishment of regional offices, but effective regionalization will require greater capabilities in information management than presently exist.

The purpose of the educational administration component is to improve the Ministry's capability to collect, manage, and use educational data and information in a systematic and meaningful way. Three activities are proposed: (1) developing a computerized management information system within the MOE, including support for regional offices; (2) conducting basic research in educational settings that will provide a qualitative complement to the overall statistical information gathered in USIPE; and (3) upgrading the software utility for personnel administration. Together, these activities offer the MOE an integrated approach to information management, planning, and decision-making, which in turn will improve its ability in program planning and implementation. The focus on effective information utilization is seen as a critical variable in strengthening the Ministry's capacity to tap other sources of financing for educational projects. It is the intention of this project to encourage increased use of the GOG Core Development Budget as well as to attract other countries and donors to the cause of basic education in Guatemala. Indeed, one specific step being taken by the BEST Project is to assist the MOE in applying for Core Development Budget funds to cover the costs of furniture procurement under the bilingual education expansion activity.

b. Activity Descriptions

(1) Developing a Computerized Management Information System

The Project will offer technical assistance and training to aid the Ministry in streamlining and automating its information management procedures at the central and regional levels. Long-term technical

assistance advisors, based in USIPE, will work closely with the technical staff of the organization to develop a comprehensive MIS/DSS (Management Information System/Decision Support System) for all departments of USIPE. The first step will be a MIS development plan created interactively by the technical assistance team and selected users of the information in different operational departments of the Ministry. The plan will include strategic and planning information requirements; summary management information requirements; operational information requirements; regional requirements; and hardware and software support requirements, including training. Based on the plan, the TA team (consisting of an international educational planner/MIS specialist who is fluent in Spanish, a local senior analyst/programmer, and a local programming specialist) will work with USIPE staff to develop customized operating software for USIPE and a communications system for information distribution throughout the MOE.

The technical assistance team will be assisted by short-term assistance in MIS planning and distribution systems. Together they will help to revise the USIPE data collection instruments (boletas) to incorporate the information needs of the MOE users and of the Basic Education Strengthening Project. Additionally they will assist in the selection, installation, and operation of a complete linked super-microcomputer system consisting of two super-microcomputers, 28 microcomputers, attendant software, and peripherals. All computer equipment will be supported by the Project.

The Project also will provide for the purchase and installation of microfilming equipment for the electronic capture of school records. This will permit the archiving of over 200,000 student records in a readily accessible and space efficient format.

In addition to the hands-on training that will be provided by the Project through the technical assistance team, one year of long-term formal training will be given abroad to three USIPE staff members. These technical specialists will receive technical and theoretical training in UNIX, Database Spreadsheets, and Communication and Systems Operations. This training will focus on the use of computers in educational planning. Up to ten in-country seminars, of approximately ten days each, will also be given to USIPE employees. These seminars will be conducted by a central level training consultant and will include such topics as computer operations, computer planning and database operation, data editing, and statistics yearbook organization and publishing.

Because the Ministry's data and information systems have improved at the central level, this activity will provide support for the institutionalization of these systems at the regional level. This process will improve the overall MIS in several ways. It will improve both the timeliness and quality of data captured; reduce the redundancy of data collection/processing activities; provide regional availability of data for operational tasks and decisions; allow data flow from the Central MOE to the regions; and improve the comprehension of the MOE modus operandi at the regional level. All systems will be comparable and compatible. This will increase standardization of administrative and management criteria throughout the educational system, reducing problems of adaptation as MOE personnel are relocated.

The Project will support the regionalization of the MIS with various inputs. It will provide initial basic computer equipment, software and installation services, basic training in micro-computer use, local travel and per diem, and short-term technical assistance to augment the long-term advisory effort at the central MOE level. A total of 25 person months of short-term assistance will be required: seven months of a regional policy and planning specialist, eight months of a regional training consultant; and ten months of a local specialist in MIS installation and support.

The regional policy and planning consultant will plan the MIS decentralization, focusing on the operational links needed to make the regional offices a part of the overall MIS strategy for the Ministry. The training consultant will organize regional training, as well as guide central level USIPE personnel into a new role of advice and training to their regional staff counterparts.

Initially one micro-computer, with peripheral equipment, will be placed in each of the regions and basic computer training will be provided for regional administrators and key office personnel. As USIPE develops systems appropriate for regional implementation, additional hardware will be installed at the regional level. It is expected that two regions could be supported as pilot regions, serving as testing, demonstration, and training centers to the other regions. A progressive transfer of responsibility for training and support of the regional systems will be made from the TA team to central USIPE personnel.

The results of the management information system activity include:

- further refinement in the collection and interpretation of baseline data;
- more accurate information for planning;
- greater speed in the provision of information to users;
- institutionalization of information feedback mechanisms between central offices and the regions;
- production of the MOE <u>Annual Statistical Summary</u> on a regular basis for the entire system, as well as by region.

(2) <u>Conducting Applied Educational Research</u>

In addition to working with the Ministry of Education to improve its internal management information and statistical programs, the project will support an independent program of educational research to track

key education indicators, analyze specific educational phenomena, and assess the impact of MOE management and organizational changes on the quality of basic education. In turn, these research findings will be used to develop policy options for decision-making.

As a first step, this activity will produce accurate and interpretable statistics that will make it possible for A.I.D., other donors, and the GOG to measure the progress of educational development in the country with confidence in the objectivity, reliability, and validity of the research data. The activity will include carefully-controlled cohort studies in representative schools, case studies of educational phenomena that have policy implications, re-analysis of population and enrollment figures, and cost studies and projections.

An advisory committee will be appointed with representatives from the various implementing units of the Ministry, including SIMAC and the DGEE, and headed by the Minister or his designee. The committee will formulate a research agenda, identifying those subjects, problems, and areas that seem to hold the most promise for assisting and guiding policy formulation. Studies from the research agenda will be contracted to the various Guatemalan universities through the proposed institutional contract (see Implementation Plan, Section V). Formulation of the research agenda and utilization of findings will be closely coordinated with the BEST project evaluation plan. A.I.D. grant funds will cover the costs of specific studies, including computer equipment, materials, supplies, local travel, and printing. It will also provide, as needed, limited short-term assistance (e.g. six months) to resolve technical issues and ensure optimal quality research.

The research agenda will include several categories of concerns:

(a) the assessment of the system's long-term impact on children's learning;

(b) short and medium analyses of specific issues (e.g., why do girls drop-out of school earlier than boys);

(c) management and organization impact evaluations (e.g., role of regionalization in implementing educational programs and improving instructional quality, or determining the effect of integrating PRONEBI into MOE operations);

(d) educational policy studies (e.g., obstacles to double-shifting and implementing a flexible school calendar, or methods for involving local communities in supporting and financing education).

One of the most important issues to be treated in this activity is the question of what students learn and what type of learning problems they face. At the current time there is no effective and reliable way to know how much students are truly learning in the public schools. Within this activity there will be the development of an objective procedure for periodically measuring student academic achievement (primarily cognitive knowledge and skills) in representative samples of students throughout the country. Sample testing will provide benchmarks for assessing qualitative improvements in the primary education system and will help identify pedagogical problems needing attention. The tests will be based on the official curriculum and the Minimum Curriculum Guides.

The proposed evaluation test will be administered in small but representative samples over the life of the project. It will be designed to compare groups such as urban vs. rural students, mayan vs. ladino, male vs. female, altiplano vs. plains, etc. It also will provide relevant correlational information between test scores, grades, promotions, and retentions. The information will be designed to identify any opportunities to contrast the effects of Components (specific Project interventions), and will focus on evaluating the overall system rather than the teachers or students.

This research will identify instructional problem areas. The test results will be analyzed and the conclusions will be presented to the teachers in the form of handbooks which will contain highly specific subject matter and methodological suggestions (e.g., low level skills in long division will suggest a need for increased time and practice given to long division). The initial results of this activity will also provide data required to establish and track the impact of the different Components involved in the BEST Project.

The results of the applied educational research activity are:

- accurate and interpretable educational statistics that allow measurement of progress of primary education;

substantially increased objective information regarding what students are learning in primary schools, particularly in third and sixth grades in Spanish and mathematics;

- increased ability to compare achievement among different schooling groups to make more objective decisions regarding curriculum and teaching methodologies;

- increased information on the effects of exogenous factors such as gender, migration, and community opinion on primary school output;

- ability to predict the effects of input variables such as textbooks, supervision, and in-service teacher training on student learning, promotion, retention, and desertion.

(3) Upgrading Software Utility for Personnel Allocation

The personnel activity of the Ministry of Education is the single largest operational function of the Ministry. Personnel budgets consume 94 percent of all Ministry operating funds, and the Ministry payroll is the second largest government payroll in the country -- some 42,000 active personnel. All of the most significant elements of this personnel function are manual including: advertising for new positions; initial recruitment and preliminary selection; manual inputting of subsequent computerized information (input for the Centro de Cómputo); transfer of teachers among school regions; requests for promotions, leaves, or sick benefits; updating of records to reflect death or departure from the teaching service.

The majority of the personnel actions take place in the Personnel Department (Dirección General de Personal) located in the Edificio Lucky in Guatemala City. With a staff of 50 persons, all the above activities receive minimal support from either Regions or Districts. All major decisions related to personnel, particularly the selection from among 5,000 qualified applicants to the 1,100 to 1,300 new teacher vacancies annually, are individually authorized by the Minister of Education. The Personnel Director individually authorizes major leave and transfer actions (approximately 8,000 per year), although monthly payment of teachers takes place at the District level. Approximately 35,000 active teacher records, and another 27,000 files of qualified, but inactive teachers, are maintained. The combination of manual files and extensive review means that the following delays are usual within the present system.

- Replacement of absent teachers requires two to four months;

- transfers, even among schools, require a minimum of 1.5 months but usually three to four months;

- promotions require at least two months to be processed.

Equally important is the fact the teachers from all over the country must travel to Guatemala City to personally resolve many personnel issues. Estimates of time required on even the simplest matter vary from three days to several weeks - during which time the teacher is typically away from the classroom.

Last year, in response to this combination of factors, the Ministry of Education identified personnel automation as a major priority for Ministry. Funds have been authorized from the current World Bank loan for upgrading the Ministry's Computer Center, principally in terms of main memory and disc storage for the HP 3000 mini computer. The proposed software utility activity will complement the World Bank hardware support through the procurement of a full-function personnel management software package with related installation and development training. Although modest in amount, this activity represents an excellent opportunity to assist the MOE in rapidly resolving efficiency problems associated with its current manual personnel system. By complementing the hardware assistance provided by the World Bank, this activity will cut years of development time from the automation process, and improve the potential for data links with USIPE and the regional offices.

Four months of short-term technical assistance from a computerized personnel specialist is recommended. This person, in conjunction with the appropriate MOE personnel, will develop a plan for automating the personnel system, examine alternative software packages, make recommendations as to the most appropriate system, and oversee installation and training activities conducted by the software manufacturer. A.I.D. grant monies will also cover the costs of procuring the proposed software and training package, including annual follow-up and maintenance through the life of the project.

The expected results of this activity include:

- improved knowledge of existing teaching vacancies, and more rapid filling of such vacancies;

- overall reduction of time required for any personnel action such as appointments, leaves, transfers, and benefits;

- improved central records and reduced errors by personnel clerks;

- increased accessibility of current personnel records at the region, and eventually, departmental level;

- adequate and appropriate placement of teachers, including bilingual teachers.

c. Education Administration Input Summary

Table 7

Component 4 Activity Budget ($000s)

Activity	A.I.D.	GOG	Total
(1) MIS	2543	493	3036
(2) Applied Research	1120	0	1120
(3) Personnel Software	320	0	320
Totals	3983	493	4476

Table 8

Component 4 Input Budget ($000s)

Summary Inputs	A.I.D.	GOG	Total
1. Technical Assistance			
(a) 37 months of Int'l long-term assistance and 7 years, 1 month of Guatemalan long-term assistance	758	0	758
(b) 39 months of Int'l short-term and 10 months of Guatemalan short-term assistance	579		579
2. Local Salaries	56	493	549
3. Commodities			
(a) equipment	534	0	534
(b) personnel software package	260	0	260
4. Research Contracts	1030	0	1030
5. Operational Costs			
(a) supplies	438		438
6. Training	176		176
7. Local Travel	152		152
Component 4 Total	3983	493	4476

C. Project Management and Administration

The project implementation plan (Section V) describes the roles and responsibilities of all implementing agents for this Project. The MOE general management office and USAID OHRD office will provide leadership and oversight to all twelve activities recommended for grant financing. The designated implementing offices within the MOE (PRONEBI, SIMAC, DGEE, USIPE, and Personnel) will carry important technical responsibilities for project implementation, while at the same time be strengthened by the A.I.D. assisted activities. In addition to MOE institutional resources, a variety of Guatemalan university and private sector groups will be involved in project execution. To help coordinate project operations, the MOE and USAID will use an institutional contract mechanism for: (a) provision of technical assistance; (b) implementation of sub-contracts with Guatemalan organizations; and (c) procurement of technically complex equipment.

A.I.D. grant financing will assist project management and administration in several ways. In addition to the technical assistance proposed under components 1-4, it will support a half-time contract Chief of Party (one individual, with half-time administrative and half-time technical responsibilities) and a small in-country office. The purpose of the office will be to conduct the administrative matters of the contract. Therefore, it will be kept small in size, and will be staffed by a bilingual administrative assistant. The technical advisors may occasionally meet there, particularly with the subcontracted Guatemalan institutions, but their places of work will normally be at the site of their technical activities. It also has been assumed that the institutional contractor will appoint a part-time home office coordinator to select, send, and backstop field technical advisors.

In order to augment the Ministry's ability to implement the BEST Project, grant monies will finance the costs of a MOE project coordinator who will be a part of the new management office for donor coordination, through year three of the Project, after which this salary will be assumed by the MOE as a counterpart expense. Money for a USAID PSC has also been budgeted to strengthen the OHRD staff available for project implementation and evaluation.

Table 9

Project Management and Administration Input Budget
(in US$ 000s)

	A.I.D.	GOG	Total
1. Personnel			
(a) Chief of Party (1/2 time)	450		450
(b) MOE Coordinator	90	90	180
(c) PSC-USAID	660		660
(d) Home Office Coordinator	125		125
2. Contractor In-Country Office			
(a) Office Staff Salaries	65		65
(b) Operating Expenses	75		75
(c) Equipment	5		5
(d) In-country travel	10		10
Project Management Total	1390	90	1570

IV. FINANCIAL ANALYSIS AND PROJECT BUDGET

Project Budget and Financial Plan

This Project consists of technical assistance, the purchase of computer hardware/software, radio studio equipment, vehicles, research contracts, the purchase and distribution of basic school materials, the printing of school textbooks, and back-up administrative support for the project purpose of improving the efficiency, coverage, and administration of basic education services. The implementation strategy is to use a variety of Guatemalan university and private sector groups in combination with MOE and USAID personnel resources to implement the BEST Project. In order to adequately tap and coordinate this range of resources, a major institutional contractor will be contracted to provide most of the technical advisory services required by the Project, will sub-contract with Guatemalan groups to implement specific portions of the Project, and will procure technically complex equipment for certain activities such as the MIS and Interactive Radio. The Mission will directly contract for the purchase of vehicles and other equipment for the MOE and also the printing of the school textbooks. As noted in the Project description, several MOE units are directly responsible for certain Project components; PRONEBI, SIMAC, DGEE, and USIPE will be

involved in the design, implementation, and evaluation of the various activities. A.I.D. grant funds will finance MOE consultants, staff members, and operating expenses during the life of the Project. Under the BEST Project, A.I.D. will make a grant of $2.1 million under a Handbook 13 Agreement to the Chamber of Industry to expand the basic school materials program into the rural areas. The Chamber will put an additional $1.4 million into the program over a six year period.

The proposed total cost of the Basic Education Strengthening Project is $63.2 million. A.I.D.'s contribution will comprise 47.5 percent of the total Project budget, or $30.0 million in grant funds. 50.3 percent of the budget or $31.8 million will be contributed by the Government of Guatemala (GOG). The remaining 2.. percent will comprise the counterpart contribution of 1.4 million by the Chamber of Industry for the basic school materials program. The $30.0 million in A.I.D. grant funds will be obligated through a Project Agreement between USAID/Guatemala and the Ministry of Education.

Table 1 contains the Project summary by component, including GOG and Chamber of Industry counterpart contributions, broken down by dollar and local currency, while Table 2 shows the summary information by inputs. The projection of expenditures by project year for AID grant funds, GOG, and Chamber of Industry counterpart is shown in Table 3. The methods of implementation and financing are detailed in Table 4. The contingency factor is 6.5 percent and inflation is calculated at 5 percent compounded on dollar costs and 15 percent on local currency costs, excluding the basic school materials program which is subject to a maximum dollar value. The detailed budgets for each component are contained in Annex G, and include the calculations and assumptions on which they are based.

B. GOG Contributions

The counterpart in-kind contribution provided by the Ministry of Education largely comprises salaries but also includes certain operating costs.

Table 1
Budget Summary and Financial Plan ($000's)
by Activity

ACTIVITY	USAID FX	USAID LC	USAID TOTAL	GOG LC	OTHER LC	TOTAL
1. Bilingual Education	4,380	2,180	6,560	22,692	-	29,252
2. Teacher Services	3,027	4,220	7,247	7,141	1,400	15,788
3. Alternative Methodologies	5,461	-	5,461	1,500	-	6,961
4. Education Administration	3,983	-	3,983	493	-	4,476
5. Project Management	1,390	90	1,480	90	-	1,570
6. Audits/Evaluations	750	-	750	-	-	750
7. Contingencies	1,951	-	1,951	-	-	1,951
8. Inflation	604	1,964	2,568	-	-	2,568
TOTAL	21,546	8,454	30,000	31,916	1,400	63,316

Table 2
Budget Summary and Financial Plan ($000's)
by Inputs

ACTIVITY	USAID FX	USAID LC	USAID TOTAL	GOG LC	OTHER LC	TOTAL
1. Technical Assistance	6,205	480	6,685	-	-	6,685
2. Salaries	2,201	595	2,796	30,602	-	33,398
3. Commodities	2,930	145	3,075	1,008	-	4,083
4. Printing Textbooks	2,877	-	2,877	-	-	2,877
5. Basic School Materials	-	2,100	2,100	-	1,400	3,500
6. Research Contracts	1,030	-	1,030	-	-	1,030
7. Advertising Contract	420	-	420	-	-	420
8. Operating Expenses	1,787	2,403	4,190	306	-	4,496
9. Training	512	-	512	-	-	512
10. Local Travel	279	767	1,046	-	-	1,046
11. Audits/Evaluations	750	-	750	-	-	750
12. Contingencies	1,951	-	1,951	-	-	1,951
13. Inflation	604	1,964	2,568	-	-	2,568
TOTAL	21,546	8,454	30,000	31,916	1,400	63,316

(3921C)

Table 3

Projection of Expenditures by Project Year ($000s)

Project Year	A.I.D.	GOG	Other	Total
1	2540	1330	234	4104
2	5601	1491	234	7326
3	5071	6942	233	12246
4	5063	7362	233	12658
5	3751	7387	233	11371
6	3455	7404	233	11092
Contingencies	1951	-	-	1951
Inflation	2568	-	-	2568
Total	30000	31916	1400	63316

s of Implementation and Financing ($000

Method of Implementation	Method of Financing	Amount
1. U.S. Institutional Contract		
Technical Assistance	Direct Reimbursement	6990
Commodities	Direct L/COM	1673
Research Contracts	Direct Reimbursement	1030
Advertising Contract	Direct Reimbursement	420
Salaries	Direct Reimbursement	1416
Training	Direct Reimbursement	508
Operating Expenses	Direct Reimbursement	1591
Sub-total		13,628
2. Commodities - Direct Contract	Direct Payment	1401
3. Basic School Materials Cooperative Agreement	Direct Reimbursement	2100
4. Personnel - PSC	Direct Payment	660
5. Printing Textbooks - Direct Contract	Direct Reimbursement	2877
6. Salaries and Operating Expenses - MOE GOG Procedures	Direct Reimbursement	4153
7. Audits/Evaluations - Direct Contracts	Direct Payment	750
Sub-total		25569
Contingencies/Inflation		4431
TOTAL		30000

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The major element of counterpart is in the bilingual education component and more specifically in activities 2 (revising texts and guides), and 3 (expanding the PRONEBI model). The technical assistance advisors will work closely with the MOE National Bilingual Education Program staff to overhaul and modernize the curriculum and teaching materials developed under previous projects. A curriculum revision committee will be formed, composed of members from each of the curriculum development teams of PRONEBI and the curriculum consultants. Field testing and adaptation will take place in the third year of the Project. The results of the mapping study will be used to develop a detailed expansion plan that will include both horizontal expansion to the 1300 schools currently under the PRONEBI service umbrella, and vertical expansion of services through the fourth grade. The school furniture required for the expansion plan will also form part of the GOG contribution.

C. Audits and Financial Reviews

Funds have been provided for mid and end of project audits to be performed under the IQCs for non-Federal audits controlled by the Inspector General's Office. A pre-award survey will be made of the Chamber of Industry prior to disbursements under the Handbook 13 Agreement for the provision of basic school materials. The Mission Controller's Office will conduct annual financial reviews either under the IQC mechanism or utilizing Controller in-house financial analyst personnel. In addition, it is expected that the major institutional contractor will undertake independent external audits on an annual basis and submit the audit report to the Mission Project Manager and the Mission Controller.

D. Recurrent Costs

The financial replicability of this Project depends on the willingness and financial capability of the GOG to "replicate" or continue the activities of this project. The recurring costs after Project termination are of four categories: (1) maintenance and operating costs associated with the computer hardware, vehicles, and motorcycles purchased under the Project, and their eventual replacement; (2) continuing new staff salaries in SIMAC for distance teacher training and the teachers' magazine; (3) continuing costs of printing and distributing the teachers' magazine; and (4) any decision on the part of MOE to expand pilot activities. Based on recent conversations with top officials from the Ministries of Education and Finance, the Mission has concluded that willingness exists on the part of the GOG to make additional budget allocations, not only to cover the counterpart funds required during project implementation, but also to provide funds required after A.I.D.'s assistance is ended. The introduction of the Core Development Budget concept using the local currency funds generated under the A.I.D. Economic Support Fund (ESF) programs has greatly strengthened the capability of the GOG to allocate financing to high-priority development projects, including the Basic Education Strengthening Project.

This willingness, coupled with past budget increases to the non-formal education programs, seems to be sufficient evidence of the importance the GOG places on this project and their desire to cover all recurring costs for its successful continuation.

One of the outputs of the project is expected to be an increased awareness among the Guatemalan business community of school problems. An important factor contributing to the low quality of instruction has been the lack of educational materials in the classroom. The Chamber of Industry has provided basic educational materials (Canastas Escolares) to school children in metropolitan Guatemala City each year since 1986. The proposed activity under this project will concentrate on expanding the distribution of basic school materials to students in rural areas through the Chamber of Industry program. The Chamber has a proven track record of successfully motivating its members to contribute time, funds, and products to their program. It is expected that this track record will be improved and maintained as a result of the Chamber's participation in the Project and as a result of the social marketing strategy to be followed under the community participation activity.

V. IMPLEMENTATION PLAN AND ARRANGEMENTS

A. Project Implementation Strategy

Within the four components described in Section III of this paper, there are 12 distinct activities proposed for grant financing. Each activity is different in its scope and content, and therefore needs different types of technical inputs and expertise. In assessing the administrative capability of the Ministry of Education and surveying in-country institutional resources in Education (see Annex E.4), it was determined that a large part of what was needed to implement the BEST project existed in Guatemala, but not in any one place. The implementation strategy, then, is to use a variety of Guatemalan university and private sector groups in combination with MOE and USAID personnel resources to implement the BEST project.

In order to adequately tap this range of resources, the MOE, through USAID, will solicit proposals for a major institutional contractor who, in turn, will:

(1) provide most of the technical advisory services required by the Project;

(2) sub-contract with Guatemalan groups to implement specific portions of the Project; and

(3) procure technically complex equipment for certain activities such as MIS and interactive radio.

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By using one major institutional contract, the MOE and USAID will maintain their leadership and oversight roles while delegating operational coordination to the contractor. Taken together, this approach will foster appropriate collaboration between components and participating institutions, and ultimately ensure continuity in project design.

The proposed strategy represents a unique mix of institutional capabilities for achieving project objectives. This alternative was chosen for several important reasons. First, it emphasizes institutional strengths, while minimizing weaknesses. Second, it capitalizes on the many excellent institutional resources available in Guatemala, while also providing a mechanism for acquiring external expertise when needed. Third, it fosters dialogue between the MOE and other Guatemalan institutions with an interest in education. Last, it provides opportunities to the universities and private sector groups to increase their commitment to basic education in Guatemala.

B. Implementation Responsibilities

1. Ministry of Education

As noted in the project description, several MOE units are directly responsible for certain project components. PRONEBI (the National Bilingual Education Program unit) holds prime responsibility for Component One. Although certain related activities such as mapping and interactive radio will actually be carried out under contract, PRONEBI staff will be intimately involved in the execution of these scopes-of-work. PRONEBI will also consult with SIMAC on the revisions to be made on bilingual texts and guides to ensure that appropriate (and positive) steps are made to coordinate bilingual education with the changes in the overall national curriculum. The Dirección General de Educación Escolar (DGEE) and the Sistema de Mejoramiento de Adecuación Curricular (SIMAC) will jointly work on the activities proposed for Component Two. SIMAC's main responsibilities will be for in-service teacher training, while the DGEE will oversee the supervisory improvement activity. The DGEE will also be the MOE contact point for the materials activity, while the DGEE and SIMAC will work closely together on the social marketing contract for increasing community participation.

The alternative methodologies to be tested under Component Three will be implemented by private Guatemalan groups under the institutional contract mechanism discussed earlier. As appropriate, representatives from PRONEBI, SIMAC and DGEE will be involved in the design, implementation, and evaluation of these pilot programs.

The Unidad Sectorial de Investigación y Planificación Educativa (USIPE) will have prime implementing responsibility for Component Four, most notably with the MIS activity, although regional offices will also benefit from this activity. The MOE personnel department will be the prime implementor for activity three, up-grading the software utility for personnel allocation.

The intention of the MOE is to utilize an implementation system designed to strengthen participating units within the Ministry (PRONEBI, SIMAC, DGEE, USIPE, and Personnel) while fostering coordination among them. To this end, the Ministry is creating a General Management Office (Oficina Gerencial), which will be responsible for overseeing all MOE externally financed projects, including the BEST Project. This office consists of one coordinating director and five high level technical coordinators in the following areas: pedagogy, civil engineering, financial administration, institutional development, and project management. The head of this office reports directly to the Minister and to two vice-Ministers, ensuring substantial authority for project implementation and coordination as well as for the alignment of project activities with MOE educational policy. This factor is particularly relevant for the educational research activity (Component Four, Activity Two), where it is envisioned that the results of contracted research will translate into policy and program formulation within the Ministry.

Each MOE implementing unit will appoint a high level representative to a BEST project implementing committee, coordinated by the General Management Office. A.I.D. grant funds will finance one staff member of that office during the life of the Project to maximize the level of attention given to BEST. The General Management Office has a critical role to play. It will free the Minister and vice-Ministers of routine administrative work (a major criticism of the MOE), while also building important substantive bridges between technical units and the policy-making level of the Ministry.

2. USAID Mission

Overall responsibility for BEST project management will be in the hands of a U.S. direct hire Education Officer. This Officer will be assisted by three foreign service national employees (FSNs), who will divide their time between BEST and other A.I.D. financed education projects. These members of the OHRD Office each will have primary responsibility for one Project Component. A Project Implementation Committee (PIC) will be formed within the Mission. This Committee will be chaired by the USDH Project Officer and will have representatives from the Project Development Support, Program, Controller, and Contracts Offices. They will jointly review project status on a monthly basis, identify potential problems, develop solutions, and prepare status reports. They will work closely with other offices in the Mission and make periodic presentations to USAID management, in keeping with regular Mission practices.

A firm recommendation is not being made at this time as to whether a PSC is needed at OHRD to assist with project implementation. Rather, money has been budgeted for such a position, beginning with a six month level of effort in year one and 12 months per year, thereafter. In this manner the Mission can make a firm decision regarding this need at the appropriate time. Meanwhile, there is money in the project management and administration budget line item to support any short-term implementation needs that may arise during project start-up.

Once the Project Paper is approved, the PDSO Office will finalize the Project Authorization for signature. The PDSO and OHRD Offices will prepare jointly the Project Agreement and subsequent Project Implementation Letters and other project related correspondence. As outlined in the year one schedule (section D.2 below), there will be a series of USAID actions required for project start-up since USAID will operate as the procurement agent for the institutional contract, vehicles and motorcycles, and other major commodity purchases. Also, OHRD and the MOE General Management Office will design and execute a joint management planning seminar to set monitoring and evaluation objectives (see section C below). The Mission Program Office will provide guidance to OHRD on project evaluation activities.

3. Chamber of Industry

As noted in the administrative analysis and the project description, the Chamber of Industry has a proven track record at successfully motivating its members to contribute time, funds, and products to their basic school materials program. They distributed 20,000 school material baskets in 1986, 25,000 in 1987, and 30,000 in 1988. Under the BEST Project, A.I.D. will make a grant of $2.1 million to the Chamber of Industry to expand this program into the rural areas. The Chamber will put an additional $1.4 million into the program over a six year period, as well as cover the operating expenses of implementing the program. They will coordinate with the DGEE in choosing schools for the donations and in selecting appropriate materials for the baskets. The Chamber will carry the full responsibility for raising funds, purchasing supplies, and distributing the baskets to children.

In signing the Project Agreement with A.I.D., the Ministry of Education will covenant to maximize, to the extent feasible, the participation of the private sector in the delivery of primary educational services. The expressed willingness of the MOE to countersign the PIO/T, which will reserve funds for the Chamber's student materials program, is an indication of this covenant. The PIO/T will also lay-out the Ministry's responsibilities for the execution of the materials activity to ensure appropriate coordination with the MOE's education programs.

4. Institutional Contractor

An institutional contractor,with solid experience in primary education, will be chosen through competitive procurement. As part of the RFP process, bidders will be expected to demonstrate a knowledge of Guatemalan institutional resources and to identify sub-contractors for project implementation. Areas in which USAID and the MOE expect local university and/or private sector involvement are: community participation; interactive radio; one-room/one-teacher classroom pilot (Escuela Nueva); and applied education research and analysis.

In addition to the sub-contracting plan, bidders will need to demonstrate their ability to identify and field both long-and short-term technical assistance in the activity areas of the BEST project, as well as perform as the purchasing agent for technically complex commodities such as computers, radio programming equipment, and microfiche apparatus.

The institutional contractor will be expected to play an important role in all monitoring and evaluation activities, including those related to Conditions Precedent and Covenants.

C. USAID/MOE Management Planning

The twelve activities proposed for financing under the BEST Project each have their own set of inputs and anticipated outputs. Although described as separate activities, important interrelationships exist. For instance, the sociolinguistic mapping exercise will provide important information for planning the expansion of bilingual education. It can also provide insight and guidance for the applied research agenda, and important baseline data for project evaluation. The proposed teachers' magazine will not only serve as an important communication and training tool for teachers, it will also foster collaboration and coordination among regions as well as between levels of hierarchy: teachers, supervisors, and administrators. The research and analysis program will only be successful if the research results are taken seriously, disseminated properly, and utilized for future planning.

In order to foster an organized and interrelated approach to the BEST project, BEST will follow the implementation model used in the Honduran Primary Education Efficiency project, where a one-week management planning meeting was held to generate clear and specific short, medium, and long-range objectives. By doing so, everyone involved in the project had a clear understanding of objectives, responsibilities, priorities, and accountability mechanisms. Due to the nature of the BEST Project, a similar process, with semi-annual follow-up, will be instituted for the key actors of the various implementing units. As part of the exercise, this group will develop a detailed monitoring and evaluation plan for the Project, including tracking of policy conditionality and Covenants (see Section VIII and Log Frame in Annex B). In this manner, project implementors can be assured of generating the performance data needed to monitor progress, assist decision-making during project implementation, and document the effects of project activities on target populations. For more details on the purpose and content of this plan, see Section VI below.

Immediately following the signing of the Project Agreement, OHRD and the MOE General Management Office will meet to draft a scope-of-work for this planning meeting, and to assess the availability of in-country resources to perform tasks. Project grant funds (from the audit and evaluation activities line item) will be used to contract the services of a professional management training consultant with experience in collaborative evaluation planning. It

is anticipated that initially this consultant will spend 2-3 weeks with project personnel to design and execute the management planning seminar. All results and decisions made during that seminar will be established officially in subsequent PILs.

D. Sequence of Activities

1. Overview of Project Schedule

While the exact sequence of activities will be determined by the management planning seminar discussed above and negotiations with the institutional contractor, the general approach to sequencing project activities is shown in the implementation schedule charts in Annex I.1. In summary, year one is largely start-up and is outlined in more detail below. Years two and three have a heavy emphasis on technical assistance start-up in order to begin a series of activities: mapping, interactive radio, Escuela Nueva, MIS, and certain key studies expected under the applied research and analysis activity. Years four, five, and six reflect continuation of these activities, or follow on activities such as bilingual education expansion.

2. Schedule For Year One

Five major activities will occur during year one: management planning seminar; advertising and negotiating the institutional contract; procuring vehicles and motorcycles; procuring furniture and other basic office/school supplies for the teacher services component; and negotiating a Handbook (H.B.) 13 Agreement with the Chamber of Industry. A bar chart reflecting the timing and steps required to accomplish these activities is contained in Annex I.2 and outlined below.

Year One Schedule

July 1989

- OHRD and MOE design management planning seminar, survey in-country resources for contractor and location in which to hold the event.

- Prepare PIO/T for institutional contract; circulate in USAID.

- Draft PIL No. 1 (PDSO)

- Prepare PIO/C for international procurement of vehicles and motorcycles; circulate in USAID.

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August 1989

- Choose contractor for management planning seminar; choose location for seminar.

- Approve PIO/C for vehicles/motorcycles by 8/15 and draft RFP.

- Begin preparations of PIO/C for commodity procurement for teacher services.

- Prepare waiver of full and open competition for student materials contract; waiver reviewed and approved.

- Sign PIL No. 1

September 1989

- Local contractor finalizes design for management planning seminar; final arrangements made for event.

- Issue RFQ for vehicle/motorcycle procurement.

- Approve PIO/C for commodity procurement.

- Draft H.B. 13 Agreement with the Chamber of Industry; commence negotiations.

October 1989

- Execute management planning seminar.

- Approve PIO/T and draft RFP.

- Issue RFQ for commodity procurement.

- Complete negotiations with the Chamber of Industry; sign Agreement by 10/30.

November 1989

- Draft and publish results of management planning seminar in PIL format.

- Submit bids on vehicle/motorcycle procurement by 11/30.

- Chamber commences first year activities of basic student materials program.

December 1989

- Sign and issue PIL containing results/agreements for management planning seminar.

- Prospective bidders on institutional contract visit Guatemala and prepare bids.

- Review vehicle/motorcycle bids.

- Submit final bids on local commodity procurement by 12/30

January 1990

- Prepare bids on institutional contract.

- USAID conducts final evaluation of vehicle/motorcycle bids and makes award by 1/31.

- USAID begins review of local commodity procurement bids.

February 1990

- Submit all bids on institutional contract by 2/15; USAID review process begins.

- Conduct final USAID evaluations and make award of local commodity procurement by 2/28.

March 1990

- Rank initial institutional contract bids; negotiations commence with top bidders.

April 1990

- Request "Best and Final" offers on institutional contract by 4/30.

- Deliver vehicles and motorcycles by 4/30.

May 1990

- Conduct final USAID evaluation of institutional contract bids; award made by 5/31.

- Deliver local commodity procurement by 5/30

June 1990

- Implement institutional contract.

E. Procurement Plans

The Project Agreement will state that USAID will act as the procurement agent for the Ministry of Education for grant financed procurements. Once the institutional contract is awarded that contractor will be expected to act as the purchasing services agent for all technically complex equipment and other commodities required to implement sub-contracts. Several major procurements are envisioned: the institutional contract; vehicles and motorcycles; office equipment and furniture for teacher services; and textbook printing for bilingual expansion during years three through six. Additionally, USAID will execute a sole source waiver on the student materials activity and negotiate a H.B. 13 Agreement directly with the Chamber of Industry. These procurement activities are discussed below.

1. Institutional Contract

The institutional contract will cover three major areas of responsibility: (1) technical assistance and related training; (2) sub-contractual relations with Guatemalan institutions; and (3) procurement of technically complex equipment.

The level of effort chart in Annex H.1 shows that about 52 person years of long-term technical assistance and 108 person months of short-term technical assistance will be required by the Project. Of this amount, 20 person years of Guatemalan long-term TA is allocated to the bilingual education component and will not be placed under the proposed institutional contract. The remaining 32 person years of long-term assistance, as well as the 108 person months of short-term TA, will be financed under the proposed contract. Although most of that assistance has been budgeted at international prices, USAID will stipulate in the RFP that potential bidders use Guatemalan and other Central American common market resources when appropriate and possible. The training activities to be organized by the contractor are contained in Annex H.4.

The administrative analysis (Annex E.4) contains a review of Guatemalan institutions capable of making important contributions to different parts of the BEST Project. It is USAID's intention to require all bidders to demonstrate a thorough knowledge of Guatemalan institutional resources and to submit a detailed plan on how these resources would be used for project implementation. Detailed sub-contracting arrangements will be requested as part of the proposal package.

The procurement of technically complex equipment also has been placed under the institutional contract since it will require up-to-date specifications from the technical assistance personnel being provided by the contract. An illustrative list of this equipment is contained in Annex H.3.

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The USAID OHRD Office will prepare the PIO/T for Mission review within two months after the signing of the Project Agreement. The target date for issuing the RFP is October 15, allowing ample time for Mission and MOE approval of the scope of work. All bids will be required by February 15. A MOE project representative, most probably from the General Management Office, will participate as a voting member on the technical review panel that will study and rank order the proposals. Best and final offers should be made by the end of April, with the final award made by May 30, 1990. Technical assistance should begin arriving in Guatemala by July 1, 1990.

2. Vehicle and Motorcycle Procurement

A total of 38 - 4 wheel drive vehicles and 316 motorcycles are proposed for grant financing. These numbers are allocated by project component as shown in Annex H.2. A PIO/C for the teacher services portion of this procurement will be drafted by OHRD and approved by the Mission during the first month after signing the Project Agreement. The IFB for vehicle procurement will be issued by the end of August, with all bids submitted by the end of November and the award made by January 31st. Delivery of the vehicles is expected by the end of April. The MOE will be required to submit an approved vehicle maintenance plan prior to the issuance of the IFB.

3. Other Procurement

The remaining commodities to be procured are the office furniture, equipment, and supplies proposed under the teacher services component. Minor support items required by activities such as mapping and interactive radio can be purchased separately by the institutional contractor. The Mission will conduct another major procurement in year three to cover the printing of textbooks for bilingual education expansion. OHRD will prepare the necessary documentation, while the Mission Contracts Office will follow-up with issuing RFQs and soliciting bids for review. The first delivery of office furniture and equipment should be made by the end of May, 1990.

4. Handbook 13 Agreement With the Chamber of Industry

For reasons described earlier in this paper, USAID will seek a waiver of full and open competition on the student materials activity (canastas escolares). The Chamber of Industry's track record in this area is unsurpassed. The sole source waiver can be approved by the Mission Contracting Officer. With approval in hand, an H.B. 13 agreement will be drafted and negotiated with the Chamber. This agreement will include: a method for selecting school sites for distribution; a schedule for private sector contributions to the program; a list of materials and books to be included in each basket, by grade; and a scheme and timetable for distribution.

5. Gray Amendment

Every possible effort will be pursued to utilize Gray Amendment firms, where their input is appropriate.

VI. MONITORING AND EVALUATIC

Monitoring and evaluation will be an integral part of project implementation. USAID and MOE project representatives will agree upon a specific collaborative project monitoring and evaluation system during the management planning seminar proposed in Section V of this paper. The monitoring and evaluation system has two essential purposes:

(1) to ensure the generation of project performance data for:

- monitoring the progress of project implemontation,
- informing decision-making during project implementation (formative evaluation),
- documenting the effects of project activities (summative evaluation); and

(2) to assist the MOE in building its capacity in data gathering and analysis, which in turn will improve the Ministry's ability to plan and implement projects.

A. Indicators to be Tracked

Annex J presents a summary of a statistical analysis of primary school efficiency and enrollment indicators that was performed in the course of BEST Project design. It was the intent of this analysis to define a set of indicators, baseline levels, benchmarks, and quantified objectives that would be tracked consistently throughout the Project. The indicators and the levels reported in Annex J differ in some cases from figures reported in other A.I.D. or GOG documents for reasons that are explained in the Annex. The figures contained in Annex J, and the detailed figures on which the Annex summary is based, are regarded as the fundamental statistics that will be used to compute quantitative impact at the end of the Project. These indicators and baseline levels will also be used for all other Mission education sector reporting between 1989 and 1995. It will be important for the Mission to maintain a running data base and to be consistent with regard to measurement and mathematical computations during this period.

As the project supported applied research and MIS activities begin, new indicators and more sensitive analyses will be possible. For example, detailed analyses of academic achievement test scores will make it possible to document, in detail, changes in students' learning that occur as a result of the Project. New analysis of cohort data gathered by USIPE with Project technical assistance will make it possible to measure and directly compare all the efficiency indicators separately for males and females, indigenous and ladino students, and urban and rural schools. Detailed studies under the research activity will begin to uncover the real causes of the dropout, repetition, and failure rates associated with system inefficiency.

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In addition to project research, outside evaluation studies will be accomplished in 1992 and 1994. These outside evaluations will add information based on independent field observation of teacher attitudes and performance, surveys of changing parental attitudes about schooling and education, analysis of changes in costs and cost-effectiveness that result from the Project, assessments of the potential of the pilot project technologies, and recommendations concerning the timing and nature of follow-on activities. These evaluations also will assess the progress being made by the GOG and MOI in increasing budget allocations and investments to the education sector, an the impact of MOE management and organizational changes on the delivery of educational programs.

B. Collaborative Evaluation

The monitoring and evaluation system will be implemented jointly by the key decision makers and information users of the BEST Project (USAID OHRI MOE General Management Office, and representatives from PRONEBI, DGEE, SIMAC, and USIPE). These individuals will form a core Monitoring and Evaluation Committee. They will be selected on the basis of their knowledge of central program issues, as well as their leadership positions in the respective units. They will meet on a regular basis and be assigned responsibility for ensuring that the staff and participants in each component and activity foll the agreed upon guidelines for data collection, tracking, and impact assessment.

A.I.D. Program Design and Evaluation Methodology Report No. 9 describes eight steps in designing a project monitoring and evaluation system. These steps, as applied to BEST Project monitoring and evaluation, are discussed below.

1. Identify the Priority Users of the Monitoring and Evaluation System

The core evaluation committee will determine who the priority users will be of the BEST monitoring and evaluation system. Most likely, these users will fall into three categories: field staff who need to know regularly "how they are performing," administrative and planning staff who need program data for planning purposes; and MOE and USAID senior management who need progress and performance data for informed decision-making.

2. Clarify Project Goals and Purposes, Inputs and Outputs

Although the BEST project design has been fully discussed and negotiated with MOE officials, component activities will be reviewed in logical framework terms. By doing this, a common frame of reference will be established and, as part of the management seminar, each manager will begin t understand how his/her responsibilities relate to other activities, as well a to the broader project purpose.

3. Identify a Series of Evaluation Questions Based on an Assessment of the Issues, Concerns, and Questions of the Key Managers

Committee members will focus monitoring and evaluation tasks on key information needs. They will consider:

- What are the major decisions that should be made during implementation for which information is needed for informed decision-making?

- What are the major areas of uncertainty about inputs and outputs and the likelihood of purpose/goal achievement?

- What do they need to know about present activities in order to plan future programs?

4. Identify Key Indicators and Administrative Data Needed to Answer the Evaluation Questions

As noted in section A above, a fair amount of work has been done to define the end-of-project indicators. They include academic achievement; drop-out, retention, and repetition rates; number of years required to produce a sixth grade graduate; and increased promotion of girls. The core Monitoring and Evaluation Committee will review these indicators in light of the evaluation questions identified in the earlier exercise and determine whether any additional indicators need to be established. At this juncture it is assumed that a series of intermediate indicators will be identified to help track progress and change. These indicators will undoubtedly reflect some of the results articulated for each activity in the Project description (Section III.B.). They will include such variables as student attendance, teacher attendance, teacher time in the classroom, and academic time on task. Other important intermediate indicators will be frequency of supervisors' visits to schools, number of teachers enrolled in distance courses, number of bilingual teachers assigned to PRONEBI schools, number of classrooms using interactive radio, etc. Intermediate indicators for tracking policy and management phenomena also will be established.

Once there has been a clear agreement on all indicators, the committee will determine what data are needed, what data are being collected already, and what data are needed but not currently being collected. They will review the types of data presently being collected by USIPE and determine whether there are any new data elements that need to be built into the MIS activity. Some data needs may be beyond the purvue of USIPE and the proposed MIS. In those cases the committee will address the information needs through some other mechanism (see step 5 below). They also will determine the roles and responsibilities of the institutional contractor (and sub-contractors) in tracking progress and evaluating impact. Procedures for and frequency of data collection will be clarified, as will the form for presenting the results of data collection and analysis.

5. Select Other Appropriate Methods to Answer Managers' Questions

Certain priority evaluation questions may require more intensive investigation over the life of the project (e.g., why do girls have a higher drop-out rate than boys? How can learning achievement best be tested and measured in the Guatemalan environment? How do teachers determine which students will be held back each year? Why do particular instructional strategies produce higher achievement rates?). Questions such as these will form the basis for a research agenda for the applied research and analysis activity in component four. These studies will require other methodologies such as participant observation, case studies, rapid appraisal, focus groups, longitudinal studies, etc. The MOE General Management Office will take the lead in coordinating the project monitoring and evaluation system with the basic research activity to ensure continuity and collaboration. Even at this stage, several research activities are planned and expected to be carried out. One is the design and pilot testing of achievement testing. Another is the design and implementation of several longitudinal studies to assess the relationships between project inputs, outputs, and impact indicators.

6. Clarify Counterpart Support and Involvement for the Project Monitoring and Evaluation System

It is USAID's intention to develop a collaborative approach to project monitoring and evaluation. The proposed management planning seminar, plus the core Monitoring and Evaluation Committee, should be important steps in forming counterpart support. USAID also will seek this support through an appropriate Covenant in the Project Agreement. Ultimately, however, real involvement will emerge only if the Monitoring and Evaluation plan is relevant to counterpart information needs.

7. Develop Feedback Procedures

The core Monitoring and Evaluation Committee will determine how often and in what form project data and information will be disseminated to users. A review of existing documents such as USIPE's boletas and "anuario estadístico" will be made. Consideration also will be given to new mechanisms to be developed by the Project, such as the teachers' magazine.

8. Develop a Schedule for Project Monitoring and Evaluation Activities

Monitoring of project implementation will occur on a quarterly basis. Annual reports will also be required to summarize events; analyze successes, failures, and existing problem areas; and formulate an operational plan for the next year. Each report will also contain a specific reference to information needs and data collection methods being used to ensure that evaluation objectives are being met. Two major evaluations will be conducted

by outside evaluators; one at the end of year three and another at the end of year five. This latter evaluation will assess technical and policy dialogue progress, as well as set the stage for possible follow-on activities. Funds are available to USAID to pay for these evaluations in a separate line item of the proposed project budget.

VII. SUMMARY OF PROJECT ANALYSIS

A. Technical Analysis Summary

The approach of the Basic Education Strengthening Project differs from many education projects in that it focuses on qualitative improvement rather than on quantitative expansion of the school system. Although an expansion of schools and services is also needed in Guatemala, first priority is being given to improving efficiency. Experience has shown that existing infrastructure can be made more productive and efficient with the type of activities provided by the BEST Project, thereby increasing the educational attainment of the population without the extremely high capital and recurrent costs associated with quantitative expansion.

Annex E.1 analyses the technical approaches supported in the BEST Project. Project interventions represent a mix of traditional and innovative techniques, but all have been proven to be practical, effective, and feasible in relevant, comparable settings. All of the technical approaches proposed for bilingual education, with the exception of educational radio to help teach Spanish-as-a-second language, represent improvements in existing practices, rather than innovations. The use of interactive radio for language learning was proven successful in Kenya, where it was used to teach English to children from 45 different language groups.

The technologies that will be used in the teacher services component are conventional and do not present major feasibility issues. The most technically complicated activity under this component is vehicles and motorcycles for supervisors. Experience has shown that vehicles are not operated and maintained properly by the Ministry of Education unless funds are provided for sufficient support. Prior to procurement of the vehicles, the MOE will be required to design a nationwide maintenance structure and set of operating controls for project-supplied vehicles, which will specify the obligations of the individual operator and of the MOE. The vehicles will most likely be maintained and fueled by their individual operators, who will submit their receipts to the departmental supervisor for reimbursement. The Ministry of Education, with BEST Project grant funds, will provide insurance coverage and all operating and maintenance costs through the end of the Project. A Covenant will require the MOE to continue to provide these support services after the Project terminates.

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The third component of the project, alternative methodologies, is designed to test the utility and costs of different instructional delivery systems in the context of Guatemalan public education. Since the approaches to be tested are experimental, the questions of technical feasibility will not be answered fully until the pilot projects are completed. Nevertheless, the two technical approaches that will be tested were selected because they are most promising among a series of possible alternative approaches that were examined.

First, the Escuela Nueva model, or one-room school, was selected because it incorporates a number of innovative techniques that could substantially lower the cost of expanding coverage of primary education to remote areas while simultaneously improving instructional quality. This methodology has been used successfully in one-room or one-teacher schools throughout rural Colombia since 1976, and in many other countries including Spain, France, Italy, and the United States. Second, interactive radio was selected because it has been used with success in Nicaragua, the Dominican Republic, Kenya, Thailand, Bolivia, and Costa Rica. Substantial learning improvements are expected in the designated program areas, Spanish and Math.

The major technical intervention in the education administration component is the automation of manual administrative information systems. No difficulties are anticipated in adapting the technology to the Guatemalan environment. What is of concern is the proper utilization of information once automation is completed. The intention of this investment is not just to improve administrative efficiency, but also to improve program planning and decision-making in the MOE. To this end the Project proposes that the long-term international technical assistance recommended for this component be first and foremost an education planner, with capability in MIS. Implicit in this 37-month TA assignment is on-the-job training in effective use of information for management planning and decision-making.

B. Economic Analysis Summary

The full economic analysis, contained in Annex E.2, clearly indicates that the BEST Project is a good use of scarce investment resources. The main target group of the Project is rural children, and most frequently indigenous, who in the past have not enjoyed equal access and opportunity in the educational system. The main output of the Project will be an increase in the internal efficiency of the primary school system via a reduction in dropout and repetition rates. The additional grades completed by more primary school children will result in higher labor productivity and a stronger likelihood of employment. The economic analysis estimates the present value of incremental lifetime earnings for children affected by the Project. The gains in internal efficiency will also translate into substantial savings in school years of instruction. The present value of the project benefits are compared to the

present value of the direct project costs and other direct and indirect costs to students, families, and to the MOE arising from additional years of schooling. Using a 15 percent discount rate to represent the opportunity cost of funds in Guatemala, it is calculated that the Project will yield a net present value of Q139.6 million or a benefit-cost ratio of 3.45.

C. Social Soundness Analysis Summary

The social soundness analysis, contained in Annex E.3, examines each project component in terms of the distribution, organization, activities, and motivation of the beneficiary population. The analysis views individual project interventions in terms of past experience and whether or not new approaches will generate increased participation. The crucial role of the rural teacher and his-her interaction with the community is given special attention. The social analysis points out that the problem of poor community-school relationships is being addressed from both sides. On one side, social marketing activities will attempt to make parents and community members (including persons in positions of influence) more favorably disposed toward education, the local schools, and teachers. On the other side, in-service teacher training will attempt to motivate teachers to interact more constructively with the community.

With regard to gender, the social analysis found that parents see less economic value in the education of girls than of boys in rural areas, and tend to pull girls out of school after just a few grades, while leaving boys in longer. This suggests that a theme for social marketing campaigns designed to motivate parents to keep girls in school longer should be the value of girls as human beings and the value of their contribution to the community. Their value includes the social benefits that accrue from education in the long run- the better health, nutrition, and childrearing practices that result from educating girls.

With regard to ethnic diversity, the AID/MOE bilingual education program is becoming a positive force in the emergence of Mayan ethnic pride and identity and in the conservation of the Mayan languages in Guatemala. Parents have come to endorse some primary school instruction in the indigenous languages. However, indigenous parents tend to be critical of primary schools for not teaching their children enough Spanish. One of the principal reasons parents in indigenous communities send their children to school is to gain access to the full range of rights and opportunities available to Spanish-speakers. The Spanish-as-a-second language radio series, therefore, is likely to be enthusiastically received by parents.

D. Administrative Analysis Summary

The implementation plan contained in Section V outlines the roles and responsibilities of the various implementing units to be used by the BEST Project. The Project is decentralized in that it will involve six Ministry of Education units, at least five private sector institutions and an institutional

contractor. This mix of institutional resources was deliberately chosen so as to emphasize institutional strengths, capitalize on the existence of Guatemalan resources, and foster dialogue between the MOE and other Guatemalan groups with an interest in education.

The administrative analysis contained in Annex E.4 assesses the capability of each MOE implementing unit and provides an overview of Guatemalan private sector groups available for implementation of specific portions of the BEST project. The MOE will be responsible for activities that they are carrying out already with some degree of success. Non-traditional, experimental, or technically sophisticated activities will be implemented through Guatemalan universities or private sector groups, in coordination with an institutional contractor. There have been sufficient examples of constructive collaboration between the MOE and private sector groups to conclude that the BEST implementation strategy will succeed. Examples include: research conducted by Landívar University in bilingual education issues; training of secondary school teachers by del Valle University; specific educational research done by ASIES, a private, non-profit "think tank;" and the Chamber of Industry's basic student materials program.

Because of the large number of institutional players involved in the Project, several coordinating mechanisms are built into the project design to make sure that activities run smoothly and in a complementary, mutually-reinforcing way. First the Ministry will establish a General Management Office to oversee all externally financed projects. This office works directly with the Minister. It will promote cooperation among the different MOE units participating in the BEST project, among all international donors, and between the public and private sector groups involved in project activities. Second, an institutional contract will be let for the provision of technical assistance and the sub-contracting of Guatemalan institutions in all Project Components. This approach will ensure that contract resources are used in ways that promote complementarity and avoid duplication. Third, a professional management and evaluation specialist will be hired to lead MOE and USAID representatives through a management planning seminar. This activity, and its subsequent follow-up, will clarify project objectives and responsibilities, establish evaluation indicators and benchmarks, and determine systems for data collection, monitoring and evaluation, and reporting.

VIII. CONDITIONS, COVENANTS, AND NEGOTIATING STATUS

A. Conditions Precedent to Disbursement for Specific Activities

1. Prior to any disbursement of funds for purposes other than the contracting of external technical assistance and the procurement of project-related goods and materials, except as may be stipulated in separate conditions precedent, the Ministry of Education will provide evidence that the Management Office has been created within the Ministry

of Education and that an appropriately qualified Director of the Management Office has been appointed to assure proper functioning and coordination of the project within the Ministry of Education and with other participating institutions.

2. Prior to any disbursement of funds for the procurement of vehicles, the Ministry of Education will provide evidence that it has established a plan, in form and substance acceptable to A.I.D., for the care and maintenance of A.I.D. financed vehicles under this project;

3. Prior to any disbursement of funds in support of the expansion of Bilingual Education, the Ministry of Education will provide evidence, in form and substance acceptable to A.I.D., that it has a plan for (a) MOE absorption of local costs, including project-funded personnel and operating expenses; (b) the creation, funding, and filling of 500 bilingual teacher positions, with appropriately qualified personnel and on a schedule consistent with the planned implementation of the bilingual education expansion activity; (c) the phased integration of PRONEBI functions within the organizational structure of the MOE; (d) a curriculum that emphasizes the rapid and complete acquisition of Spanish language skills; and, (e) an overall national master plan for achieving full operational coverage of appropriate primary education services for the indigenous population of Guatemala.

4. Prior to any disbursement of funds in support of SIMAC, the Ministry of Education will provide evidence, in form and substance satisfactory to A.I.D., that it has created, funded and filled 16 new professional positions in SIMAC to produce distance education materials for in-service teacher training.

B. Covenants

The Ministry of Education shall covenant the following:

1. To ensure that all project-related private sector and contractor personnel have appropriate access to facilities and the cooperation of MOE personnel related to carrying out the activities of the Project agreed to in Annex A of the Project Agreement;

2. To ensure that sufficient budgetary resources are made2available to cover the recurrent costs of the project and to sustain project activities at levels adequate to continue to improve the efficiency, expand the coverage, and improve the administration of basic education services in Guatemala beyond the PACD;

3. To give priority to (1) qualitative improvement of primary education rather than expansion of physical facilities; (2) use of low-cost methods to deliver primary school educational services; (3) adoption of standardized achievement testing in primary schools, (4)

improving in the collection and utilization of reliable and valid educational statistics, and (5) maximizing, to the extent feasible, the resources of the private sector in the delivery of primary educational services;

4. To delegate appropriate responsibilities and authority to sub-national units of the MOE to ensure that regionalization efforts are complementary to the objectives of this Project; and,

5. Use its best efforts to ensure that (1) the level of GOG budgetary resources in support of education approaches three percent of GDP by 1995, (2) the proportion of the GOG education budget allocated to primary education increases; and (3) the proportion of the MOE budget devoted to investment expenditures approaches ten percent by 1995.

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A N N E X E S

ACTION AID/1 INFO AMB DCM ROCAP ECON AGAT STORE/6

VZCZCCTC438 20-APR-89 TOR: 22:20
PP RUEHGT CN: 46841
DE RUEHC 123826/01 1102222 CHRG: AID
ZNR UUUUU ZZH DIST: AID
P 202221Z APR 89 ADD:
FM SECSTATE WASH DC
TO AMEMBASSY GUATEMALA PRIORITY 7699
BT
UNCLAS SECTION 01 OF 02 STATE 123826

ACTION
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DUE DATE
4/25/89
ACTION TAKEN
(Top initials)
NAW
4-21-89

AIDAC ATTENTION TO DICK MARTIN AND JOE LOMBARDO

E.O. 12356: N/A
TAGS:
SUBJECT: DAEC REVIEW OF THE GUATEMALA BASIC EDUCATION STRENGTHENING PID (520-0374)

REF (A) - STATE 074953; (B) T. BROWN/CAUTERUCCI TELCON 4/17/89

1. THE SUBJECT PID WAS REVIEWED AND APPROVED ON FRIDAY, MARCH 31, 1989. THE MISSION IS COMMENDED FOR A WELL-WRITTEN PID AND AN EXCELLENT PRESENTATION BY MISSION REPRESENTATIVES AT THE DAEC REVIEW. THE MISSION IS AUTHORIZED TO APPROVE THE PP AND AUTHORIZE THE PROJECT. PP GUIDANCE FOLLOWS:

2. NPD REVIEW CABLE: REFTEL (A) SUMMARIZED THE DECISIONS REACHED AT THE REVIEW OF THE NEW PROJECT DESCRIPTION FOR THE SUBJECT PROJECT AND PROVIDED GUIDANCE TO THE MISSION IN THE PREPARATION OF THE PP THIS PID GUIDANCE CABLE SUPPLEMENTS REFTEL (A).

3. WORLD BANK EDUCATION PROJECT: AN ISSUE WAS RAISED AT THE DAEC REGARDING THE COMPLEMENTARITY OF THE A.I.D. BASIC EDUCATION STRENGTHENING (BEST) PROJECT AND THE

DOLS 30 MILLION WORLD BANK LOAN FOR PRIMARY EDUCATION. THE DESIRABILITY OF CLOSE COORDINATION WITH THE BANK IN ITS PARALLEL DESIGN EFFORT AND THE POTENTIAL FOR GREATLY INCREASED POSITIVE IMPACT IN THE BASIC EDUCATION SECTOR WERE NOTED. HOWEVER, THE MISSION INDICATED THAT, IF THE GUATEMALAN CONGRESS DID NOT APPROVE THE LOAN, USAID MIGHT NEED TO ADD COMPONENTS TO AND INCREASE THE LOP OF THE BEST PROJECT TO ACHIEVE THE OBJECTIVE OF INCREASED EFFICIENCY OF BASIC EDUCATION SERVICES IN GUATEMALA. SPECIFICALLY, A TEXTBOOK COMPONENT MAY NEED TO BE ADDED TO REPLACE THE BANK'S PROPOSED MAJOR COMPONENT FOR THIS PURPOSE AND THE TEACHER TRAINING ACTIVITIES EXPANDED TO INCLUDE ORIENTATION TO THE NEW TEXTS. IF THE LOAN IS NOT APPROVED, THE MISSION SHOULD REQUEST AID/W PROGRAMMATIC CONCURRENCE ADDRESSING THE RATIONALE FOR AND CONTENT OF THE PROPOSED AMENDMENT IN PROJECT ACTIVITIES AND FUNDING. THE TIMING OF THIS SUBMISSION IS TO BE DECIDED BY THE MISSION, BASED ON THE TIMING OF THE WORLD BANK LOAN APPROVAL AND MISSION'S PROPOSED

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PROJECT AUTHORIZATION SCHEDULE. ASSUMING THE WORLD BANK LOAN IS APPROVED, THE PP, AS DISCUSSED IN REFTEL (A), SHOULD DESCRIBE MECHANISMS FOR ENSURING ACTIVE DONOR COORDINATION AND THE MOE'S RESPONSIBILITIES FOR OVERSIGHT AND MANAGEMENT OF THIS COORDINATION.

4. POLICY DIALOGUE: THERE IS CONCERN ABOUT THE LOW LEVEL OF BUDGETARY RESOURCES (AS A PERCENTAGE OF GNP) GOING TO THE SOCIAL SECTORS IN GUATEMALA. WHILE THE TEST PROJECT ALONE CANNOT LEVERAGE POLICY REFORM IN GOG FINANCING OF THE SOCIAL SECTORS, THE MISSION IS ENCOURAGED TO USE THIS AND OTHER PROJECTS, SUCH AS THE FISCAL ADMINISTRATION PROJECT, TO FURTHER THE PROCESS OF INCREASING GOG INVESTMENT IN THE SOCIAL SECTORS, INCLUDING EDUCATION. THIS WOULD ALSO INCLUDE EFFORTS TO EXPAND THE GORE DEVELOPMENT BUDGET IN SUPPORT OF BASIC EDUCATION.

5. ACCORDINGLY, THE POLICY ASSUMPTIONS CONTAINED IN THE LOGFRAME SHOULD BE EXPLICITLY INCORPORATED INTO THE PP DESIGN POLICY AGENDA, PROJECT AGREEMENT AND EVALUATION PLAN. THE POLICY FRAMEWORK SHOULD BE ESTABLISHED IN THE PROJECT AGREEMENT IN THE FORM OF AN APPROPRIATE COVENANT WHICH EXPLICITLY LINKS CONTINUED DISBURSEMENTS TO A CONTINUED POSITIVE POLICY ENVIRONMENT, AND SHOULD BE INCLUDED, ALONG WITH APPROPRIATE MEASURES AND PROXIES FOR GAUGING PROGRESS, IN THE PROJECT DESCRIPTION ANNEX TO THE AGREEMENT. PROGRESS IN IMPLEMENTING OR MAINTAINING POLICY REFORMS AS WELL AS GOG BUDGETARY

ALLOCATIONS TO MOE FOR BASIC EDUCATION SHOULD BE TRACKED THROUGH THE PROJECT'S MANAGEMENT INFORMATION SYSTEM, EVALUATED AT APPROPRIATE INTERVALS, AND REPORTED ON IN THE SEMIANNUAL REPORTS.

6. FINALLY, THE PP'S FINANCIAL ANALYSIS SHOULD EVALUATE THE PROJECT'S IMPACT ON THE MOE'S RECURRENT COSTS, PROJECT THE EXPECTED GROWTH IN THE MOE'S BUDGET OVER THE LOP, AND INDICATE THAT THE PROJECT HAS BEEN DESIGNED SO THAT THE MOE CAN SUSTAIN RECURRENT COSTS AFTER PROJECT COMPLETION.

7. PROJECT DESIGN: THERE WAS CONCERN THAT COMPLEMENTARY SUPPORT FOR THE WORLD BANK'S QUOTE EDUCACION MINIMA UNQUOTE AND OUR BILINGUAL AND RADIO ACTIVITIES MIGHT SUSTAIN A DUAL TRACK SYSTEM OF EDUCATION FOR THE RURAL AND INDIGENOUS POPULATION OF GUATEMALA. THE PP DESIGN SHOULD TRY TO ENSURE THAT ALTERNATIVE EDUCATIONAL DELIVERY SYSTEMS DEVELOPED UNDER THE PROJECT DO NOT ISOLATE STUDENTS BUT RATHER PROVIDE MULTIPLE AVENUES OF ACCESS TO ALL LEVELS OF EDUCATION FOR MAYAN AND LADINO

POPULATIONS. A RELATED CONCERN WAS THE PROJECT'S IMPACT ON THE CULTURAL DIVERSITY OF THE INDIGENOUS MAYAN POPULATION TARGETTED AS BENEFICIARIES UNDER THE BILINGUAL EDUCATION COMPONENT OF THE PROJECT. IN ITS DISCUSSION OF THE CONSOLIDATION AND EXPANSION OF BILINGUAL EDUCATION UNDER THE BEST PROJECT, THE PP WILL GIVE A BALANCED VIEW OF PRONEBI'S PRESENT STRENGTHS AND WEAKNESSES. IN ADDITION, THE PP SHOULD PROVIDE CAREFUL ANALYSIS OF THE CULTURAL CONTEXT OF THE PROPOSED PROJECT INTERVENTIONS AND PRONEBI'S IMPACT ON CULTURAL PLURALITY.

9. DESIGN STRATEGY: GIVEN THE POLICY AND RESOURCE COMMITMENT THAT THE GOG IS REQUIRED TO MAKE FOR THE PROJECT, WE ACCEPT THE MISSION'S VIEW THAT A.I.D. MUST ALSO COMMIT ITSELF TO A SUSTAINED TEN-YEAR INVOLVEMENT IN BASIC EDUCATION CONTINGENT UPON SATISFACTORY GOG PERFORMANCE. THE PP THEREFORE CAN BE WRITTEN TO INCLUDE THE FULL TEN YEARS ANTICIPATED. HOWEVER, PER REF (I), THE MISSION MUST LIMIT ITS INITAL AUTHORIZATION AND PACD TO NO MORE THAN SIX YEARS. PRIOR TO ANY AUTHORIZATION AND PACD EXTENSION BEYOND THAT PERIOD, THE PROJECT WILL BE SUBJECT TO A JOINT GOG/A.I.D. EVALUATION OF PROGRESS. THE EXACT TIMING OF THE EVALUATION WILL BE DETERMINED BY THE MISSION DURING FINAL PROJECT DESIGN. THE PROJECT EVALUATION SHOULD REVALIDATE THE GOG'S LEVEL OF COMMITMENT TO THE PROJECT, THE PROJECT'S COST ASSUMPTIONS AND ESTIMATES, RESOURCE AVAILABILITY

(A.I.D., GOG AND NON-GOVERNMENTAL), THE TIMING OF THE PROJECT, AND THE OVERALL GOG POLICY ENVIRONMENT. THE OUTCOME OF THIS ASSESSMENT AND DESIGN WILL BE DOCUMENTED IN A PP AMENDMENT OR SUPPLEMENT DEPENDING ON THE EXTENT OF THE MODIFICATIONS TO THE ORIGINAL DESIGN. THE DOCUMENT WILL BE REVIEWED BY AID/W.

9. THIS APPROACH TAKES INTO ACCOUNT GUIDANCE CONTAINED IN HB 3, CHAPTER 1 ON BOTH THE PHASING OF PROJECTS SUBSTANTIALLY EXCEEDING SIX YEARS AND THE FAA RESTRICTION THAT GRANT FUNDS MADE AVAILABLE UNDER THE FAA (SECTION 103121) MAY NOT BE OBLIGATED OR COMMITTED TO BE EXPENDED OVER A PERIOD EXCEEDING FIVE YEARS AT ANY ONE TIME. THE MISSION SHOULD THEREFORE SYNCHRONIZE ITS OBLIGATIONS CLOSELY WITH THE AFOREMENTIONED JOINT ASSESSMENT TO ENSURE MAXIMUM LEVERAGE OF PROJECT RESOURCES TO IMPLEMENT RECOMMENDATIONS FLOWING FROM THE EVALUATION AND PP AMENDMENT. IN DEVELOPING THE PROJECT'S OBLIGATION SCHEDULE, THE MISSION SHOULD NOT ASSUME HIGHER ANNUAL DA OR ESF LEVELS THAN THOSE CONTAINED IN THE AAPLS.

10. PRIVATE SECTOR: FURTHER TO REFTEL (A), THE MISSION IS STRONGLY ENCOURAGED TO EXPLORE ADDITIONAL WAYS FOR INCREASING PRIVATE SECTOR SUPPORT FOR PRIMARY EDUCATION

11. RATIONALE FOR TECHNICAL ASSISTANCE: THE COST OF THE TECHNICAL ASSISTANCE PROPOSED UNDER THE PROJECT RELATIVE TO THE OVERALL PROJECT COST (I.E., DOLS 6.5 MILLION OUT OF DOLS 32 MILLION) WAS QUESTIONED. THE PP SHOULD

PROVIDE THE RATIONALE FOR SELECTING THE MODALITIES FOR THE DELIVERY OF TECHNICAL ASSISTANCE UNDER THE PROJECT (E.G., INSTITUTIONAL CONTRACTOR, PSC, FSN, ETC.) AND ADEQUATE JUSTIFICATION FOR THE COSTS INCURRED. THE DISTRIBUTION OF TECHNICAL ASSISTANCE BETWEEN THE CENTRAL MINISTRY AND THE REGIONAL CENTERS SHOULD ALSO BE DESCRIBED.

12. CONGRESSIONAL NOTIFICATION: PLEASE NOTE THAT A CONGRESSIONAL NOTIFICATION FOR THE PROJECT WILL BE REQUIRED [illegible]

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ACTION AID/1 INFO AMB DCM ROCAP ECON AGAT STORE/6

VZCZCGT0137 10-MAR-89 TOR: 13:42
PP RUEHGT CN: 37663
DE RUEHC #4953/01 0690139 CHG: AID
ZNR UUUUU ZZH DIST: AID
P 100134Z MAR 89 ADD:
FM SECSTATE WASHDC
TO AMEMBASSY GUATEMALA PRIORITY 6888
BT
UNCLAS SECTION 01 OF 02 STATE 074953

AIDAC

E.O. 12356: N/A
TAGS:
SUBJECT: REVIEW OF THE NPD FOR THE GUATEMALA BASIC EDUCATION STRENGTHENING PROJECT (520-0374)

REF: A) GUATEMALA 02220 B) TELCON SCHOUX/WARFIELD 3/6/89

ACTION
USAID
HRD
INFO
PDSO
PRM
DUE DATE
3/14/89
ACTION TAKEN
(Date initials)

1. SUMMARY: THE NPD FOR THE SUBJECT PROJECT (REF A) WAS REVIEWED ON FRIDAY, MARCH 3, 1989. THE REVIEW WAS CHAIRED BY GERRY BOWERS, LAC/DR. MARCIA BARNBAUM, LAC/DR/EST, SERVED AS MISSION ADVOCATE. THE BUREAU SUPPORTS THE MISSION'S INITIATIVE IN ADDRESSING CRITICAL WEAKNESSES IN THE EDUCATION SECTOR AND APPRECIATED THE OPPORTUNITY TO REVIEW INFORMALLY THE ACCOMPANYING EDUCATION SECTOR STRATEGY. BASED ON THE MAGNITUDE AND DURATION OF THE PROPOSED PROJECT AND THE SIGNIFICANT ISSUES RAISED IN THE REVIEW, IT WAS DECIDED THAT THE PID SHOULD BE REVIEWED IN AID/W. THE ISSUES DISCUSSED IN THE NPD REVIEW AND RELEVANT GUIDANCE TO THE MISSION ARE SUMMARIZED BELOW. THE GUIDANCE MAY BE INCORPORATED INTO THE PID OR ADDRESSED AT THE AID/W REVIEW, DEPENDING UPON THE TIMING OF THE RECEIPT OF THIS CABLE AND SUBMISSION OF THE PID TO AID/W.

2. POLICY REFORM IN EDUCATION FINANCE: AID/W COMMENDS THE MISSION ON THE SUBSTANTIAL PROGRESS MADE TO DATE IN SUCH POLICY AREAS AS ADMINISTRATIVE DECENTRALIZATION, CURRICULUM REFORM, THE DEVELOPMENT OF LOWER-COST DISTANCE EDUCATION AND INCREASED SPENDING FOR EDUCATION. HOWEVER, GOG EDUCATIONAL EXPENDITURES (2.3 OF ITS GNP) REMAIN THE LOWEST IN LATIN AMERICA, AND PRIMARY EDUCATION RECEIVES A DISPROPORTIONATELY LOW SHARE OF THE MOE BUDGET RELATIVE TO ITS SHARE OF TOTAL STUDENTS. THE SKEWED DISTRIBUTION OF MOE RESOURCES BETWEEN RECURRENT AND CAPITAL EXPENDITURES WAS ALSO NOTED. GIVEN ITS MAGNITUDE (DOLS 30 MILLION) AND DURATION (10 YEARS), THE PROJECT SHOULD USE THE DA RESOURCES TO LEVERAGE EDUCATIONAL POLICY REFORM, WITH EMPHASIS ON EDUCATION FINANCE. AS SUCH, THE PP SHOULD INCLUDE A CLEARLY ARTICULATED DEFINITION OF THE POLICY CHANGES THE MISSION WILL ATTEMPT TO NEGOTIATE (E.G. EDUCATIONAL EXPENDITURES REACH X OF GDP BY 1995) AND A PRELIMINARY POLICY DIALOGUE AGENDA WITH POSSIBLE CONDITIONALITY OR COVENANTS. IN ADDITION, THE MISSION

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SHOULD CONSULT WITH THE WORLD BANK TO DETERMINE WHO WILL TAKE THE LEAD ON THE ISSUE OF EDUCATION FINANCE.

3. DONOR COORDINATION: AN ISSUE WAS RAISED REGARDING DONOR COORDINATION AMONG COMPLEMENTARY PROJECT ACTIVITIES AND THE ROLE OF THE MOE. IT IS EXPECTED THAT THE PP WILL DISCUSS MECHANISMS FOR ENSURING COORDINATION AMONG DONORS, ESPECIALLY THE WORLD BANK, AND THE MOE'S ROLE IN THIS COORDINATION.

4. PROJECT-IMPLEMENTATION-UNIT-IN THE MOE: THE SUSTAINABILITY OF THIS UNIT BEYOND THE PACD WAS DISCUSSED. IT WAS AGREED THAT THIS WAS A PP ISSUE AND THAT THE PP WOULD DESCRIBE THE NATURE OF THIS UNIT, DETERMINE THE NEED FOR INSTITUTIONAL SUPPORT, AND ANALYZE THE UNIT'S LONG TERM VIABILITY.

5. TECHNICAL ASSISTANCE FOR MOE ADMINISTRATIVE OFFICES: THE EDUCATION SECTOR STRATEGY STATES THAT ANY LONG-TERM COMMITMENT OR SIGNIFICANT FINANCIAL SUPPORT CANNOT BE JUSTIFIED WITHOUT IMPROVEMENT IN THE MOE'S MANAGEMENT, PLANNING, BUDGETING, AND ALLOCATION OF PERSONNEL. THE ISSUES RAISED WERE WHETHER THE TA FOR MOE ADMINISTRATION WOULD BE ACCEPTABLE TO THE NEW MOE AND WHETHER ALL OR PART OF THE PROJECT ASSISTANCE SHOULD BE CONDITIONED ON ACCEPTANCE OF THIS TA BY THE MOE. WHILE THE MISSION PROPOSES TO EXECUTE THE PROAG WITH THE CURRENT MINISTER, IT INDICATED THAT IT WILL NOT EXECUTE THE RFP UNTIL THE NEW MINISTER HAS AGREED TO IT. THE TIMING OF THIS ASSISTANCE AND POSSIBLE CONDITIONALITY WILL BE DISCUSSED AT THE PID REVIEW. HOWEVER, IT SEEMS CLEAR THAT IF, IN THE MISSION'S JUDGEMENT, TA IS ESSENTIAL TO SUCCESSFUL PROJECT IMPLEMENTATION, THE PROJECT SHOULD NOT PROCEED UNLESS TA IS ACCEPTABLE TO MOE.

6. ROLE OF TRAINING FOR MOE PERSONNEL: THE NPD CALLS FOR TRAINING FOR MOE ADMINISTRATIVE PERSONNEL. THE RELATIONSHIP BETWEEN THE TRAINING AND THE TA DISCUSSED ABOVE IS UNCLEAR. IN DISCUSSING THE ROLE OF THE MOE IMPLEMENTATION UNIT, THE PP SHOULD INCLUDE A TRAINING PLAN FOR THE PROJECT AS A WHOLE, FOR THE MOE IMPLEMENTATION UNIT, AND FOR THE REGIONAL CENTERS.

7. DECENTRALIZATION: AN ISSUE WAS RAISED REGARDING HOW THE PROJECT COULD MAINTAIN THE INTEGRITY OF THE APPROACH DEVELOPED FOR THE BILINGUAL EDUCATION PROGRAM, AND AT THE SAME TIME SUPPORT THE ONGOING ADMINISTRATIVE DECENTRALIZATION PROGRAM. AID/W SUPPORTS THE DECENTRALIZATION PROGRAM TO THE EXTENT THAT IT CONTRIBUTES TO THE RATIONALIZATION OF THE MOE'S FUNCTION

AND STRUCTURE, AND TO THE ACHIEVEMENT OF PROJECT OBJECTIVES. THE MISSION-IN-THE-PP-DESIGN, HOWEVER, SHOULD EVALUATE THE EXTENT TO WHICH OTHER PROJECT COMPONENTS ARE DEPENDENT ON THE SUCCESS OF THIS PROGRAM AND CONSIDER DELINKING THEM SO AS NOT TO JEOPARDIZE PROJECT SUCCESS.

8. PRIVATE SECTOR: THE FAXED SUPPLEMENTAL NPD INFORMATION STATES THAT THE PRIVATE SECTOR WILL PROVIDE TEACHING MATERIALS TO STUDENTS AND TEACHERS THROUGH A PRIVATE SECTOR BUSINESSMAN'S PROGRAM WHICH SUPPORTS PUBLIC EDUCATION. THE PP SHOULD EXPLORE ADDITIONAL WAYS FOR INCREASING PRIVATE SECTOR SUPPORT FOR PRIMARY EDUCATION AND THE ROLE OF PRIVATE SCHOOLS IN INCREASING ACCESS AND IMPROVING QUALITY.

9. LENGTH OF PROJECT: AS DISCUSSED IN REF TELCON, THE MISSION IN PREPARING THE PID SHOULD CONSIDER AID POLICY ON LENGTH OF PROJECT INVOLVEMENT CONTAINED IN HANDBOOK 3 CHAPTER 1, APPENDIX B WHICH RECOMMENDS A PHASED APPROACH FOR PROJECTS SUBSTANTIALLY EXCEEDING SIX YEARS. THE PID SHOULD PRESENT MISSION RATIONALE FOR A 10 YEAR PROJECT AND EXPLAIN WHY A DIFFERENT ARRANGEMENT WOULD HAVE NEGATIVE CONSEQUENCES FOR PROJECT IMPLEMENTATION. THIS POLICY GUIDANCE RELATES TO PROJECT DESIGN AND DOES NOT CONTRAVENE THE 10 YEAR LOP AUTHORITY REDELEGATED TO THE MISSION DIRECTOR IN DOA 752.

10. DELEGATION OF AUTHORITY: SUBSEQUENT TO THE REVIEW OF THE NPD, IT WAS DECIDED THAT GIVEN THE MAGNITUDE AND DURATION OF THE PROPOSED PROJECT, THE PID SHOULD BE REVIEWED IN AID/W. IN ORDER TO ACCOMMODATE THE ARRIVAL OF THE PP DESIGN TEAM AS ORIGINALLY PLANNED, THE ISSUES AND DAEC REVIEW HAVE BEEN TENTATIVELY SCHEDULED FOR THE LAST WEEK IN MARCH. PLEASE CONFIRM WHETHER THIS TIMING IS CONVENIENT AND WHEN YOU EXPECT THE PID TO ARRIVE IN AID/W. BAKER

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ANNEX "B"
LOGICAL FRAMEWORK

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
1. GOAL			
To improve the productivity, quality of life, and democratic participation of the Guatemalan people.	- Per capita income - Fertility & Contraceptive prevalence - Health & Nutrition indicators - Agricultural productivity indicators for small farmers - Popular participation in elections - Literacy rate	- GOG macroeconomic statistics - UNESCO Statistical Year Book - AID surveys & sector assessments - Census data - Supreme Electoral Tribunal statistics	- Positive economic trends sustained - Political stability permits continued consolidation of democratic processes.
2. PURPOSE	EOPS	MI	ASSUMPTIONS
Improve the efficiency, coverage, and administration of basic education services.	Technical Indicators - 25% improvement in academic achievement - 32% reduction in repetition rates from 318 to 215 students per 1,000. - 22% increase in 6th grade completion - 20% decrease in years to produce 6th grade graduate, from 11.65 years to 9.32 years. - 21% reduced repetition in bilingual schools from 19% to 15% - 30% increase in promotion for girls in bilingual schools, from 42% to 60% - 17% reduction in national dropout rate, from 82 to 68 students per 1,000. Policy Indicators - level of GOG budgetary resources in support of education reaches 3% of GDP by 1995. - Proportion of GOG education budget allocated to primary education increases - proportion of MOE budget devoted to investment expenditures increases to 10% by 1995	Pr MI PI pr	- Continuing favorable GOG policy orientation toward bilingual education and primary education improvement. - World Bank "Second Basic Education Project" successfully implemented. - Favorable environment for public sector - private sector collaboration. - Security conditions permit active MOE staff presence in countryside.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
Improved Administrative and Management Information practices in Ministry of Education	1) Management Information System (MIS) a. Annual Statistics Summary regularly produced with no more than one-year lay. b. Feedback mechanism Central/Regional offices tested and institutionalized. c. Central computers and computers in each regional office with trained operators and analysts. 2) Basic Research a. 8 tests of academic achievement (3rd grade Math & Language, 6th grade Math) and baseline/time services data, and language-paralell firm. b. Base line and time series data for key educational indicators with established tracking system. (enrollment, promotion. repetition. drop-out, 3rd & 6th grade completion. c. 3 cohort studies d. 5 case studies e. Correlational data/sex/ethnicity/rural/urban, etc. academic achievement/promotion achievement// type of teacher (sex, experience. ethnicinity. etc.)	3. Personnel Software a. Faster personnel processing (assignments, transfer, leave, etc.) b. Approved central records (accuracy & completeness) c. Increased access by level (regional, national, dept.. etc.)	- Adequate computer support available in Guatemala.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
3. PROJECT OUTPUTS			
Improved & expanded bilingual education program.	- New curricula, textbooks (20 titles) for 4 new language areas. - 500 additional PRONEBI schools in 4 new language areas functioning. - 2000 new teachers trained and teaching, - 500 new promoters trained and teaching - 42 new supervisors trained and supervising - 80,500 new students enrolled, - 462,000 textbooks printed - Furniture for 2000 classrooms delivered - Curriculum, textbooks teacher guides updated in 4 existing language areas. - 400 additional PRONEBI schools in 4 existing language areas. - 800 new teachers trained and teaching - 17 new supervisors trained and supervising - 28,000 new students enrolled - 280,000 new textbooks printed and distributed - Furniture for 800 new classrooms delivered	- Project Semi-Annual Review - Project evaluations - Project M.B.O. monitoring procedure - MOE reports and vouchers - A.I.D. field visits - PRONEBI records - Audits - Project Office monitoring	- Continuing supply of certified bilingual teachers. - GOG willingness to make use of outside technical assistance.
Improved Support Services for Teachers.	- 20,000 teachers using distance education in-service training materials - 7,000 schools receiving intensified supervision - 300 District supervisors retrained and equipped with office equipment and motorcycles - 810,000 packages of instructional materials provided to student - 3 national social marketing campaigns to promote enrollment and retention.		- Strong response on part of private sector to matching grant opportunity.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
2 Validated models, one for improving instructions and one for expanding coverage.	1. Interactive Radio Pilot Project completed a. 465 radio math programs produced and validated. b. 550 radio Spanish-as-a-second language programs produced and validated. c. 50 classrooms using radio lessons. d. Evaluation findings concerning cost/effectiveness of interactive radio. e. Guatemalan personnel trained in interactive radio.		
	2. One-room school model refined and evaluated a. 18 self-learning guides for grades 1-6 developed and tested. b. New teacher guide written c. 24 sets of self-learning resource kits developed and tested. d. 100 schools provided with new furniture. e. 100 teachers trained in-service in new class management and teaching methods. f. Evaluation findings concerning cost/effectiveness of new one-room school approach. g. Validated model for replication in new and existing one-room schools.		- Positive disposition by teachers to participate in experimental upgrading of one room school teaching methods.

4. PROJECT INPUTS

Bilingual Education Component	Total (in U.S. $000's) A.I.D.	GOG	OTHER
1. Technical Assistance			
a) 6.5 years of International long-term TA and 20 years of Guatemalan long-term TA	1459		
b) 13.5 months of international short-term TA and 4 months of Guatemalan short-term TA	205		
2. Local Salaries	585	21600	
3. Commodities			
a) Vehicles (6) and motorcycles (10)	122		
b) Furniture	3	1008	
c) Equipment	26		
4. Printing Textbooks	2877		
5. Operational Costs			
a) Maintenance, gas	194		
b) Supplies	392	84	
c) Office Rents	82		
d) Insurance	53		
6. Training	13		
7. Local Travel	547		
Component I Total	6588	22692	

Teacher Services Component	A.I.D	GOG	OTHER
1. Technical Assistance			
a) 5.0 years of International long-term assistance	900		
b) 12.0 months of International short-term assistance	180		
2. Local Salaries	0	6919	
3. Commodities			
a) Vehicles (27)	459		
b) Motorcycles (300)	600		
c) Equipment	410		

	Total in A.I.D.	(U.S. $000's) GOG
4. Student Baskets ("Canastas Escolares")	2100	
5. Advertising Sub-Contract	420	
6. Operational Costs		
a) Maintenance, gas, insurance	855	
b) Printing composition	550	150
c) Material supplies	315	72
7. Training	197	
8. Local Travel	261	
Component II Total	7247	7141

Alternative Methodologies Component

	A.I.D.	GOG
1. Technical Assistance		
a) 9.5 years of International long-term assistance	1696	
b) 30.5 months of international short-term assistance	45E	
2. Local Salaries	1214	150(
3. Commodities		
a) Vehicles (5) and motorcycles (6)	97	
b) Furniture	210	
c) Equipment	349	
4. Operational Costs		
a) Maintenance, gas	48	
b) Office expenses	254	
c) Radio pilot costs	779	
d) supplies	156	
5. Training	126	
6. Local Travel	74	
Component III Total	5461	1500

Education Administratio

	A.I.D.	GOG
1. Technical Assistance		
a) 37 months of international long-term assistance and 7 years, 1 month of Guatemalan long-term assistance	758	

	Total (in U.S. $000's)		
	A.I.D.	GOG	OTHER
b) 39 months of International short-term and 10 months of Guatemalan short-term assistance	579		
2. Local Salaries	56	493	
3. Commodities			
a) Equipment	534		
b) Personnel software package	260		
4. Research contracts	1030		
5. Operational costs			
a) supplies	438		
6. Training	176		
7. Local Travel	152		
Component IV tOTAL	3983	493	

Project Management and Administration

	A.I.D.	GOG	OTHER
1. Personnel			
a) Chief-of-Party (1/2 time	450		
b) MOE Coordinator	180		
c) PSC- U.S.A.I.D.	660		
d) Home Office Coordinator	125		
2. Contractor In-Country Office			
a) Office Staff Salaries	65		
b) Operating Expenses	75		
c) Equipment	5		
d) In-Country Travel	10		
Project Management Total	1570	0	
Inflation	2480		
Contingencies	1951		
Audit and Evaluation Activities	750		
PROJECT GRAND TOTAL	30000	31826	

SC(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; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES:	IS COUNTRY CHECKLIST UP TO DATE?	Yes.
	HAS STANDARD ITEM CHECKLIST BEEN REVISED FOR THIS PROJECT?	Yes.

A. GENERAL CRITERIA FOR PROJECT

1.	FY 1988 Appropriations Act Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified?	The project was initially justified to Congress in the 1989 Congressional Presentation. A Congressional Notification has been prepared to notify Congress of the specific amounts to be obligated in FY 1989 of the authorized Life of Project funding proposed in the Project Paper.
2.	FAA Sec. 611 (a)(1). Prior to an obligation in excess of $500,000, will there be (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 legislative action is required within recipient	Legislative action is not required within recipient country.

	country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance?	
4.	FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq)? (See A.I.D. Handbook 3 for guidelines.)	Not applicable.
5.	FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U. S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively?	Not applicable.
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. Project is Guatemala specific and not susceptible to execution as a regional program. Methodologies and information about the project activities in Guatemala will be shared with other countries in the Central American Region.

7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, 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. Yes, project will require substantial amounts of imported technical assistance from the U.S. b. Yes, project will use private firms for technical assistance. c. Not applicable. d. Not applicable. e. Not applicable. f. Not applicable.
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).	Project will use U.S. technical assistance and commodities.
9. FAA Secs. 612(b), 636(h). 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.	Guatemala will provide a minimum 25% contribution to the project to cover local costs.

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. FY 1989 Appropriations 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?	Not applicable
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U. S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods	Not applicable.

(such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?

13. FAA Sec. 119(g)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?

14. FAA 121(d). If a Sahel 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 (either dollars or local currency generated therefrom)? — Not applicable.

15. FY 1989 Appropriations Act. If assistance is to be made to a United States — Not applicable.

PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government?	
16. <u>FY 1989 Appropriations Act Sec. 538.</u> If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.?	Not applicable.
17. <u>FY 1989 Appropriations Act Sec. 514.</u> If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained?	Not applicable.
18. <u>State Authorization Sec. 139</u> (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision).	A.I.D. will comply with the Case-Zablocki Act, as interpreted in Handbook 3, Appendix 6G.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FY 1989 Appropriations Act Sec. 548 (as interpreted by conference report for original enactment). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support research that is intended primarily to benefit U.S. producers?	Not applicable.

b. FAA Secs. 102(b), 111, 113, 281(a). Describe 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, dispersing investment 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 appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and 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.

(a) The project will encourage the Government of Guatemala to expand basic educational opportunities, primarily to rural areas, and in a way that takes account of local needs. The project also seeks to increase the participation of parents in the education of their children. Improved educational levels are necessary for long-term social and economic development in Guatemala.

(b) The project will support the GOG's decentralization policies designed to meet local educational development needs.

(c) By improving the educational level of the population, the project will contribute to the long-run ability of Guatemala to undertake self-help measures.

(d) The project will pay special attention to improving the enrollment and retention rates of girls, thereby contributing directly to long-term improvements in women's status.

(e) Not applicable.

c.	FAA Secs. 103, 103A, 104, 105, 106, 120-21; FY 1989 Appropriations Act (Development Fund for Africa). Does the project fit the criteria for the source of funds (functional account) being used?	Yes.
d.	FAA Sec. 107. Is emphasis placed 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)?	Not applicable.
e.	FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent 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.
f.	FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to	Yes.

stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

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.

The project is designed to improve the efficiency, coverage, and access of basic educational services in Guatemala. The project directly responds to the seriously low levels of educational attainment. Increased education is associated with improved adoption of technology and production techniques, reduced family size, increased income, and improved status of women, etc. The project will also build linkages between the public and private sectors to further Guatemala's educational objectives. Significant use will be made of local universities and NGOs in developing low-cost alternative educational materials and methods, the distribution of school materials and supplies, and in developing and administering a national educational research program that will include policy, tests and measurements, and program evaluation. Over the long-term, the project will contribute to a better informed citizenry -- the foundation for enduring self-governmental systems.

h. FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?

No.

Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilization.?	No.
Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?	No.
i. <u>FY 1989 Appropriation Act.</u> Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization?	No.
If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?	

j.	FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	Yes.
k.	FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantage enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)?	None
l.	FAA Sec. 118 (c). Does the assistance comply with the environmental procedures set forth in A.I.D. regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the	The IEE resulted in a negative determination.

importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help and destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support and training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives

which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas: (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) / utilize the resources and abilities of all relevant U.S. government agencies?

m. FAA Sec. 118 (c) (13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the pro-

Not applicable.

gram or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b)/take full account of the environmental impacts of the proposed activities on biological diversity?

n. <u>FAA Sec. 118 (c) (14).</u> Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in a environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? No.

o. <u>FAA Sec. 118 (c) (15).</u> Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or mainte- No.

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	nance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development?	
p.	<u>FY 1989 Appropriations Act.</u> If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; (c) being	Not applicable

provided, when consistent with the objectives such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the

natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics specially to those outside the formal education system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

q. FY 1989 Appropriations Act Sec. 515. If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general

Not applicable.

purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committee of both Houses of Congress been properly notified?

3866C/3859C

PALACIO NACIONAL

MINISTERIO DE EDUCACION

GUATEMALA, C. A.

Of. No. 118-89
Ref. aymdeo

Al contestar, sírvase mencionar el número y referencia de esta nota.

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15 de marzo de 1989

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(Date/initials)
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Sr. Anthony Cauterucci
Director -AID
Su Despacho
Ciudad

Señor Director:

Me es grato dirigirme a usted, para hacer referencia a nuestras conversaciones sostenidas oportunamente, relacionadas con el Proyecto de Mejoramiento de la Educación Básica, el cual podría ser financiado con fondos de donación del Gobierno de los Estados Unidos de Norte América.

Sobre el particular, deseo reiterarle el interés del gobierno de Guatemala y, especialmente del Ministerio de Educación, para que el Proyecto en referencia sea puesto en marcha a partir del mes de julio del corriente año, ya que es impostergable para el sistema educativo nacional tener un apoyo para realizar acciones de ampliación de cobertura a través de metodologías no convencionales, mejorar la formación técnico-pedagógica de los maestros y fortalecer el proceso administrativo para el sistema de supervisión; así como continuar apoyando el proceso de desconcentración y descentralización mediante la puesta en marcha de un sistema de información para la planificación, formulación, ejecución y seguimiento de Proyectos Educativos. También es importante señalar que en este Proyecto se considera importante una ampliación del Programa Nacional de Educación Bilingüe, a fin de consolidad el actual proyecto que está siendo desarrollado con la colaboración de AID y que para este Gobierno es

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prioritario, en virtud de su impacto en la población cuya lengua materna es un idioma mayense.

Al agradecer anticipadamente al señor Director el apoyo que se sirva brindar al Gobierno de Guatemala, para mejorar y modernizar el sistema de enseñanza-aprendizaje, aprovecho la oportunidad para suscribirme con las muestras de mi consideración.

MINISTERIO DE EDUCACION GUATEMALA

JOSE RICARDO GOMEZ GALVEZ
MINISTRO DE EDUCACION

c.c. División de Recursos Humanos. -AID-

Gerencia Ministerial

PALACIO NACIONAL

MINISTERIO DE EDUCACION

Guatemala, C. A.

Of. No. 210/89.smbf.
Ref. crd.Lic.RF.

Al contestar, sírvase mencionar el número y referencia de esta nota.

Guatemala,
30 de mayo de 1989.

Doctor
Rodolfo Paíz Andrade
Ministro de Finanzas Públicas
Presente.

Señor Ministro:

Tengo el agrado de dirigirme a usted, para hacer referencia a nuestra conversación sostenida el día de hoy, relacionada con el presupuesto de funcionamiento e inversiones de este Ministerio para el año 1990.

Sobre el particular, deseo manifestarle que el documento en referencia será presentado a la Dirección Técnica del Presupuesto en el transcurso de la primera semana del mes de junio, ya que por instrucciones del señor Presidente Constitucional de la República, Lic. Marco Vinicio Cerezo Arévalo, se está incluyendo los programas y proyectos prioritarios para el sistema Educativo Nacional, y cuyo financiamiento sera realizado con recursos de Gobierno, lo que constituye un incremento al presupuesto de este Ministerio, en relación al del año próximo pasado.

Al agradecer su atención, aprovecho la oportunidad para suscribirme con la muestras de consideración.

MINISTERIO DE EDUCACION GUATEMALA, C. A.

JOSE RICARDO GOMEZ GALVEZ
MINISTRO DE EDUCACION

c.c.
Señor
Presidente Constitucional de la
República.
U S I P E.

ANNEX E.1

TECHNICAL ANALYSIS

1. Introduction

The Basic Education Strengthening Project is designed to improve the efficiency, coverage, and administration of primary education in Guatemala. The approach differs from some education projects in that it focuses on qualitative improvement rather than on quantitative expansion of the school system. Quantitative expansion (school construction, new teachers, etc.) is also needed in Guatemala, but A.I.D. Mission and Agency Policy in the education sector has determined that improving efficiency should take first priority. Experience has shown that existing infrastructure and human resources can be made more productive and efficient with activities such as those provided by the BEST Project, increasing the educational attainment of the population without the extremely high capital and recurrent costs associated with quantitative expansion.

The technologies and approaches that will be supported in the BEST project represent a mix of traditional and innovative techniques, but all have been proven to be practical, effective, and feasible in relevant, comparable settings. This analysis annex will discuss the proposed technical approaches associated with each of the four components.

2. Component 1: Bilingual Education

Over the past eight years, A.I.D. has funded two projects that have led to the development of a technically sound approach to providing bilingual education in Guatemala. The process of developing, testing, and refining the bilingual education service for the population of Mayan-speaking primary school age children of Guatemala involved anthropologists, curriculum designers, linguists, materials specialists, administrators, and evaluators. While outside advisors have played a supporting role from the onset, most of the work has been done by bilingual Guatemalan educators of indigenous origin. This approach ensured that the program would be culturally relevant and pedagogically appropriate for the target population. It also resulted in an indigenous image and mystique that has made the program popular and has led to a growing acceptance on the part of the indigenous population.

The program, called the "Programa Nacional de Educación Bilingue" (PRONEBI), includes the following:

(1) A core curriculum, based on the official national curriculum, adapted to the special cultural, economic, and social circumstances of the indigenous population. The curriculum covers five grades (preschool through grade 4);

(2) A "transitional" approach to gradually introducing instruction in Spanish, which results in full fluency in both Spanish and one indigenous language by grade 5.

(3) Textbooks and teacher guides especially designed for the bilingual classrooms;

(4) A growing corps of certified bilingual teachers who are native speakers of Mayan languages; and

(5) Special support services, including an administrative structure and a network of bilingual supervisors, for bilingual education schools.

This technical approach is proving effective in a growing number of schools. From an initial group of 40 pilot schools, coverage has expanded to 400 schools. Initial evaluations have shown that enrollment (especially of girls) increases, dropout and repetition rates decline, and retention increases with the PRONEBI approach, compared with traditional instruction in Spanish.

However, field experience and project evaluations have also indicated some areas in the PRONEBI approach that need improvement. Overall, the PRONEBI approach may be unnecessarily complex and costly. Evaluations have repeatedly indicated that the PRONEBI instructional materials are complicated and difficult for teachers to use, resulting in heavy requirements for in-service teacher training. The PRONEBI system is labor-intensive for teachers, making it poorly suited for multi-grade classrooms. The administrative and supervision services of PRONEBI overlap those of the national school system, resulting in duplication and occasional turf battles.

The technical design of the BEST project essentially accepts the transitional bilingual education methodology developed by the A.I.D.-financed PRONEBI projects as an effective and feasible approach to providing basic education services to monolingual indigenous children in Guatemala. Evaluations have shown that it is clearly superior to the only known available alternative, the intensive one-year "Castellanización" approach. However, because of technical problems that have been detected in the PRONEBI system, an initial "consolidation" phase of two years is included in the BEST Project. This phase will accomplish three general categories of technical adaptation and strengthening:

a. <u>Technical Upgrading</u>

The curriculum, materials, and support services will be refined and streamlined based on field experience and evaluation findings. The objective will be to make the PRONEBI approach easier for teachers to use, usable in multi-grade classrooms, and more economical.

b. Master Planning

An overall national plan for extending primary education services to the entire indigenous population is required, prior to entering into a major expansion phase.

If PRONEBI is to expand its coverage to 1,300 schools, it is crucial that expansion be done in schools and in areas where there is greatest need for the program. A mapping study is therefore included in Component 1 to clearly identify the extent and specific areas of need for the PRONEBI service. At the same time the mapping study will serve as a vehicle for the training of PRONEBI staff in a set of skills that will allow them to apply the results of the mapping study, develop plans for the extension of programs, and assume the responsibilities for future study and development. This will not be the first attempt to map language areas in Guatemala. Previous mapping efforts of various levels of sophistication have served as bases for providing bilingual education dating back to the policy of "Castellanización" in 1985.

c. Technical Integration

Under the BEST project, a gradual process of technical and administrative integration of bilingual education into the mainstream of MOE programming will begin. Technically, PRONEBI's special curriculum will be reconciled with the new national curriculum. In-service teacher training and supervision will be made compatible and eventually be combined with SIMAC training and DGEE supervision programs. Bilingual education services will be gradually redesigned to be more flexible, so that linguistically and culturally appropriate materials and services will become available to both bilingual and monolingual classrooms.

An important element of the expansion phase is the assignment of qualified teachers. The MOE must outline and adopt an efficient and equitable set of procedures that will allow for the staffing of PRONEBI schools. With the surplus of elementary teachers in the country, availability of qualified teachers, even bilingual teachers, is not a consideration. The normal schools of Santa Lucía Utatlán, Normal de Tomocapan, Instituto Indigenista el Socorro, Instituto Indigenista Santiago, and Instituto Normal Comitancillo San Marcos graduate between 150 and 200 bilingual teachers per year.

Educational Radio is a technical innovation that is directly relevant to the methodological strengthening of bilingual education. This approach, discussed more fully under Component 3 of this technical analysis, is designed to improve the learning of Spanish by indigenous children in school. It is expected that Spanish by Radio may make it possible in the future to reduce the number of years required for students to achieve competency in Spanish from five to four, reducing costs substantially. It will also partially relieve teachers of the burden of teaching Spanish language skills, making it

easier for them to work in multi-grade bilingual classrooms in the future. Also, Spanish by Radio can be used as a remedial tool by non-bilingual teachers who have indigenous children in their classes.

Once the technical refinements and master planning are completed, the project will continue to support the expansion of bilingual education services with the objective of achieving almost universal coverage of the Mayan-speaking population by 1996.

3. Component 2: Teacher Services

The teacher services component provides a series of support services to classroom teachers to enhance the quality of instruction. It should be pointed out that the single most powerful and important support service that can be provided to teachers to improve the quality of instruction, according to many research studies, is student texts. The World Bank's "Second Basic Education Project," a $30 million project planned for a 1989 start, will provide loan funding for massive printing of new student texts. The A.I.D. Basic Education Strengthening Project will provide other complimentary teacher services. Taken together, the services that will be provided to teachers by the two projects should be a powerful package for improving instructional quality. An extensive body of educational research demonstrates that improved instructional quality results in improved learning as measured by academic achievement tests. Improved academic achievement, in turn, results in improved overall efficiency by reducing dropout and repetition rates and increasing retention and graduation rates.

The technologies that will be used in the teacher services component are conventional and do not present major feasibility issues. Distance in-service teacher training has been used successfully in a number of countries, including Chile, Colombia, Brazil, and Honduras. In Chile, a professional magazine for teachers became so successful that the magazine eventually became financially self-supporting through sales to teachers. In Honduras, the A.I.D.-funded Primary Education Efficiency Project has provided a periodical and self-study materials for teachers. These materials have been extremely effective and are enthusiastically received by teachers. An evaluation of distance in-service teacher training provided by an A.I.D. project in Nepal showed that self-study techniques work best when used in combination with face-to-face training experiences. The BEST Project will support distance education self-study modules and a teachers' periodical that will complement face-to-face in-service workshops that are provided to teachers as part of the ongoing program of SIMAC. The two activities, continuing distance training and face-to-face training, will be closely coordinated so that they will reinforce each other's impact. Overall, experience has shown that in-service teacher training is an effective, manageable, and low-cost way to improve instructional quality and educational efficiency. For example, an evaluation of the MOE teacher "Actualización" program in Honduras showed that in-service training not only improved teachers' knowledge of essential subject matter, it also successfully promoted the adoption of modern teaching techniques, improved morale, and stimulated a sense of professionalism and commitment to teaching.

The provision of instructional materials is technically straightforward. Materials are presently produced and distributed successfully to public schools throughout Guatemala by various public and private sector organizations. The only technical problem is distribution to remote schools. Since the BEST Project will most likely distribute materials through a program run by a business organization, it is anticipated that commercial business distribution networks (beer, soft drinks, etc.) may be made available for distribution of school materials to remote areas.

The most technically complicated activity under Component 2 is vehicles for supervisors. The Project will finance over 300 motorcycles for district supervisors and 22 cars for departmental supervisors. Procurement specifications will require that the vehicles have service and parts widely available throughout Guatemala, and will specify that a warranty be provided by the supplier. These arrangements will take care of initial maintenance and will assure that parts and service are available in the country. However, experience has shown that vehicles are not operated or maintained properly by the Ministry of Education unless provision is made and funds provided for effective support. The fact that PRONEBI effectively operates a fleet of eleven cars and fifty motorcycles shows that operation and maintenance of vehicles in the field is feasible if proper administrative and financial mechanisms are in place. Prior to procurement of the vehicles, the MOE will be required to design a nationwide maintenance structure and establish operating controls for project-supplied vehicles which will specify the obligations of the individual operator and of the MOE. The vehicles will most likely be maintained and fueled by their individual operators, who will submit their receipts to the departmental supervisor for reimbursement. The Ministry of Education, with BEST Project grant funds, will provide insurance coverage and all operating and maintenance costs to the end of the project. A Covenant will require the MOE to continue to provide these support services after the A.I.D. support terminates.

The community participation activity of Component 2 will involve the use of "social marketing," a technically-sophisticated approach to mass communication. In the BEST Project, the community participation activity will be implemented by a local private sector marketing/advertising agency that will be selected based on its marketing expertise and experience. Additional technical assistance will be provided to ensure that the special characteristics of the education-related message and the largely low-income rural audience, which are likely to be unfamiliar to a commercial ad agency, are adequately addressed. The social marketing campaigns will be reinforced by special modules and articles to teachers regarding community participation activities.

4. Component 3: Alternative Methodologies

Component 3 is an R & D component designed to test the utility and costs of new alternative instructional delivery systems in the context of Guatemalan public education. Since the approaches that will be tested are experiments,

the questions of technical feasibility will not be fully answered until the pilot projects are completed. Nevertheless, the two technical approaches that will be tested were selected because they are the most promising among a series of possible alternative approaches that were examined.

First, the "Escuela Nueva," or one-room school (no correction) model was selected because it incorporates a number of innovative techniques that could substantially lower the cost of expanding coverage of primary education to remote areas while simultaneously improving instructional quality. Among the technical innovations that will be incorporated into the field test are:

(1) Peer teaching: older students teach younger students.

(2) Learning by investigation: students learn through field research and direct experience.

(3) Competency-based pacing: individual students progress through the material at their own individual rate, rather than at the rate of the class.

(4) Flexible calendar: students enter and leave school on their own schedule.

(5) Community involvement: the community and its local resources provide the context for learning.

(6) Adapted curriculum: curriculum content is adapted by the teacher to the local economy and environment.

(7) No textbooks: posters, cards, and student notebooks are used instead of texts.

(8) Student Government: students function as officials to learn about taking responsibility and democratic decision-making.

These techniques are progressive and exciting, and most (except number 7) have been tested over a seventeen year period in Colombia, where the "Escuela Nueva" approach evolved with A.I.D. and World Bank support. However, these eight techniques also represent radical departures from traditional formal primary school instruction as it is practiced in Guatemala. One alternative to the proposed R & D approach that was considered was full implementation of the approach in all 3,000 one-room schools in Guatemala. This alternative was rejected because of uncertainties about the feasibility of successfully implementing such abrupt and dramatic changes from established practices, doubts about the ability of teachers to effectively manage such a flexible and unstructured program, and questions about long-term costs. Under the circumstances, a significant field test seemed advisable, with the notion that follow-on funding might be available to expand the model once its advantages and feasibility are demonstrated conclusively.

"Interactive radio," the other experimental technology in Component 3, is a promising innovation that has been used successfully in Nicaragua, Dominican Republic, Kenya, Thailand, Bolivia, and Costa Rica. Interactive Radio uses sophisticated programmed learning techniques to structure material to be learned. The radio programs present concepts in rapid-fire short segments, interspersing practice, songs, stories, and physical exercise to enrich the classroom experience and motivate the children. The programming is called "interactive" because the radio asks questions, the children answer orally, and the correct answer is immediately reinforced by the radio. Interactive radio math instruction has been used successfully in primary schools in a number of countries. Most recently, for example, an A.I.D. project in Honduras financed the program "La Familia de los Números," which resulted in substantial gains in math scores among first graders in one year. In language instruction, an A.I.D. project in Kenya demonstrated that interactive radio was effective in teaching English, the official language of instruction, to children from 45 different language groups.

For radio transmission, the Project will make use of Radio Zamaneb, a new radio station financed by the terminating A.I.D. Non-Formal Education Project in the Department of Baja Verapaz.

5. Component 4: Education Administration

The major activity of the education administration component is a computerized, regionalized, management information system (MIS) for the Unidad Sectorial de Investigación y Planificación Educativa (USIPE). The technical design of the MIS has deliberately been kept simple. The central unit in Guatemala City will be equipped with a local area network of interconnected microcomputers. At the Ministry's request, substantial technical assistance will be provided for the design and installation of the MIS, for the selection and adaptation of software, and for the training of users. Equipment will be purchased from a supplier offering strong parts and service support in Guatemala. A staged design has been developed in which the core analytical capability in USIPE will first be developed and set into operation. Later smaller microcomputer-based systems will gradually be introduced in the eight regional MOE administrative offices. The Project will also provide microfilm equipment for the filing of student records. A decision was made to support microfilm equipment only in Guatemala City where maintenance services, chemicals, and other supplies are available. The idea of microfilm equipment for the eight regional offices was discarded as not being technically feasible because of lack of maintenance and support in the field.

ANNEX E.2

ECONOMIC ANALYSIS

1. Introduction

The Guatemalan public education system is highly inefficient, especially at the primary education level. This analysis first describes the main sources of inefficiencies in the education system and makes an attempt to quantify their monetary values. The interventions contemplated in the project in the areas of bilingual education, teacher training, new educational methodologies, and education administration will directly address a number of the system's interventions in past projects and their likely impact on Guatemala's primary education system. Improving the quality and quantity of primary education in Guatemala will yield both external and internal economic benefits. Estimates of the value of external benefits in the form of higher individual earnings are made possible by setting target reductions in repetition and dropout rates. Likewise, estimates of internal economic benefits are derived from setting target reductions in repetition rates which are expected to follow from the interventions contemplated in the Project. Taking into account the direct project costs and other indirect costs, the benefit-cost analysis performed here yields a high internal rate of return for the Basic Education Strengthening (BEST) Project. This high rate of return for the Project was expected and falls within the range of experience with similar projects in other developing countries.

The project's worth is likely to be understated by the rate of return estimated here because of our inability to take into account intangible benefits accruing in such areas as health, nutrition, fertility, and technology absorption in agriculture and industry. Besides the gains in efficiency reflected in measurable and non-measurable benefits, the project will also address the important issue of equity. Most of the project interventions will be directed to students in rural areas coming from low income and indigenous families who in the past have not enjoyed equal access and opportunity within the Guatemalan educational system.

2. The High Inefficiency of Guatemala's Primary Education System

Guatemala's education system is characterized by a highly inefficient flow of students with extremely high repetition and dropout rates, especially in the early grades. These deficiencies generate a dismal level of educational system output as measured by standard cohort statistics. For 1987, the last year for which statistics are available, the repetition rates in first and third grade, for example, were 45.8 percent and 32.3 percent, respectively. (Tables containing the raw data used to compute descriptive statistics and projections in this analysis can be found in Bulk Annex 7, available at USAID/GUATEMALA). For the same year, the dropout rates were 10.6 percent for first grade and 10.9 percent for third grade

As a consequence of the poor transition rates, it is estimated, using the 1987 trends, that only about half of all the primary students enrolled will eventually graduate from sixth grade and only 7 percent will graduate in the minimum of six years. It will take 12.15 years of schooling to produce a sixth grade graduate.

The poor performance of the primary education system leads to a waste of very scarce government resources and to unrealized human capital development. In 1987 alone, 367,714 primary school students repeated a grade. This is about one third of the total primary school enrollment in that year. At an average current cost (excluding facilities) of Q160 per primary student in 1987, total repetition in primary schools represents a waste of Q58.8 million. This figure amounts to close to 20 percent of the MOE budget for 1987. An additional Q3 million to Q5 million for the use of school facilities should be added to the total figure. Because high repetition rates have been a structural phenomenon, the waste of resources over the years has been very large. At 1987 prices, the MOE could have had an additional whole annual budget every five years through the elimination of repetition in primary schools.

The wastage implied by high dropout rates is of a different nature from that of high repetition rates. High dropout rates cause a waste of resources because of the private and social economic value of extra years of schooling. Additional years of schooling tend to increase the productivity and lifetime earnings of individuals. Additional years of schooling also have many other beneficial effects on society, ranging from better health to more responsible citizenship. From the regression estimates based on 1986-87 Household Survey data, discussed in the benefit-cost section below, an extra year of primary school would result on average in Q7,150 in lifetime earnings at 1987 prices (or Q1,280 in present value terms at a discount rate of 15 percent). In 1987 alone, around 93,000 students or eight percent of those enrolled dropped out of primary school. About 42 percent of the dropouts took place in the first grade, precluding an increase in lifetime earnings per individual of six times those just discussed An additional difference between dropouts and repetitions is that a reduction in dropouts imposes additional budgetary demands on the system. If in 1987 no student had dropped out of primary school, an additional Q14.8 million in the MOE budget would have been required to keep the expenditure per student standards existing at the time. This would have represented approximately a 4.5 percent increase in the 1987 MOE budget.

A much less frequently mentioned source of inefficiency in the Guatemalan primary school system is absenteeism and the otherwise small time input in the classroom. We know less about absenteeism than about repetition and dropout rates because no average daily attendance statistics are kept in the system. However, there is evidence that attendance is sporadic in the entire system, especially in rural areas where many families are involved in a pattern of seasonal migrations. Although they are not independent, the wastage implied

by absenteeism can be computed on the same basis as repetition (cost per day per student). The time input in the educational process is also reduced by a short official class period (4 hours), by a reduced official calendar year (120 days), and by the frequency with which teachers arrive late, leave early, or do not show up at all.

The waste of resources due to the low efficiency of Guatemala's primary education system is made more poignant by the presently unmet needs for schooling. As of 1987, approximately 672,000 children of primary school age were not attending school, while 1,097,000 were in school. Closing this coverage gap in 1987 would have required an approximate doubling of the MOE's entire budget for that year. In recurrent expenditures alone, using an average recurrent cost per student of Q160, an additional Q107.6 million would have been needed.

The lion's share of closing the coverage gap in primary schooling lies in the capital investment needed for school facilities. MOE recent studies point at a deficit of close to 5,000 classrooms. This is likely to be an underestimate. Dividing the 672,000 children out of school in 1987 by 50 students per classroom yields a deficit of 13,440 classrooms. Recent USIPE and PRONEBI/USAID figures show a necessary investment in building and furniture of Q369 per student. Thus, closing the schooling gap existing in 1987 would have required an investment of Q244.7 million. The scarcity and high cost of school facilities put into question present MOE policies regarding the use of this crucial input in the production of educational services. What is needed is a more intense and rationalized use of school facilities. A single shift policy is wasteful in a system with such low coverage rates as Guatemala's. A number of developing countries with higher primary education coverage rates than Guatemala's have adopted successful double shift policies. Guatemala's relatively short school day should make the adoption of double shift policies relatively easier. Future school mappings for new construction and renovation of schools could gradually introduce a more intense use of the system's infrastructure. The World Bank's second Basic Education project, to start in 1989, adopts this strategy. Improved techniques in school mapping and demographic projections should also minimize present misallocations in school space whereby in some areas classrooms are nearly empty while in some other areas classrooms are overcrowded.

There exist a few other notable inefficiencies in Guatemala's primary school system. In the area of staffing there are approximately 15,000 trained teachers without jobs, close to the number of teachers that would be needed to educate 672,000 children out of primary school. But since the system will not be able to absorb this number of teachers in the medium term, it would be more cost efficient to train fewer teachers and train them better at the pre-service stage. For years, primary school teachers in Guatemala have lacked adequate training in many areas such as management of multigrade schools, grading and promotion practices, and bilingual education. As has been the experience in many other countries, Guatemala's MOE has had

difficulties staffing schools in rural areas. The only long term solution to this problem is to increase the overall compensation offered to teachers assigned to rural schools beyond their present levels. Only trial and error can determine the right amount of compensation, and this compensation should be expected to vary over time and with changing labor market conditions. MOE compensation policies need to incorporate the necessary flexibility to adapt to changing labor market conditions.

The technology currently used by the MOE in the production of primary education services is clearly inefficient. Too much is spent in teacher salaries and too little in other important inputs such as books, supplies and materials, and adequate maintenance of physical facilities. Central administration expenditures at 6.5 percent of the MOE's budget in 1987 are also unnecessarily high. Even though GOG allocations to education measured as a percent of the Government budget or as a percent of GDP has increased in every one of the years of the Cerezo administration, the GOG needs to be constantly reminded that one of the best uses in public funds continues to be primary basic education.

It is very unlikely that the poor performance of Guatemala's primary education system is entirely due to internal inefficiencies. Factors external to the system, such as poor economic conditions of families, low preferences for education and awareness of its benefits, or the 23 indigenous languages spoken by half of the population are all important contributors to the system failures. Any other education system laden with these constraints also would have performed poorly. Below we will discuss regression results showing that females have an economic rate of return from primary education that is less than half of the rate of return for males. External factors such as this will only change slowly through time. But meanwhile they will tend to limit the effectiveness of any gains in internal efficiency of the education system.

3. The Economic Impact of the Project

A vast number of studies have shown for decades that the general level of education is among the most important determinants of a country's rate of growth in per capita income. Higher levels of educational attainment increase the productivity and health of the labor force, increase the flexibility of labor markets, facilitate internal labor migration. This research has also shown that the economic returns to investment on education quality are as high as the returns to investment on coverage or quantity of education. The Guatemalan primary education system is, as we outlined in the previous section, far from meeting minimum standards in both coverage and quality of education. Without a change in this state of affairs, Guatemala will continue to deprive itself of one of its main engines of economic growth. The Basic Education Strengthening Project is an attempt to change the present situation by increasing both the quality and coverage of Guatemalan primary education. Each of the four project components adopts a non-conventional approach to critical areas of the education system.

a. Bilingual Education

This component will allow the consolidation and expansion of the PRONEBI project. Bilingual education increases effective access to education of rural indigenous children who otherwise may have never enrolled in school, or who would have dropped out in a relatively short period of time or after repeating the first few grades for a number of years. A good portion of the gains in internal efficiency - reductions in dropout and repetition rates - expected from the Project and presented in the cohort simulations in the next section are attributed to the bilingual education component.

b. Teacher Services

As in many other countries, teaching in Guatemala is not treated as a profession for which high quality training is required. Many enter the teaching profession because of a lack of better opportunities. The situation is more difficult in rural areas where teachers receive little support and living conditions can be harsh. Teacher commitment tends to be low, and the poor quality of instruction offered translates into high dropout rates. Teacher effectiveness in the classroom has been shown to be a key factor, sometimes the only factor, in explaining differences in student academic achievement in both developing and developed countries. There is also ample evidence that lack of teacher training can severely condition different types of interventions designed to improve educational systems. One area of activity of this project component will be to put in place an in-service teacher training system to improve education. A second activity will introduce standardized testing to provide school administrators and teachers with objective criteria to improve their instruction. Both better teacher training and standardized testing are expected to have a significant impact on the high repetition and dropout rates the system has been experiencing.

c. Alternative Education Methodologies

This project component will develop two alternative methodologies, Escuela Nueva, and interactive radio education adapted to Guatemala, to increase the quality of education in primary rural schools. If proven successful, these new methodologies ultimately will be used to increase coverage of education. The Escuela Nueva approach introduces teaching techniques and instructional material tailored to improve the quality of education in one classroom, multigrade environments. By making multigrade teaching more effective, the Escuela Nueva approach is expected to produce significant reductions in repetition and dropout rates. Radio education will help teachers present Spanish and math to children effectively in rural schools. This technology has been effectively used in other countries, producing lower absenteeism and greater student achievement. Interactive radio education is also expected to lead to lower repetition and dropout rates.

Given the experimental nature of Escuela Nueva and interactive radio education activities, it will be necessary to set up a rigorous experiment methodology to establish their cost-effectiveness vis-a-vis the traditional approach. Both the experimental schools and the control schools should be as similar as possible in all external factors affecting educational output such as family background and language skills of students. Testing the cost-effectivemess of the new and traditional approaches will require: (1) the development for both types of schools of internal efficiency measures including daily attendance, repetition and dropout rates, and standard student achievement, and (2) the development of detailed statistics of costs per enrolled student in the two systems.

d. Educational Administration

The MOE operations tend to be bureaucratic and inefficient. At the present time there exist serious bottlenecks in the analytical, planning, and budgeting activities of the Ministry. It is clear from the high level of inefficiency of the educational system that significant gains can be made from small investments in the areas of educational research and management. This project component will address these problems. Although the contemplated activities will not directly affect classroom performance, it is expected that they will allow supervisors and teachers to concentrate more on the teaching function.

4. Methodology of Project Economic Analysis

The project economic analysis follows standard methodology to estimate both benefits and costs that are expected to arise from project interventions. The project's worth is measured by three alternative values: net present value of discounted benefits and costs, the ratio of (discounted) benefits to discounted costs, and the internal rate of return. This latter is the rate of discount which makes discounted benefits equal to discounted costs, or alternatively, net present value equal to zero. For the net present value and the benefit-cost ratio computations we assume a 15 percent rate of discount (in real terms) as an approximation of the opportunity cost of capital in Guatemala.

a. Measurement of Economic Benefits

As in most other education projects, there are two types of economic benefits that can be expected from the Guatemala Basic Education Strengthening Project: (1) an increase in lifetime earnings or external efficiency benefits arising from increased productivity and job opportunities of better educated primary school students and (2) cost savings from internal efficiency gains of the primary school system.

External Efficiency Benefits

One of the best established findings in labor economics and the economics of education is that lifetime earnings are highly positively correlated with years of schooling. The reason is that better educated individuals are more likely to remain employed and to be more productive in their jobs. By strengthening the primary education system, this project is expected to increase the quality and average years of schooling of primary school age children in Guatemala. Rather than measuring the impact of improved quality separately, all project external benefits will be assumed to accrue through the number of children leaving primary school with more grades completed in comparison to what would have been the case without the Project.

The computation of external benefits requires data on the number of children who will complete more primary school grades, and the expected increase in lifetime earnings per extra grade of primary education. The number of students who complete more grades are obtained from a cohort analysis of the primary education system after setting target differences in repetition and dropout rates expected from the Project. The cohort simulations assume that the project will not alter entrance rates. The entrance rate remains at 79 percent during the life of the Project. The "with" and "without" project target repetition and dropout rates are presented in Tables 2 and 3 of Annex J. Additional grades completed are estimated by the difference in number of dropouts in grades 1 to 5, and number of graduates in grade 6 from the with and without project cohort simulations. It should be noted that the figures in Tables 2 and 3 of Annex J on the number of students who will complete more grades as a result of the project are hypothetical. They reflect only the best judgment of the project team as to the likely impact of the project's interventions. Note also that the projections do not incorporate the impact of other interventions, such as the World Bank Second Basic Education Project, which will run concurrently with the Basic Education Strengthening Project.

To estimate the increase in lifetime earnings associated with more years of primary schooling, we use data from the 1986-87 Encuesta Nacional Socio-Demográfica compiled by the Instituto Nacional de Estadística and made available to us by the International Labor Organization project in Guatemala City. The data set consists of a random sample of 2,000 observations containing information on earnings, years of schooling completed, and other

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background information. To isolate the impact of years of schooling on earnings from other variables which also play a determining role on lifetime earnings, we use a multiple regression analysis. Among the other variables affecting earnings, job experience is the most important. The list of variables used in the regressions with their definitions and mean values is presented in Table 5. Besides allowing us to compute the net expected increase in lifetime earnings from additional years of schooling, the regression analysis reveals other interesting features of the economic value of education in the Guatemalan economy. The alternative specifications of the regression equation are presented in Table 6. Equation (1) shows that earnings do increase with each additional year of schooling as well as with job experience. Equation (1) also uses the square of job experience as explanatory variables to capture the decreasing value of job experience with time. The coefficient for education shows that the rate of return to additional years of primary education is close to 16 percent. This is slightly lower than existing estimates for other developing countries but still quite high. Using the mean value of earnings, equation (1) implies that one extra year of primary schooling on average (i.e., accounting for unemployment spells and for differences across individuals in gender, geographical location, etc.) represents Q143 in additional earnings per year, or about Q1,068 in present value of lifetime earnings (discounted at 15 percent for 50 years). These are the estimates used in the benefit-cost analysis below after adjusting for different levels of experience and allowing for a 20 percent increase in nominal wages to capture increases in the cost of living between 1987 and 1997. Equation (1) also shows that job experience is a significant contributor to earnings but its value declines slightly with time. Equation (2) accounts for variations in earnings across individuals due to the different number of hours worked per week at the time of the survey. The most interesting results take place in equation (3) when we introduce a dummy interaction variable of education with the gender of students. The negative and statistically significant regression coefficient for this variable shows that in Guatemala the market rate of return from additional years of primary education is half for females of what it is for males. It should not be surprising then to find that in Guatemala the retention rate for female primary students is much lower than for male students. Unfortunately, there are many other personal and family gains for female students that are not reflected in market salaries. This finding regarding the gender of students underlines the importance of information campaigns directed to parents of female students. The introduction of a similar interaction dummy variable for education and race (indigenous) indicates the possibility of a slightly lower rate of return from additional years of primary schooling for indigenous students. This result however, is much weaker; notice that the coefficient is not statistically significant and very small in absolute value.

Internal Efficiency Benefits

The main benefits from gains in internal efficiency are expected to come from lower repetition rates. A reduction in the number of students held back results in a lower number of instructional years for the system. The

estimates for these savings are based on the difference in the number of students that would be expected to repeat grades in the two-with and without project-scenarios in Table 2. We use an average cost figure of Q160 per student per year. This is the average expenditure per student in primary education in the 1987 budget and it includes a pro-rata of the MOE central administration expenditures for that year. This cost per student figure represents a number of problems but no better data were available. Because the Q160 per student do not include any charge for school facilities and corresponds to the 1987 budget, it is likely to yield a conservative estimate of the savings to be realized from lower repetition rates. Even though the marginal cost of enrolling an extra student is likely to be close to zero, the use of average expenditure figures is justified when dealing with large changes in the number of students, as is the case here.

b. Measurement of Project Cost

Three different categories of economic costs are included in the benefit-cost calculations: (1) Project Direct Costs, (2) Increased Costs to Students, and (3) Increased Costs to the MOE.

Project Direct Costs

This category of cost is taken from the project budget. Dollar figures are transformed into Quetzales at an exchange rate of 2.70 Quetzales per U.S. dollar. The budget figures are not adjusted for future expected inflation to be consistent with the rest of the benefit-cost calculations which are performed at 1989 prices.

Increased Costs to Students

Those students who, as a result of the project, will complete additional grades of primary education will incur two types of costs: (1) direct costs of schooling and (2) opportunity costs of their time. Direct costs include enrollment fees, educational supplies, and other expenses such as the school snack contribution. Based on Michael Richards' estimates in "Opportunity Costs of Education to Rural Households," we use a figure of Q20 per student per year. To estimate opportunity costs we assume a daily wage of Q1.65. We also assume that each child loses an average of 100 working days during the school year. These assumptions are likely to overstate the opportunity costs for children of primary school age, making the benefit-cost calculations conservative.

Increased Costs to the MOE

Due to the lower dropout rates expected from the project's interventions, a larger number of children will remain in school in any year. This represents a potential increase in costs for the MOE in instruction years. We call it a potential increase because the MOE could try to accommodate this additional demand with the same level of resources as opposed to increasing expenditures on teachers and classrooms. To be consistent with

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the benefit calculations for lower repetition rates, here we also employ an average cost figure of Q160 per student year. The total increase in instruction years is derived again from the differences in the two cohort scenarios in Table 2.

c. Benefit-Cost Calculations

The benefit-cost calculations are presented in Table 7. The Basic Education Strengthening Project, under the assumptions discussed in the previous paragraphs, will yield a net present value of Q139.6 million. The desirability of the Project is also reflected in the high benefit-cost ratio of 3.45. The internal rate of return for the Project is calculated at 60 percent, which is well beyond the assumed opportunity cost of funds of 15 percent. It should be kept in mind that the results of the benefit-cost calculations are a direct result of the assumptions we have made. The most critical of these assumptions has been the targeted impact of the project's interventions on repetition and dropout rates. But even if we were to adopt much more pessimistic assumptions about effective changes in repetition rates and dropout rates, the calculations strongly suggest that the proposed project is a profitable investment of funds.

Table 7 shows that the main cause of the high present value is the increase in earnings for additional years of schooling. These are lifetime benefits beyond the year the student leaves school discounted back to 1989. To avoid double counting, the computations only included earnings corresponding to the completion of additional grades induced by the Project.

5. Distributional Impact

The benefit-cost calculations in Table 7 necessarily ignore the redistributional effects of the Project. Because a considerable part of the Project is targeted to the increase of educational opportunities of rural indigenous families, the introduction of distributional weights in the benefit-cost calculations, if at all possible, would have shown a higher desirability for the Project. This is as much as one can say on the issue of distributional effects since we do not know the income level of the families to be affected by the Project. Neither do we have appropriate distributional weights to be used in the calculations.

6. Conclusion

The proposed Basic Education Strengthening Project is a desirable use of scarce investment funds and should be expected to yield a high economic rate of return. This conclusion is based on a benefit-cost analysis using labor market information and expected changes in the internal efficiency of the primary education system. These findings are congruent with the experience of other countries in which similar interventions have been tried.

ANNEX E.3

SOCIAL SOUNDNESS ANALYSIS

1. Introduction

This is an examination and analysis of the proposed interventions of the Basic Education Strengthening Project (BEST) in terms of appropriateness and gain for the intended beneficiaries. The data presented are based on recent studies carried out for the 1988 Education Subsector Assessment, the 1985 Education Sector Assessment, other relevant data, and a limited number of interviews expressly done by the authors for this Social Soundness Analysis (SSA).

The BEST components examined by this SSA are the following:

(1) The expansion, consolidation, and improvement of bilingual education (PRONEBI); and Spanish by radio (RS) as a new PRONEBI activity.

(2) Teacher services designed to improve teaching quality by means of extensive in-service teacher training, teacher commodity support, field supervision, and a new teacher magazine to facilitate communication and participation.

(3) Expansion of coverage and access to include:

a. a new radio course in Spanish-as-a-second language (RS) for indigenous children in pre-primary school through grade three.

b. expansion and improved teaching in one-room schools using programmed instructional materials developed and tested in Colombia as part of the "Escuela Nueva" program.

Each of the above project components is examined in terms of feasibility which, in effect, looks at the distribution, organization, activities, and motivation of the beneficiary population. The individual interventions are viewed in terms of past experience and whether or not new approaches will generate increased participation. Possible obstacles and problems relating to implementation are discussed. The crucial role of the rural teacher and his/her interactions with community residents is given particular attention.

The principal beneficiaries of the project are rural children who will be better educated and prepared to participate in economically productive activities. As in the case of most development interventions, others will also be affected. Those who never went to school or dropped out may be motivated to return even though they have long passed the usual age, and adults may clearly see the advantages of literacy and numeracy. The net outcome can be an enhanced social consciousness and increased community involvement leading to demands for more and better government services.

In terms of social consequences and benefits incidence, we have been especially concerned with the participation and effects on women. Females have characteristically been at the margin of the educational system and, as result, have had the fewest opportunities to benefit from better employment and increased involvement in community affairs. Historically, Guatemalan women have been kept within the domestic sphere, but current economic and social conditions are by necessity demanding their increased participation i productive activities.

2. Relevant Background

a. Conditions in Rural Guatemala

Efforts to improve productivity in agriculture, and raise the level of educational achievement, are currently high on the list of priorities for tl Guatemalan government and international development agencies. The strengthening of primary education is considered to be a key component of ar integrated strategy to increase family incomes and enhance the well being of the most marginal sectors of the population. In order to understand the rol of education in Guatemala, one must also have a grasp of conditions in rural areas where most of Guatemala's school age children live.

The principal economic activity in rural communities is agriculture. Mo than half the economically active population depends on small-farming activities for most of their income and revenues. However, due to a rapidly increasing population and severe land pressure resulting in very small landholdings and poor quality of land, rural people live in increasingly desperate conditions of extreme poverty. During the 1990s, we will see communities left without firewood. Springs will dry up because of deforestation, and the population will continue to get larger.

Based on information from the Encuesta Nacional de Ingresos y Gastos completed in 1980-81, it has been estimated that 71 percent of the total population of the country and 84 percent of rural people live in a state of either poverty or extreme poverty. This means that people do not have enoug income to provide the basic food basket. Extreme poverty is basically a rura problem. Out of a total of 2.68 million people estimated in 1980-81, 84 percent lived in rural areas. 1/ This situation helps to explain the continual fragmentation of landholdings in Guatemala.

The land tenure system can be characterized by a great majority of very small farms, and a small number of farms that occupy the majority of the best arable land in the country. According to the standard classification employe

1/ Delgado, Hernán L., Situación Alimentaria de Guatemala. Instituto de Nutrición de Centroamérica y Panamá, Publicación E-1223, 1987.

in most studies of land tenure in Latin America, 88 percent of Guatemala's farms in 1979 were of sub-family size (i.e., too small to provide for the needs of a family). These farms possessed only 16 percent of the total amount of land being farmed. At the other extreme, farms that had 450 hectares and more amounted to less than 1 percent of all the farms, but occupied 34 percent of the arable land. 2/

The pattern of land concentration is exacerbated by greater skewing of the distribution in areas of the country in which the best farmland is located. In the coastal departments of Suchitepéquez, Izabal, and Escuintla, which contain 49 percent of all of Guatemala's Class A land, farms of 450 hectares or larger account for 53 percent, 49 percent, and 59 percent, respectively. 3/

Land scarcity has led to temporary migration in search of agricultural wage labor as an economic survival strategy for landless campesinos from the Highlands. Estimates of migration range from about 220,000 to 500,000. 4/ The minifundia system is, therefore, a major factor contributing to the deplorable situation of blatant poverty in the rural areas, where living conditions are continually deteriorating.

It is clear that the bulk of the population is rural and will remain rural for the next several decades. In 1980, some 63 percent of the population lived in rural regions. In 1978, it was estimated that of the total population 59.7 percent was of Mayan origin. 5/ Due to continual acculturation, current estimates range from 40 to 50 percent out of 8.5 million inhabitants. All indicies show that the rural Mayan population suffers from the most acute poverty.

The profile of the Guatemalan small farmer is similar to that of other millions of small farmers in Africa, Asia, and Latin America. He is a campesino who continually produces at a loss and whose production patterns make him primarily a subsistence farmer. Many are monolingual Mayan speakers who live in far away communities, are illiterate, cultivate the less productive lands and migrate frequently to the big plantations as a wage laborer. 6/ Furthermore, the serious problem of land scarcity is becoming even more desperate and frustating with little or no prospect for change in the land tenure system.

2/ Hough, Richard et al., Land and Labor in Guatemala. Ediciones Papiro, Guatemala 1982.

3/ Ibid p. 7.

4/ Ibid p. 16

5/ Delgado p. 1.

6/ O'Sullivan, Jeremiah, La Educación y El agricultor de Subsistencia: El Caso del Altiplano de Guatemala. Estudios Sociales N. 13. Instituto de Ciencias Políticas y Sociales de la Universidad Rafael Landívar, Guatemala, 1979.

A realistic look at rural conditions in 1980 showed that Guatemala did not have sufficient land to provide family-size parcels to the entire landless rural population. Contrary to the popular belief, there is not unlimited land available in the country, especially in the FTN (Franja Transversal del Norte) and the Petén. A quantification of land available based on soil conditions and the current size of the population shows that Guatemala can only accommodate between 31 and 64 percent of its landless. 7/

In view of current and future agrarian conditions, and because future generations will be less dependent on agriculture, it becomes necessary to provide at least a minimal education to rural people. Today's children need to be prepared for work requiring no less than the ability to speak Spanish, and the attainment of literacy and basic mathematical skills. Improved primary education, through the BEST project, is a move in this direction with the expectation that more employment opportunities will be created during the next decade and beyond.

b. History of Education

In order to analyze the sociocultural context of an education project containing multiple interventions with the potential of affecting large numbers of rural families and their children, it is necessary to have an idea of major historical changes and trends in Guatemalan education. After all, the parents of today's primary school children are themselves the product of the same but changing educational system. To a large extent, their current opinions and attitudes have been formed by their own experiences in the recent past and those of their parents in the first half of the 20th century.

Guatemalan public education was first organized and instituted during the Liberal Reform Period in the last quarter of the 19th Century. The system was designed to be free, secular, and obligatory. Many primary schools and high schools were opened, textbooks were printed, and the National Library was created.

During the first four decades of this century, Guatemalan education was characterized by stagnation. In spite of the creation of some services in the educational system, measures that limited freedom to teach were imposed, and educational institutions were, to some extent, militarized.

The period from 1944 to 1954 was characterized by the expansion of educational services at all levels, and the creation of rural and popular educational services. Previous restrictions on teaching and curricular content were removed, the Department of National Literacy was created, and the first rural teachers were trained.

7/ Ibid Hough et al.

During the 26 years after 1954, there was a quantitative improvement in the national educational system. In 1963, educational planning was institutionalized and rural education was reorganized and grouped under the Dirección de Desarrollo Socieducativo Rural. This move was characterized by both advances and stagnation for public education. 8/

One of the most reliable indicators for assessing the efficiency of primary education over many years is changes in the level of illiteracy. The illiteracy rates for the population aged 7 years for 1893, 1921, 1940, and 1950 were as follows: In 1893, the general illiteracy rate was 86.6 percent, with no breakdown by gender; in 1921 the illiteracy rate remained virtually unchanged at 86.8 percent; by gender, males were at 85.5 percent and females 88 percent. By 1940, general illiteracy had been reduced to 67.4 percent, 61.6 and 73.4 percent for males and females, respectively. 9/

When the variables of ethnicity and region are added, it becomes obvious which sectors of society have been ignored by the educational system. In 1950 the illiteracy rate in rural Guatemala remained at 82.7 percent; 78.5 and 86.9 percent for men and women, respectively. At the same time, illiteracy in the ladino population was 67.1 percent, with 63.3 percent for males and 71.2 percent for women. The 1950 rate for the Mayan population was 91.6 percent and, when disaggregated by sex, was 88 percent for men and 96 for women. This same year, the illiteracy rate for women in the United States was 2 percent, in Bolivia 77 percent, in Costa Rica 21 percent, and in Haiti 92 percent. 10/

As recently as 1981, 41 percent of the general population was considered illiterate, and for the Mayan population, it was 63 percent. By sex, the overall national illiteracy rate for women was 49 percent, but for the Mayan population it was 74 percent as compared to 53 percent for Mayan men. 11/ When comparing the general illiteracy rate of 86.6 percent in 1893 to 74 percent for Mayan women in 1981, some 90 years later, it becomes obvious that the educational level of rural Mayan women has changed very little.

8/ González Orellana, Carlos, Los Educadores y La Escuela Paralela en Guatemala y Costa Rica. Colección Textos Universitarios, Universidad de San Carlos de Guatemala, 1985.

9/ Arias B., Jorge, El Analfabetismo en Guatemala. Primer Seminario Nacional Sobre Problemas de la Educación Guatemalteca, Servicio Cooperativo Interamericano de Educación, Ministerio de Educación, Guatemala, 1961.

10/ Ibid.

11/ Paolisso, Michael et al., Guatemalan Women in Development: Opportunities and Constraints. International Center for Research on Women, Washington, D. C., February 4, 1988.

Although the education system in Guatemala has grown rapidly over the past century, with public elementary school enrollment almost tripling and public secondary enrollments more than quadrupling from 1965 to 1985, large segments of society continue to be neglected by the system, especially the rural population and, above all, Mayan women. 12/

3. Sociocultural Feasibility

Since this SSA considers both rural teachers and community residents, and the interaction between the two, both groups will be examined and analyzed as part of the same broad sociocultural system. It is neither practical nor realistic to think of rural residents, both indigenous and ladino, and teachers as being members of distinct cultures. Granted, there are major differences that will be considered, but in reality they occupy distinct positions on a complex social, cultural, economic, and linguistic continuum. Furthermore, there is considerable variation from region to region and community to community.

It should also be pointed out that this assessment is not for a qualitatively new project using distinct interventions that have never been attempted in Guatemala. Rather, it is a cross-sectional look at the dynamics of rural education in relation to a number of proposed changes to increase efficiency by promoting greater acceptance by rural residents. Our emphasis, therefore, is on how rural residents view education, its utility, and the potential impact of the BEST components.

The most recent data available on indigenous communities are from two surveys. The first was done in 1986-1987 with a sample of 392 communities in the four linguistic areas where PRONEBI is currently operating. 13/ The second study was completed in 1988 and has added considerably to our knowledge of community attitudes toward education, the relations between residents and teachers, and the attitudes and practices of the teachers themselves. 14/ This study surveyed 53 communities in 7 Mayan language areas and 12 Spanish speaking ones for a total of 65. What follows is a summary of findings that are considered relevant to the sociocultural feasibility of the BEST project.

12/ World Bank, Guatemalan Public Expenditure Review. 1988.

13/ Richards, Michael and Julia Richards, A Profile of the Languages and Communities of the National Bilingual Education Program of Guatemala. United States Agency for International Development and the University of New Mexico, July 1988.

14/ Richards, Michael et al., Guatemala Primary Education Efficiency Sub-Sector Assessment, Topic Area 7: Opportunity Costs of Education to Rural Households. Academy for Educational Development, Juarez and Associates, and the United States Agency for International Development, 1988.

a. The PRONEBI Communities

The communities surveyed in the PRONEBI study are typical of those found throughout the Highlands; included in the sample was a wide range of size from the smallest parajes and caserios to cantones, aldeas, and five cabeceras municipales. Mam and Q'eqchi' communities were smaller and more isolated than those in K'iche' and Kaqchikel regions; these latter two also had the greatest number of communities with the largest percentage of indigenous residents. The survey found that the Q'eqchi' areas had the largest number of monolingual communities while the K'iche' showed the greatest degree of moderate bilingualism (54 percent); as a consequence, it can be surmised that the K'iche' area is undergoing the most rapid degree of linguistic change, and the Q'eqchi' is by far the slowest.

In terms of geographical isolation and access to the outside world, the Mam region has the most remote communities, followed by the Q'eqchi'; over 90 percent of the communities in the survey had no two-way radio, telegraph, or telephone; transistor radios were most common in the Q'eqchi' where 34 percent of the communities had radios in over half the residences visited, while in the Mam area, less than 10 percent of the residences had a radio. Some 22 percent of the towns had electricity, and 45 percent had communal faucets; more than half lacked a rural health post; with the exception of the Mam area, most of the communities were served by an agricultural extension agency; and about a quarter of the Kaqchikel, K'iche', and Q'eqchi' communities had some kind of a cooperative.

Intense activity in domestic agriculture in all four areas takes place during March, April, and May for planting and October to January for harvesting. There are some regional variations due to ecological and climate differences. When not working on their own land, many perform wage-labor on nearby and distant fincas. Some 82 percent of the communities had at least one nearby finca that used local seasonal labor, and about 40 percent had five or more nearby fincas. Migration to distant fincas is an important source of income for a significant portion of the entire Guatemalan indigenous population. Data from each linguistic area showed different patterns: the Q'eqchi' region, having the most nearby fincas, does not rely on distant seasonal migration; in the Q'eqchi' and Kaqchikel areas, two-thirds of the communities had less than 10 percent of the inhabitants migrating; but for the Mam, it was over 50 percent. It should also be noted that children most often migrate with their parents and participate in wage-labor. In the Mam region, for instance, schools are at times empty because almost everyone has gone to work on distant fincas.

The participation of children in agricultural activities also varied considerably from region to region. The highest degree of participation was for the Mam (94.4 percent), followed by the K'iche', Q'eqchi', and Kaqchikel, with 83.4, 76.5, and 62.7 percent, respectively. The demand for child labor in the Kaqchikel region is probably the lowest because of urbanization and the highest amongst the Mam speakers due to domestic animal herding activities.

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About one-fifth of the survey respondents reported that they spoke no Spanish whatsoever, and it is important to note that the majority of these were women. From the primarily monolingual Q'eqchi' area, half claimed to speak no Spanish, while in the other three, some 10 percent said they were monolingual. There also appears to be a small, but notable, shift towards a generational change in Mayan language use; children are speaking less Mayan than their parents. This trend, however, is most notable in the K'iche' area and virtually non-existent among the Q'eqchi'.

The use of Spanish in the four indigenous language areas also appeared to vary according to context. Men said they used Spanish more frequently on the street and in the marketplace, with their parents, teachers, municipal officials, and the clergy; women did not show the same degree of Spanish use. Parents were also quite aware of their children speaking Spanish among themselves. Some 12 percent of the respondents believed that their native language was disappearing, and 15 percent believed that their children were losing their Mayan language speaking ability. Interestingly, 87 percent believed that those who had lost their Mayan language should still be considered ethnic Indians.

A little less than half of the respondents said that they could read and write their native language, but only 6 percent said they could do it well. Some 86 percent knew that their children were receiving bilingual instruction in their community schools; 15 percent thought that Mayan languages should be used for explanatory and clarification purposes only; 34 percent thought it should be used for instruction in some subjects; 46 percent thought the indigenous language should be used for instruction in all subjects; and 53 percent said it should be used for instruction in all primary grades. These responses indicate a strong community-based mandate for Mayan language instruction. Parents did not show much familiarity with bilingual didactic materials, but were most certainly in favor of bilingual education. At the same time, Spanish was overwhelmingly seen as the "lingua franca" of commercial power and access to national institutions and, as such, Spanish instruction should be a major component of the primary school curriculum.

Richards and Richards conclude their analysis of the community survey by saying:

> Despite the wide variety that exists within and between communities, the sociolinguistic and community surveys uncovered many points of consensus. Although the Mayan languages clearly are the languages of inter-ethnic communication and a strong Mayan language loyalty exists, there is an increase of Spanish language usage in most domains of daily life. Parents overall support the idea of bilingual education. While parents mostly are in favor of the use of the native language as a medium of instruction in the schools, they are also in favor of the continued use and instruction of Spanish in the schools. Due to the lack of parental involvement in the

schools and their lack of exposure to the materials being used, there nevertheless exists a certain lack of awareness regarding the goals, philosophies, and methodologies of the National Bilingual Education Program. It is the opinion of the authors that for the program to remain successful, considerable effort should be devoted to explaining the merits of bilingual education to parents and rural community members in general, and to incorporating their felt needs and suggestions into the bilingual curriculum (1988:5-0).

b. Opportunity Cost Survey

(1) Parental Responses

One of the most important findings was that few parents perceived the benefits of education and most thought they had a very slim chance of getting a job based on their educational achievement; agricultural work and domestic occupations do not require a primary school education. Furthermore, one-fith of the respondents claimed that going to school put a financial burden on the household and that children were not learning the necessary technical skills needed in their rural working environment.

Parents also criticized curriculum content in that it was not appropriate for their children. In particular, many said that Spanish language teaching was insufficient to give their children an adequate working knowledge of the language. There should be a special emphasis placed on coversational skills in the early grades rather than on repetitive reading and writing exercises.

One unexpected finding was that 90 percent of the households did not object to paying enrollment and matriculation fees, and three-quarters would be willing to contribute more, primarily in the form of labor for school construction and maintenance. Wealthier households, on the other hand, were less willing to contribute and pointed to the fact that the constitution guarantees free primary education for all Guatemalans.

(2) The Value of Children's Labor

There has been considerable discussion about whether or not some parents' decisions not to send their children to school are, in fact, based on the value of time and labor in the home and in agriculture. The finding that after the second grade of primary school there develops a gender bias as a result of high female drop-outs is generally attributed to the need for school age girls to care for younger siblings and to perform a large number of other domestic activities; to a lesser degree, boys work with their fathers in the fields or in other economic activities. The survey found that traditional corn and bean producers keep their children out of school more than wealthier families, as measured by household surface area, indicating a direct positive association between relative wealth and school attendance. This finding is not particularly surprising in view of the current economic situation, low employment opportunities in rural areas, and the negative attitudes about the relevance and utility of a primary school education.

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Parents, therefore, find themselves in the middle ground between a legal requirement to send their children to a school which they feel provides an inappropriate education and the need to make ends meet during very difficult and worsening social and economic circumstances. In the case of the indigenous population, the situation is worse when taking into consideration the political history of ethnic conflict rampant with humiliation and discrimination; parents recall their own negative experiences in schools administered by urban-oriented ladino teachers who showed no sensitivity or interest in the hardships of rural life.

(3) Teacher Attitudes

In view of the community data, it is no surprise to find that teachers claim to have very low involvement in community affairs and feel alienated from the local population as well as the educational system that they represent. This is further demonstrated by the fact that some 62 percent of the 65 teachers in the sample expressed a desire for transfer to another post. As an additional indicator of the gap between parents and teachers, only about one-quarter said the "Committee of Parents" in their communities functioned well.

When the teachers were queried about the cost of education and the parents' financial obligations, one-half thought that parents should not be obliged to shoulder any additional monetary burdens. They did, however, believe that labor contributions for construction and maintenance would be most appropriate. This sentiment is very much in accord with the view held by most of the parents.

The majority of the 65 teachers were very receptive to the possibility of using educational radio programs in the classroom and for their own in-service training; there was an overall recognition of the need for pedagogical training. The need for additional teacher training was reinforced by the fact that one-third of the PRONEBI teachers have difficulty comprehending and using the bilingual didactic materials in regard to reading and writing; another 45 percent have local dialect incompatibilities with the bilingual text materials.

c. Further Considerations of Rural Education

In order to supplement the survey findings and to achieve a better understanding of the sociocultural context and possible impact and problems with the BEST Project interventions, we spoke with a number of central- and regional- level MOE personnel, visited three schools, and held a focus-group with eight mothers in a small rural community.

(1) Aldea Panimaja'

The small rural community visited was Panimaja', a small aldea with about 50 to 60 houses located about 6 kilometers from the Interamerican highway in the municipio of Nahualá in the department of Sololá.

The economic activities and life in this community are typical of most of the highlands. The residents are subsistence farmers where women help men with agricultural labor, collect firewood, and watch animals at pasture. Virtually all the residents can be considered at the lowest end of the socioeconomic spectrum, and according to the eight mothers we interviewed, almost the entire adult population is illiterate. The aldea has had a one-room school, an escuela unitaria, for the past seven years, but according to the mothers, its impact has been limited. Nevertheless, most of the houses have latrines and potable water but no electricity; the population was estimated at a little over 200, mostly monolingual K'iche' speakers.

The focal-group was held at approximately 1 PM with 8 mothers and about an equal number of their school-age children; we did not meet the teacher who had finished her class and left town a little early. The mothers expressed unanimous agreement with the idea that their children should have a primary education in order to be able to communicate effectively in Spanish; this included complete literacy. They also said that education and literacy were necessary for virtually any kind of work beyond the traditional activities in the community, and it was for this reason that they were very concerned about their children's education.

Panimaja' has a functioning Parents' Committee, but only the men are members and the mothers said that they had not been asked to participate. One important activity involving fathers in the school is the taking of turns to enforce childrens' discipline during class time. The role of women is limited to the preparation of snacks and liquid refreshments; this year, however, they have not received any powdered milk and have been unable to prepare the usual atol, a common drink in the Highlands.

When asked about why some of their children leave school, the mothers expressed a clear consensus and gave the following reasons:

- Very often children are needed to take part in work both in the home and in agriculture; their contributions are considered very important in order to help support the family. This is particularly the case for girls' participation in the domestic sphere.

- Primarily due to ineffective teaching, some children leave school because they do not learn anything; as such, it is better for children to work in the fields or at home.

- When children are physically mistreated by the teacher, some parents take them out of school.

- Some children cannot go to school because of health problems, which often include malnutrition.

- Children who do not behave are periodically taken out of school because they are not learning anything.

- When the students are permitted to speak mostly in K'iche', some parents feel their children are not learning any Spanish. If they are not learning to speak Spanish, going to school is a waste of time.

When the topic shifted to how the educational system and the school could be improved, the mothers 15/ offered these suggestions:

- A coherent process with frequent supervision should be established whereby students, teachers, parents, and representatives of the MOE can all take an active and responsible role.

- An exam should be designed and given periodically to the students to measure their progress; parents should participate in these activities.

In view of the fact that the people of Panimaja' are very poor subsistence farmers, it is notable that the cost of going to school was not among the reasons given by the mothers for taking children out of school. A reflection of the inferior quality of education in this community is the fact that one fourth grade child we talked to was totally unable to communicate in Spanish. Out of the 45 students in this one-room school, there is only one female in the sixth grade, the others dropped out a long time ago. The teacher, it turned out, was from Zacapa, and according to the mothers, does not speak a single word of K'iqche', the native language of everyone in the aldea.

Although we only made one brief visit to a single aldea, everything we were told was in agreement with the survey findings; the discipline problem, however, was a new factor brought to light by the focal discussion, and it is impossible to estimate how extensive a problem this may be.

(2) Aldea Cipresales

This community is located on the road between Sololá and the Panamerican Highway with a total population of 1,115. The school has the complete PRONEBI curriculum taught by a faculty of 1 promoter, 2 teachers, and the director. Currently, there are 204 students attending out of a school-age population of 335 children. Over the past five years, the enrollments have more than doubled.

15/ It should be noted that with just one exception, none of the mothers in our focus-group had ever attended school; one said she had gone to either first or second grade, but she was not absolutely sure.

According to the director of the school, the population of Cipresales is divided into three basic sectors: agriculturalists (5 percent), rural wage laborers (75 percent), and comerciantes (20 percent). He said that the comerciantes have the highest regard for the importance of a primary school education because of the perceived need for literacy and basic math; without these skills children cannot help parents and follow in their footsteps. They do not, however, have much interest in bilingual education. About half of the agriculturalist families are in favor of education. The director said that many of the adults in this group had learned to read and write, but because of disuse, they quickly forgot what they had learned. Rural wage laborers who comprise the largest group of residents, on the other hand, see little value in education and have to be persuaded to enroll their children in school.

Another problem mentioned was that children have very little time to themselves. As soon as they finish school boys must go home, pick up the hoe, and go help in the fields; girls must help in the home with domestic duties and child care. The director felt that this heavy schedule day in and day out made it very difficult for children to complete homework and do any real learning; they are simply very tired most of the time, especially the sons and daughters of the wage laborers.

When asked why girls tend to drop out of school more than boys, the director said it was because females are too introverted; they are very reluctant to speak in class and do not interact in any positive manner. He said it was a case of "cultural" backwardness. 16/ The boys, on the other hand, are much more outgoing and are able to learn much faster and better. "After all, men need the education more since it is they who will have the responsibility of supporting their families," he claimed.

In respect to bilingual education, the director thought there were a number of serious problems. First, children should not be allowed to speak Kakchiquel while in school because it impedes the learning of Spanish. By the time children reach the second grade, they do have some comprehension of Spanish, but to become truly bilingual, they need at least 5-6 years of training. Parents are concerned that their children are not learning Spanish very well; this is particularly the case for the comerciante families.

The director expressed satisfaction with the bilingual curriculum and didactic materials, but he said that the teachers should be better trained. More specifically, the bilingual teachers need in-service training at least three times per year in teaching methods and the proper use of didactic materials; they should also learn Kakchiquel better and also try to be more effective teachers of Spanish.

16/ This school director was from the Eastern ladino part of Guatemala which could account for his attitude about indigenous "cultural" backwardness.

(3) Aldea Vasconselos

This community has a population of about 450 with 140 enrolled in school out of a total of 180 school age children. Again, this was a complete PRONEBI school with two bilingual promoters, one bilingual teacher, a monolingual Spanish speaking teacher, and the director who teaches 5th and 6th grade. The aldea and the surrounding lands lack water for year-round agriculture. Crops are planted only during the winter months, and the rest of the time many families buy vegetables in Sololá for resale on the south Coast and in Guatemala City. A large segment of the population is very poor, even by local standards.

The director, a young woman who had been teaching in Vasconselos for 6 years, said she had an "acceptable" relationship with the community residents. Parents were willing to help and participate in school activities, but their ability to contribute financially was very limited. She has found it very difficult to hold meetings with the local parents' committee because people spend most of their time out of town selling vegetables.

The agenda for the next meeting was to discuss the possibility of children wearing uniforms, the economic situation, school projects, childrens' behavior in school, and academic achievement. Apparently, the parents are very concerned about the cost of new school uniforms, which ranges from three to eight Quetzales, depending on quality. The director emphasized that people in this community are constantly complaining about the high cost of sending children to school; they don't have money to buy school supplies for special projects, such as crochet and embroidery.

During the past few years, it has been very difficult to persuade parents to keep their children in school. Parents want their children out as soon as possible to help supplement family incomes. For example, the sixth grade only has seven students; five boys and just two girls. The director said that parents were especially reluctant to send their daughters to school, and when they do, most only stay through the third or fourth grade. Girls are expected to remain in the community and work in the home, weaving.

The school director said that bilingual education has not resulted in increased school enrollments. Furthermore, the school has had a number of bad teachers, and parents have been very aware of the resultant fact that their children have not been learning very much. At the time of our interview, we were told that something would have to be done very soon about one teacher who was extremely incompetent.

(4) Cooperación Indígena para el Desarrollo (COINDI)

In order to gain additional insight into community dynamics, local views, and sentiments, we interviewed the director of a small indigenous PVO with offices in Sololá. This PVO, with a philosophy of grass-roots

participatory development, has a staff of 11 (six women and five men), and works in education, agriculture, community health, and microenterprise development; limited financial support has been provided by the Canadian and Dutch governments.

The director of COINDI, a Kaqchikel speaker from Sololá, said that a basic problem with PRONEBI, and bilingual education in general, is that central and regional managers are not Mayans and that there has been little or no indigenous input into curriculum design and program operation. He went on to say that people in the communities where they have projects have told him that many bilingual teachers are poorly trained and do not know how to teach. Community residents are often resentful because the bilingual program has been imposed from the outside and nothing has ever been explained to them. A reasonable amount of explanation and parental involvement would go a long way toward improved acceptance of bilingual education. Another problem has been that teachers often speak indigenous dialects that are quite different from the local one; consideration should be given to more appropriate teacher placement.

The most important criticism was that the curriculum content was of no use in local communities. It is not surprising that children lose interest and create disciplinary problems; they are extremely bored. The director suggested that subjects relating to local agriculture be added to the curriculum because people need knowledge to survive and improve their living conditions.

Another important point he made was that a few people in small Sololá communities have finished primary school, completed their secondary education, and have gone on to become professionals. This fact has not been lost on the rest of the population; people are very aware of the educational and economic achievements of some individuals who have become teachers, accountants, and lawyers, etc. And they are asking: why not us? People know that a secondary education is not enough and that higher education is very expensive. Therefore, according to our informant, people are increasingly beginning to understand the value of education and want their children to have better opportunities than their parents.

The director of COINDI said that there were a limited number of other non-governmental organizations in the Highlands concerned with education. The Asociación de Desarrollo Económico, Social y Educativo (ADESE) in Chichicastenango has started an Educational Center to help support students from remote communities who wish to pursue a secondary education. Two other NGOs are the Asociación de Desarrollo Integral Rural (ADIR) located in Los Encuentros, and the Asociación para el Desarrollo Indígena Cultura, Social, y Económico in Chaquijya' (ADICSE).

There are still relatively few indigenous development organizations in the highlands. According to the director, the most plausible reason is that as a result of the political violence at the beginning of the 1980s, people

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are still very timid and afraid to form 'development' organizations. The current movements, however, are strong and growing, but religious division between Catholics and evangelicals is splitting many communities. Community residents insist that the new NGOs coordinate their activities with civil and military authorities to make sure that their projects can in no way be considered subversive.

d. The BEST Project Components

When considering each project component, it becomes quite clear that a number of special circumstances exist that must be taken into consideration to avoid undesirable and negative outcomes. In general terms, however, the data presented in this SSA appear to support the implementation of all parts of the proposed project. Below, we examine each individually.

(1) Expansion of PRONEBI and Distance Education

A simple expansion of PRONEBI, as it presently exists and operates, will most probably have no effect on reducing dropout and repetition rates. The current mode of operation does little to motivate parents to keep their children in school and to change their minds about the utility of education. Furthermore, the relatively deficient manner in which Spanish is currently being taught in many PRONEBI schools has been recognized by many parents who, as a consequence, see that an important motivation and reason for sending children to school is not being satisfied.

Before PRONEBI engages in any large-scale expansion, both vertical and horizontal, we believe that a number of problems should be resolved. First, issues relating to dialect variation and alphabets to be used in the four major languages should be resolved. Second, creative energies and financial resources would, perhaps, be best used in solving problems and improving teaching and didactic materials currently in use prior to any horizontal expansion to include more languages. Third, we believe that renewed efforts should be made to make more appropriate teacher placements based on language, local dialect variation, and motivation to live and work in rural areas.

The proposed activities under the BEST bilingual education component include mapping of sociolinguistic variations, revising texts and teacher guides, testing Spanish-as-a-second language by radio, and expanding the PRONEBI model to 1,300 schools.

The data presented in this SSA clearly show that community residents feel that curricular materials currently being used are not providing the kind of knowledge children should be learning in school. In terms of the BEST project, much attention has been paid to incorporating locally relevant and useful information into the curriculum, but achieving this goal in an effective manner may be quite difficult. For instance, how and who will determine the exact content? and will attention be paid to local and regional

variation? Assuming that geographical, cultural, and linguistic variation will be taken into consideration, we feel that local residents and their leaders must be actively involved in curriculum design. Previous failures and lack of cooperation can, to a large extent, be attributed to preconceived ideas and programs being summarily imposed on local communities. Repetition of such behavior may offend indigenous residents and lead to a reduction in both motivation and participation.

A possible mechanism to generate and sustain local participation would be to have Parents' Committees 17/ select representatives who would form part of a regional or Departmental organization working with PRONEBI and BEST personnel to design curriculum content; even if having all local communities participate would not be practical, the fact that there is some local participation would become common knowledge very quickly.

The most effective way to publicize and promote the new project components would be to use a multi-channel approach involving teachers, local committees, posters, handouts for students to take home, and radio spots. Furthermore, community visits by regional personnel to attend committee meetings would greatly enhance the legitimacy, seriousness, and purpose of the new interventions. If the parents are actively recruited to participate and do, in fact, become involved, then a large quantity and variety of relevant curriculum materials would be made available for possible inclusion.

The specialist in qualitative classroom data collection and analysis working with the PRONEBI evaluation unit will be playing the crucial role of selecting relevant materials. The curriculum revision committee, however, should be encouraged to work with local representatives on curriculum content and classroom testing. A potential problem here would be that the PRONEBI and project personnel do not become sufficiently involved with and knowledgeable about local realities, needs, and desires, but instead try to design comprehensive and standardized curricula for areas with excessive sociocultural and linguistic variation.

The introduction of a pilot component to teach Spanish as a second language in selected PRONEBI schools, if properly designed, offers an opportunity to meet a perceived need for a significant portion of the indigenous population. 18/ Since the design calls for careful incorporation

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17/ The mapping study could include a section designed to identify communities with active local organizations, either a Comité de Padres de Familia or a Comité Pro Desarrollo Local, disposed to select appropriate representatives who would be able to work on curriculum design and content.

18/ Our interviews, the survey of the PRONEBI Schools, and the Opportunity Cost Study have indicated a significant desire on the part of parents for children to become more proficient at speaking Spanish. Apparently, there is also some resistance but at present the relative magnitude of either attitude is not known. More reliable quantification of these variables could be achieved by inclusion in the mapping study.

of indigenous cultural values as a key to acceptance, the problem, once more, becomes one of identifying, selecting, and using particular aspects of community life in the broadcasts.

We suggest selecting very practical activities related to local resource use, production, marketing, and environmental conservation practices. As with the PRONEBI curriculum, the representatives of local parent committees should be encouraged to provide input on program content. Responsiveness to these ideas will provide local relevance and recognition of the fact that their own parent committees have had a role in program content and design. The recognition of content having local interest and relevance may very possibly serve to moderate opposition to the teaching of Spanish. Communities or whole regions where resistance to bilingualism has been identified should receive particular attention in terms of visits by project personnel to make sure that special problems and circumstances are addressed.

In order to facilitate the collection of base information for region and community specific programming, the interactive radio project team should include the proper expertise and sufficient personnel to cover all the communities in the Radio Salama listening area and with special emphasis on communities with the formative evaluation schools. Another possible way to enhance local involvement would be for the project to search for indigenous individuals, both men and women, willing to participate to some limited extent in the radio programs. This could take forms ranging from short announcements to actual participation in scripted programs.

(2) Teacher Services

One of the most uniform findings in virtually all of the communities was an expression of dissatisfaction with teacher performance in the classroom and in relations with parents. The reasons given included inadequate teaching skills, use of irrelevant didactic materials, lack of concern for children learning anything, and little supervision or any perceptible contact with regional or departmental MOE personnel. Not only did parents express this view, but the teachers themselves expressed dissatisfaction by wanting to transfer to another post. Some strongly felt that many of their colleagues were not particularly committed to either school or the profession itself. Many parents expressed emphatically that one of the principal reasons that many children do not attend school is due to poor teaching of irrelevant material in badly equipped schools.

From these data, we feel that one of the most formidable challenges for the BEST Project is to find and implement strategies to improve the content and methods of teaching as well as to bring about a virtual metamorphosis in teacher morale. A number of MOE officials interviewed by the authors expressed serious doubts about the feasibility of making radical changes in the manner in which established teachers perform their work.

Nevertheless, an effective and well-designed in-service training program does have the potential for achieving the intended goals. From the point of view of this SSA, the most important consideration is how to determine the effects of in-service interventions on how teachers work both within and outside the classroom. At this point, we cannot predict what the outcomes will be except to say that teacher responses will be extremely diverse and that an efficient methodology should be designed to provide relevant data on a timely basis while the project is being implemented.

Since the distance education components will be developed as pilot projects in the area around Salamá, Baja Verapaz, we suggest that a continual monitoring mechanism be developed and operationalized in this region. Of prime importance will be to maintain constant contact with Parent Committees which can provide frequent feedback on teacher performance. Attempts should also be made to measure student reactions to innovations used by their teachers. Again, we feel that this kind of involvement will contribute to developing better and more interactive teacher-parent relationships. From our findings, we can say with confidence that increased and improved relations with teachers will be well received by community residents.

Returning to the question of how effectively and how many of the primary school teachers currently working in Guatemala will respond to the BEST in-service training, we ask the following: Is it only a matter of providing the appropriate support and courses or does it have to do with deeper and relatively rigid values and attitudes held by most teachers? In other words, changing established teaching and community relations practices may be much more difficult than envisioned by project planners.

One innovative strategy brought to the authors' attention would be to identify and select a group of bilingual normal school students who are about to graduate or recent graduates who have not found teaching positions. The criteria for selection should be based on a real desire to live and work in rural areas and a real concern for the well-being of rural indigenous residents. The idea is that these teachers have not had the time or the opportunity to adopt the prevalent attitudes and practices of their often frustrated and burned-out colleagues, and would, as such, serve as a control group to measure the effects of in-service training. With proper language and dialect considerations, these individuals would then be placed in project schools in the Salamá listening area. Not only would this offer an opportunity to evaluate in-service effectiveness without possible bias as to the length of time teaching, but would also provide data on controlled community responses to new and motivated teachers.

Provided the new teachers were successful within the BEST Project context, they could possibly have a beneficial spread-effect on established teachers who are prejudiced against new methods and materials. The new magazine/journal for teachers could serve as a medium of communication for providing details on individual case studies.

(3) Escuelas Nuevas

Ever since funding for the Escuelas Unitarias by UNICEF terminated in 1971, the 3,257 one-room and one-teacher schools in Guatemala have been left on their own. Funds for supervision and supplies have been virtually non-existent. For instance, the coordinator for Sololá has a budget for 46 Quetzales per month and no vehicle to visit over 100 schools, some in very remote areas that can only be reached on foot. The conditions in these schools are probably among the worst in the country and the schools do, in fact, have the most severe drop-out and repetition problems. Children in these rural areas urgently need radical improvement in the quality of educational facilities, teaching methods, and curriculum content.

The school in Panimaja' was an example of a one-room school where parents were concerned about severe problems of discipline and of relatively little learning from a curriculum they considered to be irrelevant. Because of the highly deteriorated condition of these schools, very special care and attention should be given to the 100 schools in the Escuela Nueva pilot effort.

The needs assessment/qualitative research study should be carefully designed to identify schools in communities with sufficient sociolinguistic and cultural variation to assure identification of the entire range of problems faced by the Escuela Unitaria system. The linguistic mapping study could be used for preliminary identification of say 200 schools, and the needs assessment should then be used to narrow the field to the desired 100 schools.

Supervisory personnel on both the regional and central levels pointed out that the one-room teacher core was somewhat better prepared, had an innate ability to improvise, and had developed much better relations with parents than other rural teachers. Other than such assertions, we have no reliable data distinguishing these teachers from the rest in terms of attitudes and actual behaviors in their school communities. These teachers could quite possibly be the most conservative and set in their antiquated ways than other rural teachers; these are questions that must be answered prior to the selection of the pilot project sample.

If the decision is made to use new or never employed teachers as a control group, their placement in Escuelas Unitarias would be essential. This would provide an excellent opportunity to study the efficacy of curriculum reform and teacher training, and the ability to mold close community relations. More specifically, the ability of teachers to implement and sustain cooperative and participative learning methodology, flexible groupings and time, and community involvement as non-formal educators will be one of the most delicate and potentially problematic areas in this project. Even if the teachers become technically competent in the new pedagogy, a deficiency in abilities to interrelate with community residents and leaders on a collegial basis will drastically reduce the chances for success. Unless parents are involved in discussions of the new curricula from the very beginning, chances are they will view the "innovations" as yet another imposition from the outside and will not cooperate to the extent necessary.

Without full parental cooperation, it is highly unlikely that students will be able to form school councils to increase participation and incorporate relevant aspects of community life into school functions. These are extensive and complex interventions requiring optimal conditions to succeed; the general character of rural teacher, student, and community relations underscores the difficulties that lie ahead for this project component.

At present, we do not have much reliable data on the nature and mechanisms of community participation in the educational curriculum and in the teaching process itself. Will parents participate at all? Are there regional or cultural differences t t influence the form and degree of participation? What should teachers do to insure optimal participation?

In order to answer such questions, a small number of Escuelas Nuevas (ten would be a manageable number) should be selected for intense long-term case studies. Ethnographic methods would be effective in providing detailed qualitative data, with the condition that appropriate and well-trained investigators are used.

(4) The Project Components and Female Students

There is overwhelming recognition that more females than males never enroll in school, drop out sooner, and have higher repetition rates; these same statistics are many times worse for rural indigenous girls. Under the current social and economic conditions prevailing in Guatemala, there is no simple and universally applicable solution to this ubiquitous problem.

All publicity, from mass media to local interpersonal communication, should emphasize the importance of education for women. Examples should be used to reinforce the need for literacy and basic mathematics for market activities and the budgeting of limited incomes to maximize purchasing power. Moreover, it should be pointed out that an increasing number of women are entering market activities that involve purchase and resale. These activities could be done much more efficiently and could generate better profits for those who are literate and can perform basic mathematical calculations.

In-service training of teachers should pay special attention to strategies that can be used to encourage parents to enroll their daughters or convince them of the utility of remaining in school. Curriculum content should be designed to interest females and to take into consideration local cultural and linguistic variations and gender oriented activities. Gender issues should be considered in mapping activities, surveys, and needs assessments to be done for project components.

It would not be unreasonable for the project to have one staff member in charge of all aspects of female involvement and to monitor relative achievement. As we all know, it is a simple matter to make stipulations in the planning stage, but during the long process of implementation, gender issues could easily fall by the wayside. A specific staff position would alert project directors to potential problems and suggest alternative and/or corrective action.

4. BEST Project Spread Effects

Educational projects do not have the tangible and quantifiable outputs that agricultural projects have (e.g., an increase in agricultural production due to a new soil management technology). Instead, as a result of an educational project, the number of individuals from particular communities with specific abilities and aspirations increases. Once a certain investment has been made in education, individuals must use their learned skills or else they gradually forget how to read, write, and do simple math. In any population, some will go beyond their primary education to become professionals in a variety of fields, and some will continue a traditional agrarian way of life. The point, however, is that those who go on to become successful, in part, because of educational achievement, will be recognized and admired well beyond their own communities. Our interviews showed that this is already beginning to happen in Sololá, and most certainly has a potential to spread over wide areas.

Since so many communities will be involved in the PRONEBI expansion, Radio Spanish, and the Escuela Nueva model, most certainly some communities will have positive experiences as a result of the project interventions, and others will have less than optimal experiences; communities not included will be aware of the fact that something new is happening to education in surrounding regions. Word of both successes and failures will spread over large areas in the Altiplano, the South Coast, the Oriente, and elsewhere. If the Project is able to generate predominantly positive experiences, other communities will want to be included in the educational activities. This, however, would put additional pressure on the MOE to increase expenditures and train additional personnel.

There is also considerable potential for a spread-effect among teachers. Above we discussed possible teacher inertia and resistance to change which could be alleviated by the positive experiences of those who have benefited by the project in terms of improved teaching experiences and community relations. Of course, the reverse is also quite possible.

5. Social Consequences and Benefit Incidence

As the BEST Project components are implemented, enrollments in the upper grades are expected to increase for both males and females, leading to a significant increase in the number of primary school graduates. A secondary effect will be that more individuals will also go to and complete secondary school and beyond. As the number of graduates at all levels goes up and the public, in general, becomes better educated, there will be increased competition for jobs with educational prerequisites.

Assuming that the next decade will bring economic expansion to Guatemala, the steadily increasing number of graduates will be able to benefit from their parents' investment in education. The overall effects would be improved rural incomes and living standards which, in turn, will encourage more families to send their children to school and to insist that they remain in school longer.

The interplay between education and productive economic activities would reduce temporary labor migration in indigenous areas currently dependent on this source of income supplements; the Mam-speaking region would be particularly affected. At the same time, there could be a gradual increase in rural to urban migration as a result of a saturation of the rural sector. Decentralization of food processing for export agriculture and other small-scale commercial and industrial activities would reduce this trend to some extent. Again, overall economic well-being is the critical issue that will determine the perceived utility of education and continued parental investment.

Under the assumption of increased economic well-being, another consequence would be the strengthening of local political, ethnic, and development organizations. These groups would, in all probability, pressure the government and its ministries to provide more services and to make greater investments in rural development. Included in such demands would be greater access to resources such as technical inputs, credit, markets, and, of course, land itself. Economic declines and recessions could result in tension between rural interests and the internal political economy of future governments.

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ANNEX E.4

ADMINISTRATIVE ANALYSIS

A. OVERVIEW

The Basic Education Strengthening Project is designed to provide a series of support services to classroom teachers in order to improve the quality of instruction in primary schools. It does not have as an objective the creation or restructuring of organizational units. In terms of institutional units that will implement the Project, the Project is highly decentralized, involving six Ministry of Education Units, five private sector institutions, and an institutional contractor. While the different components are designed to reinforce each other in the field, they are not administratively interdependent. Delays or problems in one component will not affect the implementation of others.

In the Ministry of Education, Project components will increase the quality and coverage of ongoing services provided by existing units. Working through existing units reduces problems of project administration, implementation, and long term institutionalization, compared with a project approach that involves the creation of new services or units. Adminstratively, reinforcing existing services and units does not require the creation of large numbers of new staff positions, the negotiation of new lines in the GOG budget, the legal establishment of new departments or offices, the negotiation of responsibilites and lines of authority vis a vis other MOE units and officials, or the rental and equipping of new office space. The fact that the Project involves a number of different MOE administrative units, rather than just one, has a number of additional advantages. Each activity is of manageable size. No single administrative unit is in danger of being swamped by more resources than it can handle. Success under the Project in effective units should motivate other slower-moving units to improve their performance. Most important, there is no single project implementation unit that can complicate and retard project implementation by bottling up resources, bureaucratizing administrative procedures, and getting into turf battles with other pre-existing MOE administrative units.

Services will be implemented in MOE administrative units that already are functioning with some degree of success. This fact gives the Mission confidence that the Project activities in the Ministry of Education can be successfully implemented. Each implementing unit already has professional and administrative staff with experience and an established track record. Furthermore, each activity was designed in direct and detailed consultation with the specific MOE unit that will subsequently be responsible for its implementation. The strengths and weaknesses of the different units became clear in the course of Project design, and technical assistance and staff training were custom designed to strengthen the implementing units where specific weaknesses were detected.

Project activities that are non-traditional, experimental, potentially controversial, or technically sophisticated will be implemented through the Guatemalan private sector. The Ministry of Education is presently overburdened with existing activities and with its delivery of traditional formal public school services. It is unlikely that the Ministry could effectively carry out the Project's educational research and experimental pilot project activities, which require the utilization of complex and sophisticated evaluation techniques, new technologies, and potentially controversial pedagogical techniques. Experience has shown that Ministries of Education usually do not offer a favorable institutional environment for innovation or for research and development (R & D). The public sector is often unable to contract for the kinds of expensive, short-term, technically sophisticated, creative talent needed for R & D activities. Furthermore, public sector executives often have difficulty justifying to their constituencies, both internal (teachers) and external (parents and the news media) the use of resources for seemingly exotic activities of little immediate utility when such basic necessities as desks and chalk are in short supply. Finally, the public sector "education establishment" has a tendency to be somewhat politicized and technologically tradition-bound, creating a difficult environment for serious long-term R & D activities.

Fortunately, the Guatemalan private sector includes a number of institutions that offer resources and orientations that make them ideally suited to carry out the Project activities that did not look feasible as public sector, Ministry of Education, activities. While there are some elements in the Guatemalan private sector that are not favorably disposed toward working collaboratively with the Government, there are also a number of institutions that contain the kind of sophisticated and innovative services, people, and facilities needed to carry out R & D activities successfully. Fortunately, there is also a history of constructive collaboration between some of these private sector organizations and the Ministry of Education, demonstrating that collaborative activities using complementary public sector and private sector resources is feasible.

Because of the large number of institutional players involved in the Project, several coordinating mechanisms are provided in the Project design to make sure that activities run smoothly and in a mutually-reinforcing way. First, the Ministry of Education will establish a special Project Management Unit in the Minister's Office that will promote cooperation among the different participating MOE units, among all international donor-financed projects, and between the public and private sector project activities.

Second, having a single institutional contractor responsible for technical assistance and training in all Project components will assure that contract resources are used in ways that promote complementarity and avoid duplication. Third, a professional "Management by Objectives" contractor will be hired to establish and track progress toward meeting project objectives and benchmarks. The participatory Management by Objectives approach directly involves all Project staff from all components in the negotiation and tracking of progress, and, if used as planned, will lead to spontaneous and continuous coordination of activities.

The sections that follow discuss the institutional capabilities of the units and organizations that will be responsible for implementation of the different Project activities. Several "bulk annexes," referred to in the text, contain additional background information on implementing units.

B. MINISTRY OF EDUCATION

Bulk Annex 1 contains a general description of the structure of the Ministry of Education. This section describes only the specific MOE Units reponsible for implementation of BEST Project components.

1. PRONEBI - Programa Nacional de Educación Bilingue

PRONEBI will be responsible for the implementation of BEST Component, "Bilingual Education." PRONEBI has adequate administrative structure and staff to undertake the additional activities of the new Project. PRONEBI has developed a cadre of indigenous administrators and professionals who have built up their credibility through the experience and academic credentials they have gained in the program. These individuals form a pool of leadership which can, if necessary, fill the void left by the anticipated retirement of the present PRONEBI director. The basic financial and administrative systems of PRONEBI are well developed and have functioned successfully.

There is a lack of space in the present facilites for either the staff to be added through the reprogramming of funds or for those needed to carry out the mapping activity to be supported by the Project. This activity will be housed elsewhere but will include the close involvement of PRONEBI staff.

The operational units of PRONEBI are divided into four components: administration, pre-school/primary education, curriculum development, and training. The director's office is responsible for the overall administration of the program. It consists of the PRONEBI director, the associate director, two secretaries, and the four national consultants in the office of public relations. The director of the program has been a key figure in mediating among the various interest groups in PRONEBI.

The administration unit consists of a unit chief, an accountant, a purchasing agent, a bookkeeper, a cashier, a motor pool coordinator, a warehouseman, and several secretaries. Its primary functions are to manage the finances of the organization, provide logistical support, and take responsibility for procurement and inventory of materials and furniture. The unit has successfully obtained commodities and interacted with the financial offices of the Ministry and AID over the past four years and should be able to carry out the administrative functions related to revising PRONEBI's instructional materials and expanding the program.

The pre-school/primary unit is responsible for the coordination of teacher placement with the MOE and supervisory activities for the bilingual schools. The unit consists of a section chief, a Guatemalan consultant in supervision, and a field staff of seven regional coordinators and 41 supervisors. This field staff is to be augmented by 12 new supervisors hired with the reprogrammed funds. All of the supervisors have been incorporated into the MOE regionalization effort and thus provide services to primary and secondary schools in urban areas as well as to PRONEBI schools. The regional coordinators, although working with the regionalization program, have not yet been officially made part of it. They work out of offices established as part of the PRONEBI program. The majority of the PRONEBI supervisors have recently completed university degrees in educational administration and have been involved in both pedagogical and administrative aspects of PRONEBI's teacher training efforts. Thus, both the physical infrastructure and the trained administrative personnel exist for revising the curriculum and for expanding the program on a regional basis.

The curriculum development unit is responsible for producing the teachers guides, student texts, and supplementary materials for pre-school through fourth grade in four Mayan languages (Mam, Kakchikel, Q'eq'chi, K'ich'e). The unit is headed by a coordinator who integrates activities among the four curriculum development teams. Each of these teams consists of a leader/curriculum designer, an anthropologist/linguist, two writers, and a secretary. The teams are to be strengthened by six additional writers who will be hired under the reprogrammed funds. These individuals will begin the development of curriculum materials in the four linguistic groups targeted by PRONEBI for expansion efforts. These are: Ixil, Kanjobal, Tzutuhil, and Pocomchi.

The training unit and its staff have been primarily responsible for coorindating the in-service training of the supervisors and other PRONEBI staff, and for developing an in-service professionalization course for bilingual pre-school teachers. Both of these activities will be completed in 1989. The national consultant in curriculum has also assisted in organizing the in-service teacher training workshops. Reprogrammed funds are to be used to hire a unit chief and eight training specialists to develop in-service modules aimed at improving PRONEBI teachers' use of the materials.

The research and evaluation unit is responsible for developing and validating tests designed to measure curriculum objectives in two languages. The unit is also carrying out a longitudinal evaluation of the program, using measures such as desertion and repetition rates. Its research and evaluation efforts are internal to PRONEBI and there is no integration with the USIPE data collection efforts. The unit has a chief, a national consultant in evaluation, four data personnel, and field data collection teams consisting of two individuals for each of the four major linguistic areas. The reprogramming is to finance eight motorcycles for field research, and four new computers for the unit as well as the salaries of two additional data entry personnel and 12 additional interviewers.

PRONEBI is a relatively strong and well-run MOE unit. In part because of its continuous AID support, it has been insulated from the political changes that periodically buffet the rest of the Ministry. It also has enjoyed generous and uninterrupted budget support. These advantages, obviously beneficial in terms of implementation of the PRONEBI program to date, also represent potential obstacles to the permanent institutionalization of bilingual education. Because of generous financing, the PRONEBI development team has not had to make its approach inexpensive. This could jeopardize the eventual massification and sustainability of bilingual education when AID support ends. PRONEBI's relative autonomy and generous budget have also made it the object of institutional jealousies and rivalries which could also endanger its survival when AID support ends. PRONEBI has come to function as a somewhat isolated, independet, autonomous unit, duplicating some functions (supervision, textbooks, curriculum design, in-service teacher training) of other MOE units, administering its own funds, and setting its own policies. AID, MOE executives, and some PRONEBI staff, have recognized this situation as a potential liability for bilingual education in the long term. For this reason, the MOE and PRONEBI have drawn up a plan for the gradual integration of PRONEBI into the mainstream of Ministry administrative structure, primarily by beginning to "deconcentrate" PRONEBI into the new regional administration offices. During the initial two-year "consolidation" phase of the BEST Project, this plan will be reviewed and refined. A balance between autonomy and institutionalization will be sought, always with the objective of defining an institutional approach that best serves the long-term interests of the indigenous population of Guatemala. Care will be taken to see that PRONEBI does not prematurely lose its vital "critical mass" before bilingual education is fully developed and institutionalized. Also, in the course of the BEST Project, bridges will be built to other MOE units in an effort to begin to merge functions that presently are duplicative. For example, the Project will promote linkages to SIMAC for curriculum design and textbook development and to the Dirección General de Educación for supervision. The program will evolve toward a more flexible "service center" approach which can respond to the varying needs of bilingual and monolingual schools in different parts of the country. Ultimately, bilingual education for the indigenous population should be woven into all aspects of MOE activities, gradually reducing the need for a separate, A.I.D-dependent administrative unit.

2 SIMAC - Sistema Nacional de Mejoramiento y Adecuación Curricular

SIMAC is the MOE Unit that will be financed by the Basic Education Strengthening Project to implement distance in-service teacher training. Since SIMAC is a new unit founded in 1986, and somewhat controversial within the Ministry of Education, the BEST Project design team performed an evaluation of SIMAC. This evaluation document, along with other descriptive documents, is contained in Bulk File No. 2, available in USAID/Guatemala. Briefly, the evaluation found that SIMAC's initial efforts at formulating a new national curriculum have been a back-to to basics" approach in terms of content, combined with a modern, participatory approach in terms of teaching methods and presentation. With regard to SIMAC's national program of in-service teacher training, the evaluation revealed that the program was a qualified success. Overall, coverage was spotty, the teaching materials were difficult to use, and the training too short and superficial. In spite of these problems, SIMAC has made a promising start toward meeting several critical needs. The evaluation showed that 60 percent of teachers support SIMAC's overall approach; 80 percent report that SIMAC's training was too short, revealing demand for more in-service training from SIMAC.

SIMAC is currently working in eight regions and covering approximately 9332 schools and 13,000 teachers. The organizational profile of SIMAC follows.

Mission: Curriculum Adaptation and Development and Teacher Training

- Level of Operation: National

- Funding: 45 percent MOE and 55 percent external (UNICEF, UNDP/UNESCO, Holland, USAID/ESF)

- Legal Base: Specific law for its creation and MOE decrees that designate SIMAC as the only unit with responsibility and authority to develop/adapt curriclum and to train teachers in such an endeavor.

- Technical Approach: participative and integrated process involving all MOE parties concerned with qualitative education factors.

- Main Activities: diagnostic research, learning needs assessments, formulation of learning objectives, identification of content and delivery strategies, training of multiplier agents and teachers, development and provision of materials.

- Articulation/Coordination: at Central level with offices of Minister and Vice Minister; at Regional level with Directors; at Departmental and District levels with supervisor.

- Staff: 40 technicians (positions have been created although not all have been filled), 8 administrative and 12 support personnel. SIMAC has permanent technical representatives of all major MOE education improvement projects and technical delegates at each regional office.

- Budget: $2.7 million in 1989
  $2.8 million in 1990

Prior to SIMAC there was no systematic, coordinated approach to in-service teacher training in the Ministry of Eduction. Demand for more SIMAC training by teachers and the positive impact of in-service training in other projects and in other countries clearly indicates the need to strengthen SIMAC's training capability.

The World Bank's new Second Basic Education Project ("Educación Mínima") will support the costs of SIMAC's formal face-to-face program of field workshops and courses for teachers. AID's Basic Education Strenghtening Project will support complementary non-formal "distance" continuing education services for teachers, including a program of correspondence study and a professional periodical for teachers.

SIMAC does not presently have the capacity to carry out the planned AID-financed distance education activities. The BEST Project will therefore provide technical assistance to train SIMAC staff and to develop the new distance education services and support materials. The Ministry of Education will provide new staff (see Project Description) to strengthen SIMAC's capability to implement these services and to sustain them when AID assistance ends.

3. USIPE: Unidad Sectorial de Investigación y Planificación Educativa

USIPE's Management Information System and planning capability will be strengthened by the BEST Project. USIPE is the Eduction Sector Investigation and Planning Office, a straight line dependency of the Minister's office that performs its advisory function through data analysis and consultation. It is responsible for research, planning, budgeting and administrative development of educational programs. As such, USIPE functions as the central nervous system of the MOE, gathering information from the schools, integrating and analyzing information, and setting priorities for resources.

To carry out this vitally important function, USIPE has six divisions:

(a) programming and socioeconomic studies,
(b) information and statistics,
(c) curriculum development,
(d) administrative development,
(e) physical resources development, and,
(f) project development.

Each division has a chief who reports to the director and the deputy director of USIPE.

USIPE has a total staff of 130 individuals of which about one-third are technical specialists or administrators with university degrees. The largest division is programming and socioeconomic studies, which integrates and presents to the Ministry of Finance the MOE yearly budget. A key task of the division is to determine the need for all (current and new) MOE personnel, representing by far the largest element in the MOE's budget. This division, however, rarely conducts socioeconomic studies or evaluations to guide budget allocations.

Since its creation in 1975, USIPE has played an important role in the formulation of policies and in the design of sector improvement projects. In this regard, the director of USIPE usually represents the MOE before the Ministry of Finance and the National Economic Planning Council. Its information and expertise in infrastructure planning, project development, and budgeting have given USIPE a seat at the table in the design and negotiation of projects. However, USIPE is not strong enough to satisfy the information, research, and planning needs of the MOE.

In order to enhance its role as the MOE's general planning office, USIPE will have to overcome some basic deficiencies. For example, the information system is incomplete and data management procedures are obsolete (mainly manual and aggregative). USIPE already has basic information gathering forms and manuals but data processing is slow and cumbersome, and the reports that are generated are untimely and devoid of sound planning information. The BEST project will seek to overcome this particular deficiency.

It should be emphasized that BEST Project interventions are not designed simply to upgrade USIPE's data storage and processing capability. The ultimate payoff from data and information derives from its utilization by management. The Project will provide technical assistance in the development of efficient and clear analysis and reporting of educational data. The objectives of this assistance will be both internal and external. Internally, timely and effective reporting will facilitate the correct and appropriate use of statistical data for making critical management decisions, such as the optimal allocation of budgetary and human resources. Externally, effective reporting will be designed to give the MOE increased access to underutilized available resources, such as the Core Development Budget.

4 DGEE - Dirección General de Educación Escolar

This directorate is subordinate to the Vice-Minister for Technical Affairs and provides technical and logistical support to the various programs and levels of education. In the BEST Project it is anticipated that DGEE will be responsible for undertaking the improvement of the supervision system, as well as supporting activities such as the Unitary Schools and Radio Mathematics. DGEE is responsible for all aspects of qualitative improvement in formal schools and has eight offices within it that help to fulfill its functions and responsibilities. The DGEE has the following units and responsibilities:

a) The Directorate of Urban Primary and Pre-Primary Education has responsibility for public education services in the Department of Guatemala, the capital. All supervisors for primary education in the capital report to this directorate.

b) The Directorate of Student Welfare and Special Education, which includes the Department of Academic and Vocational Guidance, provides services to primary schools through in-service training of teachers and by sending specialists such as psychologists to schools.

c) The Directorate of Secondary Education.

d) The Directorate of Social Rural Educational Programs.

e) The Directorate of Aesthetic Education.

f) The Directorate of General Supervision provides supervision to areas outside the capital. This unit will be responsible initially for implementing BEST Project support to the national network of field school supervisors. In each department there is at least one supervisor who is responsible for servicing both public and private primary and secondary schools. In larger departments, there is a head supervisor with district supervisors within the department. All of these are responsible for both primary and secondary education.

g) The Directorate of Physical Education.

h) The Adult Education and Literacy Directorate.

Currently the Department and District Supervisors are administratively responsible to the DGEE but their technical work must be coordinated with the Regional Directors in the Regional Administrative Offices. This duality of authority does not permit assignment of responsibility to the Regional Directors, in spite of the fact that the majority of the training and supervision activities are carried out in each region.

The DGEE currently operates the national network of 320 departmental and district supervisors. Initial implementation of the BEST Project Componnet II activities, which provide support for improving field supervision, will therefore initially take place with the DGEE. However the MOE intends to "deconcentrate" the field supervisory network by moving control from the central Ministry's DGEE office to the eight regional administrative offices. Project technical assistance will be made available to help assure that this shift, when it is made, is implemented in such a way that the field supervisory function will be facilitated and improved by the change.

5. The Regional Offices

The GOG Regionalization Program has potentially serious implications for the national public school system. The Regionalization Program presented a design challenge to the BEST Project design team and to USAID/Guatemala, because at the time the Project was being developed, the real impact and effective institutionalization of the program was yet to be seen. The over GOG political commitment to regionalization was, at the time of BEST Project development, extremely strong. However, the regionalization program must be viewed as a political initiative of the regime that conceived and articulated it until it has passed the test of survival under other governments that will follow the present one. Also, even if political rhetoric in support of regionalization continues to be strong, only time will tell the extent to which effective administrative and executive decision-making authority is really delegated from Central Ministry units to the regional offices. If effective authority is delegated, the regional offices may really function to make educational services more efficient and responsive to local needs. If, on the other hand, most real authority is ultimately retained at the central level, then the regional offices could become simply another intermediate administrative level, decreasing the responsiveness of MOE decision-makers and administrators to MOE staff in the local schools.

A.I.D. has provided cautious support to the regionalization initiative in the education sector. Specifically, A.I.D. provided $500,000 through the Primary Education Management Improvement Project (520-0320) to furnish the eight regional offices, to provide each with a car, and to train their staff. As of the writing of the BEST Project Paper, these inputs were being provided and implemented efficiently. Individuals were selected to run the eight offices who are solid, well-qualified, career professionals. Initial indications, therefore, are that the GOG's regionalization initiative in the education sector is off to a strong start. However, the crucial decisions concerning specific authorities that will be delegated and a schedule for delegation, including the phase-out of central MOE units and staff, are not yet complete. The final verdict on regionalization will not be issued for at least three to four more years.

The BEST Project approach to regionalization will continue to be one of support. Specifically, the Project's approach to regionalization will have the following features:

1) Component 4 will directly support regionalization by providing eight local management information systems in the eight regional offices to support the reporting, tabulation, and analysis of educational statistics at the regional level. The objective of this part of the Component 4 MIS activity is to provide the statistical information needed for effective decision-making, planning, and allocation of resources at the regional level. This kind of management information support is an essential prerequisite for effective regional management and administration. However, the regional MISs will not be established until the central USIPE MISs and data base are installed and functioning smoothly, since the regional MIS will be serving as remote terminals in a national MOE data network, with USIPE serving as the central node.

2) Components 1 and 2 will work assiduously to integrate their services and staffs into the regional administrative apparatus. The pace and implementation strategy for this transfer will be gradual and evolutionary. Only when it becomes clear that regional offices can effectively provide administrative support and backstopping superior to that presently provided by MOE central units will activities be shifted to regional offices. This process will be planned jointly by the implementing units, the Project Coordinating Unit, the Technical Assistance contractor, and the USAID/Guatemala Project Office. It is expected that this possible transfer of implementation responsibilites for BEST Project activities to the regional offices will not begin until the regionalization program is on a firm footing, perhaps in the third or fourth year of the Project.

It should be added that Component 1 and 2 activities are designed so that they can be effectively implemented either with or without regionalization. while it is the intent of the Mission to regionalize the implementation of Project activities if and when it appears prudent and advantageous to do so, regionalized implementation is not a formal requirement of the Project nor is it incorporated specifically into the Project implementation plan. Given the evolutionary nature of the GOG regionalization initiative, a flexible approach and attitude on the part of AID and the units responsible for Project implementation is the best course.

A detailed description of the GOG regionalization initiative and backup documentation are found in Bulk Annex 3, avilable from USAID/Guatemala.

6. The MOE Project Coordinating Unit

Project implementation responsibility will rest directly with different MOE functional units. An overall Project Implementation Unit will not be created. Nevertheless, the MOE has created a high level Management Unit directly in the Minister's Office. The purpose of the Office is to remedy the slow implementation of donor-financed projects in the MOE by creating a high level advocate/coordinator with direct access and accountability to the Minister. This Unit has many advantages. First, it does not have direct implementation responsibility, so it will not constitute a bottleneck if it does not work well. Second, its high level ministerial mandate should give it administrative clout to move the cumbersome MOE bureaucracy when there are problems. Third, since it deals with all donor-financed projects, it should be in a unique position to coordinate different donor activities, avoiding conflict and duplication.

The implementation of each of the project components will be the responsibility of the specific unit directly involved (PRONEBI, USIPE, SIMAC, DGEE, etc). The legal mandate creating this overall Management Office does not yet exist, but it is operating informally and implementing actions to facilitate the development of educational projects that receive external financing. The Office will be made up of a Coordinator and five technicians in Pedagogy, Civil Engineering, Financial Administration, Institutional Development, and Project Management.

This Office will be strengthened with BEST Project human and economic resources in order to insure the permanence of an expediting unit within the MOE structure that will facilitate the implementation of externally financed projects. The BEST Project should be considered as only one activity of the Management Office so as to avoid creating another new bureaucratic unit for this Project. Financial support will be provided for two professionals in the Office: an economist, specialized in financial administration; and an administrator, specialized in project management.

Besides being a link between Projects and the Ministry, this Office will also be a facilitator for each executing unit, giving unity to the work plans so that they meet overall goals and objectives established in project documents and Ministerial education policies.

Technical Assistance for administrative help in this Project will be located in the Managerial Office and will provide assistance in coordination with all of the projects under its responsibility.

The Director or coordinator of the Management Office will:

- coordinate the educational project formulation process for presentation to international financing agencies,

- coordinate the follow-up and evaluation process for actions that are implemented by the Ministerial units with international financing,

- coordinate the preparation of operational plans for the projects executed by the Ministry of Education with international financing,

- participate in the financial management follow-up process of the Ministry of Education,

- participate in the follow-up and evaluation of those actions implemented or carried out within the framework of programs and projects executed by the Ministry of Education,

- represent the Ministry of Education in the process of negotiation of international cooperation projects, and in its relations with international donor organizations,

- participate in the process of implementation and evaluation of budgetary policies in the Ministry of Education,

- coordinate the technical team which makes up the Management Office,

- be the technical-administrative liaison between the Ministerial Office and the administrative units that implement projects.

C. PRIVATE SECTOR INSTITUTIONS

One of the constraints to improving basic education services in Guatemala has been a failure to mobilize community and private sector resources. In part because of Guatemala's comparatively low national budget allocations for primary education relative to other Latin American countries, the Ministry of Education is ill equipped to provide the necessary services to students that will ultimately ensure their academic achievement. Although the GOG is increasing its monetary support for education, serious deficiencies can only be remedied by immediate interventions of additional resources and services. A chief mechanism for providing needed services to children, which will be developed by this Project, is the systematic utilization of private sector capabilities, including Guatemalan business and industry, the Guatemalan university system, and local communities.

Utilization of private sector interests and resources, including funds, products, and talents, is important for several reasons. Private sector organizations are generally less restricted by the cumbersome legal measures and approval mechanisms that constrain the public sector. Private sector organizations are able to allocate funds for designated purposes in relatively short periods. In addition, private sector organizations are able to move quickly to implement activities.

Private sector involvement has other advantages. Private sector organizations generally have an established infrastructure. Although the members of the organizations may change, organization structures generally remain stable and the organizational purposes are not modified to a significant extent. Public sector entities, however, because of changes in government administrations, are vulnerable to what are often major changes in organizational structure and in purpose. The continuity of private sector organizations can contribute to the sustainability of project activities and in the consistency of both human and monetary resources.

The involvement of the private sector in activities to improve primary education has two objectives. First, host country organizations, with identified expertise in certain fields, can be contracted to carry out specific project activities. Tapping these resources not only benefits the Project, but also helps to develop capacity and sustain qualified organizations. Second, groups can be strategically selected that will stimulate interest and concern in education in the country. Nurturing such interest and concern can have several effects. It can encourage groups to focus on those educational deficiencies in the country that the MOE does not have the resources to ameliorate. The interest and concern can also be channeled into constructive ways to offer expertise that will improve the operations of schools. For example, in the case of the projects of the Cámara de Industria to provide school supplies (canastas escolares) to primary school children, individual industry leaders personally delivered the canastas escolares to the schools. Once visiting the schools and witnessing the conditions in the schools, they then took the initiative to focus on other ways that they might be of assistance (e.g., sponsoring extra curricular activities, providing enrichment lectures and classes, assisting teachers in the classroom, etc.). This kind of individual initiative could be developed systematically into other activities that could benefit primary schools throughout the country.

Cooperation between the private sector (business and industry) and the Ministry of Education is a relatively recent phenomenon in Guatemala. On the other hand, the MOE has long-standing relationships with Guatemala's public and private universities. Historically, the unviersities have not only contributed curriculum materials, training, and other services to public education in Guatemala, but the MOE has also requested a variety of services from the universities.

Several private sector groups have worked successfully with A.I.D. on a number of activities and have demonstrated capabilities in specific areas. In addition, other groups are becoming increasingly more visible and show potential for contributing in specific capacities to the improvement of primary education in Guatemala.

To provide an indication of the impressive capability and resources that exist in the Guatemalan private sector to implement BEST project R&D activities, this section briefly summarizes the capabilities and experience of several leading private institutions. This list is intended to be illustrative, not exhaustive, and is included to demonstrate the feasibility of successfully accomplishing Project R&D activities through Guatemalan private sector institutions.

(a) ASIES

ASIES (La Asociación de Investigaciones y Estudios de Guatemala), a private, non-profit "think tank," was founded in 1982. Since that time, ASIES has conducted a wide range of studies in the social sciences. Although ASIES has primary skills in economic analysis, it also has a bank of consultants with diverse skills who complement the permanent staff of researchers. Among their contributions to education are the drafting of the law of literacy (alfabetización) and a series of documents on relevant approaches, within the context of contemporary needs in Guatemala, for teaching all subjects in the school curriculum. ASIES has conducted a number of studies for the Ministry of Education and has, since its inception, responded to requests of the Ministry of Education for needed services, including activities in coooperation with SIMAC, the national curriculum development program. ASIES presently has initiated a new project that is analyzing and testing ways of improving the efficiency of Guatemala's 3000 one-room schools.

(b) Universidad del Valle de Guatemala

The Universidad del Valle has, since its founding as a laboratory school (first as the Colegio Americano de Guatemala and later expanding to include the Universidad del Valle), identified itself as a higher education institution with a strong research capability. Del Valle has been committed to addressing the social and economic development needs of Guatemala by means of its five major research and development activities: educational research, test development, curriculum development, teacher training, and educational services. It operates the Institute of Educational Research; the Center for Research on Population, Environment, and Natural Resources; and the Center for Research on Tropical Diseases. One of the major research activities at del Valle has been a longitudinal study of Guatemalan children's physical development. In addition, the university has the most complete bank of elementary school test items in Guatemala. Among its programs, the University has established master's degree programs in educational testing and measurement, educational administration, and curriculum planning.

(c) Universidad Rafael Landívar

The Universidad Rafael Landívar, a private Jesuit university, has established a cooperative relationship with the Ministry of Education, particularly in its support of rural education. As part of its program in learning disabilities (educación especial), Landívar students serve as practice teachers in local public schools. In addition, the University offers a specialization in social communication and has a distance education program in development agriculture, with sponsorship from the Dutch government.

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Although not well known, CINDEC (Centro de Investigaciones en Educación), affiliated with the Latin American information network (REDUC), is housed at the Univesidad Landívar. With modest support from A.I.D. and other international donors, the REDUC network has increased its number of centers and services in Latin American countries, providing documents, journal articles, and research information to researchers throughout Latin America. REDUC is an ongoing program at Landívar. The University also conducts a project for training of rural development promoters which was initiated with A.I.D. funding 20 years ago.

(d) Cámara de Industria

The Cámara de Industria is one of the seven Chambers that are affiliated with the umbrella organization, the Cámara Empresarial. It has successfully provided basic educational materials (canastas escolares) to school children in metropolitan Guatemala City each year since 1986 (20,000 in 1986, 25,000 in 1987, and 30,000 in 1988). The canasta escolar includes basic school materials that families are unable to provide for their children. The Cámara de Industria has successfully motivated its members to contribute their time, funds, and products to school children.

D. BUDGETARY TRENDS IN GUATEMALAN EDUCATION

The Ministry of Education's budget has been growing continously in real terms over the last four years (1986 to 1989). Nevertheless, as a percentage of the National Budget it has remained steady at about 13 percent. For 1990, an increase of at least 80 million quetzales has been projected by the Government for education.

The largest increases in the MOE budget are in operating expenses, particularly salaries. Table 1 shows that capital investment has declined as a percentage of the education budget. Expendable items such as textbooks and school furniture are regarded as operating costs rather than as capital expenditures.

One of the reasons that education expenditures have increased since 1986 is that the new Constitution sets aside five percent of the national budget for the Ministry of Education. Table 2 shows that expenditures for education have increased by 173 percent since 1980, an average increase of 20 percent per year. However, expressed as a percentage of Gross National Product, national expenditures for education have remained relatively steady. About 58 percent of the Ministry's budget is used for primary education. Table 3 shows that the National University budget (USAC) consumes 20 percent of the MOE budget, and that the USAC budget increased by 97 percent in the four years between 1986 and 1989. Currently, the Ministry of Education is making a concerted effort to increase the education budget, with special emphasis on increasing the budgetary levels for primary education. It is the stated intention of present MOE executives to increase the education budget annually, with a goal of reaching three percent of the Gross National Product by 1995.

Table 1

MONTO DEL PRESUPUESTO DESTINADO A FUNCIONAMIENTO E INVERSION Y RELACION PORCENTUAL RESPECTO AL PRESUPUESTO TOTAL PROGRAMADO DEL MINISTERIO DE EDUCACION
AÑOS 1986 - 1989

Años	Presupuesto total programado del MINEDUC	%	Funcionamiento	%	Inversión	%
1986	226,085,297	100	215,403,298	95.28	10,681,999	4.72
1987	329,876,851	100	311,997,286	94.58	17,879,565	5.42
1988	385,365,526	100	366,962,990	95.22	18,402,536	4.78
1989	439,565,429	100	419,117,659	95.35	20,447,770	4.65

Fuente: Presupuesto de Ingresos y Egresos del Estado. Ministerio de Finanzas Públicas 1986 - 1989.

Table 2

PRESUPUESTO DEL MINISTERIO DE EDUCACION Y SU RELACION
CON EL PRODUCTO INTERNO BRUTO 1980 - 1988
(MILLONES EN QUETZALES)

Año	a Producto interno bruto	b Presupuesto del Ministerio de educación	b/a Relación porcentual
1980	7 879.4	140.8	1.79
1981	8 607.6	156.7	1.82
1982	8 727.8	156.7	1.80
1983	8 717.3	162.9	1.87
1984	9 500.0	167.2	1.76
1985	11 027.00	171.2	1.55
1986	15 785.0	226.1	1.43
1987	17 514.0	332.6	1.90
1988	20 696.0 /p	385.4	1.80

Fuente: Presupuesto de Ingresos y Egresos del Estado.
Departamento de Estudios Económicos del Banco de Guatemala

p/Cifra Preliminar

Table 3

PRESUPUESTO DE GASTOS DEL MINISTERIO DE EDUCACION SEGUN GASTOS ESPECIFICOS
A OS 1986 - 1989

CONCEPTO	1986	%	1987	%	1988	%	1989	%
	226,085,297	100	329 876,851	100	385,365,526	100	439 565,429	100
1. Política Salarial	157,156,973	61.51	203,529,266	61.70	228,314,877	59.24	263,010,000	59.83
a. Sueldos	83,719,726	37.03	128,119,416	30.84	154,503,265	40.09	187,000,000	42.54
b. Bonificación de Emergencia	73,437,247	32.38	75 409,850	22.86	73,811,612	19.15	76,010,000	17.29
2. USAC	45,336,854	20.05	65,790,000	19.94	76,326,867	19.81	89,266.474	20.31
3. CONALFA	9,067,371	4.01	13,158,000	3.99	14,471,573	3.76	17,853,295	4.06
4. DEPORTE	4,508,244	2.00	6,579,000	2 00	7,632,687	1.98	8,926,647	2.03
5. OTROS GASTOS	10,015,855	4.43	40,820,585	12.37	58,619,922	15.21	60,509,013	13.77

Fuente: Presupuesto de Ingresos y Egresos del Estado. Ministerio de Finanzas Públicas 1986- 1989.

ANNEX F

SUMMARY REVIEW OF USAID/GUATEMALA ACTIVITIES IN RURAL EDUCATION

I. Introduction

This annex constitutes a brief review of the major projects financed by USAID, Guatemala in rural education since 1968. The major source of information for this annex was the Evaluation of USAID-Assisted Educational Sector Programs in Guatemala, 1969-1983: Final Report. Summaries taken from that report were augmented by several project summary evaluations, the Mission Education Sector Strategy, and comments from USAID, OHRD staff.

II. Project Overviews

Sustained AID assistance to Guatemala to improve the educational system began about 1961 with the Alliance for Progress. From that date to 1967, this assistance provided 3,123 classrooms, some 35 percent of the classrooms of that time. AID also provided technical assistance (3 percent of the AID program), training (17 percent) and textbooks (11 percent).

In 1968 USAID and the GOG negotiated a loan agreement (520-L-015) for $8.6 million with a counterpart of $6.6 million. The project built two normal schools and 27 regional schools (to serve as nuclear schools for smaller satellite schools) and 265 urban and rural primary classrooms. Over two million primary school textbooks were published and distributed. These included 33 titles for the primary school curriculum, plus titles in basic literacy and pre-school materials for indigenous children. Teachers from the 27 regional schools were trained in using a problem-solving methodology in teaching.

Another Loan project (520-L-025) was negotiated in 1975 to expand the programs of the 1968 loan into the Western Highland Area (Altiplano) and Eastern region (Oriente) of the Country. It was for $7 million with $5.7 million in counterpart funds. Construction under this project included 27 primary schools upgraded to standards for regional schools, 70 primary schools upgraded to satellite schools, two normal schools expanded, 19 administrative library or storeroom units, 186 primary school classrooms, 24 manual arts or multi-purpose units, six dormitories, and eight teacher residences. The instructional materials provided included 806,000 primary textbooks, 34,000 teacher guides and 673,000 adult literacy primers.

A new loan (520-L-029) was negotiated in 1977. Its primary purpose was to restore schools damaged in the 1976 earthquake, supplementing the disaster relief funds, but it also was to continue the expansion of the

primary education programs of the previous two loans. It was for $5.7 million, with $6.2 million in counterpart funds. The project constructed three regional schools, three satellite schools, ten urban schools, thirty-eight rural schools, one normal school, and repaired two more urban schools. It furnished 33,000 textbooks, 6,000 teacher guides, and 13,000 bilingual pre-school primers.

A controlled nonformal education experiment was started in 1973, the Basic Village Education Project (598-15-190-551), to test the cost-effectiveness of different communications media mixes in instructing rural people in practical agricultural matters. AID provided $1.7 million in grant funds with $600,000 in GOG counterpart funds. In addition to experimental results, the project equipped and established two radio stations (Momostenango and Quesada) with staffs capable of producing and broadcasting effective Non-Formal Education programs. The experimental project also resulted in the Basic Rural Education Project, with $1.3 million in AID grant funds and $4 million in GOG counterpart funds. The project established a Non-Formal Education service (literacy, agriculture, health, sanitation, etc.) which reached some 10,000 people a year in over 200 rural communities in highland departments. Three hundred community promoters were trained to assist in the educational process.

By 1979 it was becoming clear that a major difficulty with the Rural Primary Education program was that it was not reaching non-Spanish speaking children, and in that year the Bilingual Education Project (520-0358) was started with $1.9 million in AID grant funds and $1.1 million in GOG counterpart funds. This pilot project developed preprimary and first and second grade instructional materials in the four major Indian languages. This project was also to train local bilingual teachers and promoters to use the materials, using the methodology from the other AID Primary Education Projects, and to train a curriculum development staff.

To supplement the Primary and Non-Formal Education Projects, an Educational Administration Project(520-0259) was agreed upon in 1980. AID contributed $915,000 in grant funds. This was a training project with the following outputs: 205 district supervisors in a 60 hour short course, 18 Ministry educators with Master's Degrees from the Universidad del Valle and four M.A.'s from the University of New Mexico, 35 Ministry of Education department heads in a 70 hour course, and 40 school district secretaries in a one week course.

The Bilingual Education Project proved to be successful. The prototype curriculum, methodology, and materials were tried out in 40 schools, and in 1985 a follow-on project (Primary Education Improvement Project - Bilingual Education 520-0282) got underway to expand the program to 400 schools and to go up through the fourth grade. It is now a five year project with funding from AID in the form of a $10.2 million loan and a $3.3 million grant, and approximately $25 million of GOG counterpart funds.

The Basic Rural Education Project also resulted in a follow-on project, the Integrated Non-Formal Education Project (520-0281). AID provided $2.0 million in loan and $860,000 in grant funds and the GOG provided $4.7 million in counterpart funds. The life of the project was from September 1982 to March 1988. It improved the non-formal education services nationally, expanded the NFE Secretariat's center in Quetzaltenango, and developed another such center and a radio station in Salama, Baja Verapaz.

Lastly, and most recently, USAID has supported the MOE regionalization effort with a $500,000 grant. Grant funds have financed a series of workshops at the regional, department and district levels as well as furniture, equipment, and some vehicles for the newly formed regional offices.

III. Some Lessons Learned

A.I.D. assistance has made a difference quantitatively and qualitatively in Guatemala's rural education, but it is going to take considerably longer than originally anticipated to bring about necessary changes. There are no "quick fixes". Many project gains seem to have been psychologically institutionalized by Ministry personnel even if they are not financially institutionalized.

Meeting the pressing needs of rural education is well beyond the reach of the GOG's financial ability (noted in 1983), and beyond the reach of any sole donor. The financial and technical assistance of other international donors is needed.

Many of the qualitative project gains of AID-funded projects require extensive ongoing in-service teacher training and curriculum revision if they are to continue. It is unrealistic to expect the GOG to expand gains made.

A.I.D.-assisted projects are well designed, but overly ambitious in terms of objectives, time/cost estimates, and projections of GOG ability to continue gains realized. The real accomplishments of the A.I.D. projects are sufficiently impressive; "puffing-up" the design should not be necessary.

Two of the most critical objectives of the primary school reform projects were affected adversely by two unanticipated bureaucratic bottlenecks: the difficulty in getting textbooks out of the Ministry of Education warehouse and the Department of Personnel's extreme reluctance to offer teaching positions to the graduates of the two normal schools constructed with A.I.D. assistance. It is recommended that USAID/Guatemala include a provision in all future project agreements that outlines a procedure for dealing expeditiously with unanticipated bottlenecks situated in any GOG agency. The procedure should have teeth and A.I.D. should not hesitate to invoke the necessary provisions.

There needs to be the willingness and flexibility to address small issues and unforeseen details encountered during project implementation.

Example No. 1: After expending over $3 million dollars to build two normal schools to train teachers who were to teach in isolated rural areas, the student-teacher supervisors were not provided with motorcycles to visit the practice teachers. The supervisors were limited to bus transportation--a very cheap but time-consuming way to travel in rural Guatemala. Providing the supervisors with motorcycles would have enabled them to at least triple their visits to practice teachers.

Example No. 2: Three AID-sponsored projects spent $2.7 million to provide textbooks to poor rural children, but while pencils were provided, the students were not given tablets for writing.

Example No. 3: After spending millions of dollars on school construction, and a small amount on the development of a simple, illustrated manual for building maintenance, funds were not provided to print and distribute the manual to school personnel.

Example No. 4: As noted in 1983, rural teachers in especially isolated areas cannot obtain any supplies within a year of request. (They have a hard enough time getting paid). The educational infrastructure lacks the wherewithal to redress small oversights. These oversights are ultimately, and in the aggregate, important. The educational system would be well served by a humane mechanism staffed by people who really care about the plight of every rural teacher and school-aged child. It is recommended that an Ombudsman's office within the Ministry of Education be created with the authority and budget needed to cut through red tape and take action.

Experience in the non-formal education projects raised questions regarding the MOE's capability to establish and manage a radio station operation. Subsequently, it was recommended that institutional analyses carefully study the administrative and technical capacity of executing agencies to use new technology, and to be wary of involving host government agencies in areas where their competence has not been tested.

Budget Master No.1 Rest Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
COMPONENT I														
BILINGUAL EDUCATION														
1. Mapping														
Technical Assist.														
a. long-term			134		65								199	0
b. short-term			9		1								10	0
Local Salaries			57		23								81	0
Operational Costs														
a. Maintainance/Gasoline			10		4								14	0
b. Supplies			1										1	0
c. Office Rental			16		8								23	0
Commodities														
a. Vehicles			37										37	0
b. Computer hardware/ Software			19										19	0
c. Furniture			3										3	0
d. Photocopier			5										5	0
Training			13										13	0
Local Travel			22										29	0
Activity Sub-Total	0	0	327	0	108	0	0	0	0	0	0	0	435	0
2. Revising Texts and Guides														
Technical Assist.														
a. long-term			150		420		270						840	6
b. short-term			45		45		30						120	0
Local Salaries					126	5400	63	2700					189	8100
Operational Costs														
a. Maintainance/gas ($30,000)					30		10						0	0
b. Supplies					90	21	50	10					40	0
c. Rents (15,000)					15		7						0	0
d. Insurance (13,000)					13		7						140	31
Commodities													22	0
a. Desktop Publishing (2,000)							2						20	0
b.													2	0
c.													0	0
Training													0	0
Local Travel													0	0
							1						4	0
Activity Sub-Total	0	0	195	0	741	5421	440	2710	0	0	0	0	1377	8131

Budget Master No.1 Best Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
3. Expansion														
Technical Assist.														
a. long-term														
b. short-term							121		181		120		420	0
Local Salaries							31		31		15		75	0
Operational Costs							61	270	121	5400	126	5400	315	13500
a. Maintainance/Gas (50,000)														
b. Supplies (100,000)							41		56		50		140	0
c. Rents (15,000)							50	1	100	21	100	21	250	53
d. Insurance (13,000)							7		15		15		37	0
Commodities							7		13		13		33	0
a. Furniture														
b. Texts							0	331	0	336	0	336	0	1008
c. Vehicles (5x 15,000)					177		900		900		900		2877	0
Training					85								85	0
Local Travel													0	0
					128		130		128		128		514	0
Activity Sub-Total	0	0	0	0	390	-	1347	3047	1542				4746	4561
Activity Sub-Total Tech. Assist.	0	0	338	0	531	0	450	0	210				1664	0
Activity Sub-Total Local Salaries	0	0	57	0	149	5400	126	5400	126				585	21600
Activity Sub-Total Oper. Cost	0	0	27	0	160	21	178	21	178				721	84
Activity Sub-Total Commodities	0	0	64	0	262	0	902	336	900				3028	1008
Activity Sub-Total Training	0	0	13	0	0	0	0	0	0				13	0
Activity Sub-Total Local Travel	0	0	23	0	137	0	131	0	128				547	0
Sub-Total Component I	0	0	523	0	1239	5421	1787	5757	1542				5558	22692

Budget Master No.1 Best Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
COMPONENT II														
TEACHER SERVICES														
1. In-Service Training														
Technical Assist.														
a. long-term			300		150		150						600	0
b. short-term					45								45	0
Local Salaries		44		175		175		175		175		175	0	919
Operational Costs														
a. Materials	20		30		40		25		25		25		165	0
b. Gasoline, etc.	5		5		5		5		5		5		30	0
c. Printing, Composition	50		150		150		100	25	50	50	50	75	550	150
Commodities														
a. Equipment			60		100								160	0
b. Vehicles	85												85	0
c.													0	0
Training													0	0
Local Travel			17		16		18		15		15		79	0
Activity Sub-Total	160	44	562	175	[illegible]	175	296	200	95	225	95	250	1714	1069
2. Supervisors														
Technical Assist.														
a. long-term			150		150								300	0
b. short-term							30		30				60	0
Local Salaries		1000		1000		1000		1000		1000		1000	0	6000
Operational Costs														
a. Materials	25	12	25	12	25	12	25	12	25	12	25	12	150	72
b. Maintenance,Gas,Insura.	75		150		150		150		150		150		825	0
c.													0	0
Commodities														
a. Vehicles	[illegible]													
b. Motorcycles	600												374	0
c. Equipment	200		50										600	0
Training			65		33		33		33		33		250	0
Local Travel	31		31		30		30		30		30		197	0
													102	0
Activity Sub-Total	1305	1012	471	1012	380	1012	268	1012	268	1012	238	1012	2938	6072

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Budget Master No.1 Best Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
3. Materials														
Commodities														
a. canastas	350		350		350		350		350		350		2100	0
Activity Sub-Total	350	0	350	0	350	0	350	0	350	0	350	0	2100	0
**. Achievement Testin														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries														
Operational Costs														
a. Materials													0	0
b. Printing													0	0
c.														
Commodities													0	0
a. Equipment													0	0
b.														
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Community Participatio														
Technical Assist.														
a. long-term													0	0
b. short-term			45				15		15				75	0
Local Salaries													0	0
Operational Costs														
a.													0	0
b.													0	0
c.													0	0
Commodities														
a. Advertising Contract			105		105		105		105				420	0
b.													0	0
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	150	0	105	0	120	0	120	0	0	0	495	0
Activity Sub-Total Tech. Assist.	0	0	495	0	345	0	195	0	45	0	0	0	1080	0
Activity Sub-Total Salaries	0	1044	0	1175	0	1175	0	1175	0	1175	0	1175	0	6919
Activity Sub-Total Oper. Cost	175	12	360	12	370	12	305	37	255	62	255	87	1720	222
Activity Sub-Total Commodities	1689	0	565	0	555	0	455	0	455	0	350	0	3989	0
Activity Sub-Total Training	0	0	65	0	33	0	33	0	33	0	33	0	197	0
Activity Sub-Total Local Travel	31	0	48	0	46	0	46	0	45	0	45	0	261	0
Sub-Total Component II	1815	1056	1533	1187	1349	1187	1034	1212	833	1237	683	1262	7247	7141

Budget Master No.1 Base Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
COMPONENT III														
ALTERNATIVE METHODOLOGIES														
1. Interactive Radio														
Technical Assist.														
a. long-term			388		360		160		180		90		1378	0
b. short-term			165		135		75		15		0		398	0
Local Salaries			116		192		192		172		152		824	0
Operational Costs													0	0
a. Office			94		42		42		42		35		254	0
b. Pilote Activities			255		163		163		111		88		779	0
c. Gas, Maintainance			4		9		9		9		7		38	0
Commodities													0	0
a. Studio Equipment			223										223	0
b. Computers and Supplies			96										96	0
c. Vehicles			74										74	0
Training			31		8		4		3		1		47	0
Local Travel			7		8		8		6		4		32	0
Activity Sub-Total	0	0	1452	0	917	0	853	0	538	0	385	0	4143	0
2. Escuela Nueva														
Technical Assist.														
a. long-term			318										318	0
b. short-term					15		15		15		15		60	0
Local Salaries	33	250	81	250	81	250	81	250	81	250	35	250	390	500
Operational Costs													0	0
a. vehicle maintanence			2		2		2		2		2		10	0
b. materials	26		52		26		26		13		13		156	0
c.													0	0
Commodities													0	0
a. Furniture	210												210	0
b. Vehicles	23												23	0
c. Equipment	30												30	0
d.													0	0
Training	59		20										79	0
Local Travel	7		9		7		7		7		7		42	0
Activity Sub-Total	387	250	482	250	[illegible]	250	130	250	117	[illegible]	72	250	1318	500

Budget Master No.1 Best Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
Activity Sub-Total Tech. Assist.	0	0	871	0	510	0	450	0	210	0	113	0	2154	0
Activity Sub-Total Local Salaries	33	250	196	250	273	250	273	250	252	250	187	250	1214	1500
Activity Sub-Total Oper. Cost	26	0	406	0	241	0	241	0	176	0	145	0	1236	0
Activity Sub-Total Commodities	263	0	393	0	0	0	0	0	0	0	0	0	656	0
Activity Sub-Total Training	59	0	51	0	8	0	4	0	3	0	1	0	126	0
Activity Sub-Total Local Travel	7	0	16	0	15	0	15	0	12	0	11	0	75	0
Sub-Total Component III	387	250	1934	250	1047	250	983	250	653	250	457	250	5461	500

Budget Master No.1 Best Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
COMPONENT IV														
EDUCATIONAL ADMINISTRATION														
1. MIS														
Technical Assist.														
a. long-term	21		222		237		235		33		10		758	0
b. short-term	75		118		117		102		15		2		429	0
Local Salaries	0	24	14	54	14	84	14	113	7	113	7	105	56	493
Operational Costs													0	0
a. Supplies	36		98		95		88		62		61		438	0
Commodities													0	0
a. Equipment	54		211		137		120		12		0		534	0
Training	1		35		61		61		9		9		176	0
Local Travel	10		18		31		33		33		27		152	0
Activity Sub-Total	97	24	716	54	692	84	651	113	171	113	116	105	2543	493
88. Research														
Commodities														
a. Research Contracts													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Basic Research														
Technical Assist.														
a. long-term	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. short-term	0	0	45	0	45	0	0	0	0	0	0	0	90	0
Local Salaries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operational Costs													0	0
a. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commodities													0	0
a. Research Contracts	0	0	210	0	263	0	221	0	168	0	168	0	1030	0
Training Material/Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total	0	0	255	0	308	0	221	0	168	0	168	0	1120	0

Budget Master No.1 Best Project ($000)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
3. Personnel														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries			60										60	0
Operational Costs													0	0
a.													0	0
Commodities													0	0
a. Software													0	0
Training			181		20		20		20		20		260	0
Local Travel													0	0
													0	0
Activity Sub-Total	0	0	240	0	20	0	20	0	20	0	20	0	320	0
Activity Sub-Total Tech. Assist.	56	0	445	0	389	0	337	0	48	0	12	0	1337	0
Activity Sub-Total Salaries	0	24	14	54	14	84	14	113	7	113	7	105	56	493
Activity Sub-Total Oper. Cost	36	0	98	0	95	0	86	0	62	0	61	0	438	0
Activity Sub-Total Commodities	54	0	601	0	420	0	361	0	200	0	188	0	1823	0
Activity Sub-Total Training	1	0	35	0	61	0	61	0	9	0	9	0	176	0
Activity Sub-Total Local Travel	10	0	18	0	31	0	33	0	33	0	27	0	152	0
Sub-Total Component IV	197	24	1211	54	1020	84	892	113	359	113	304	105	3983	493

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* * * RESUME Of BUDGET MASTER No.1 BEST PROJECT ($000) * * *

* * * RESUME * * *	.....		Year 2		Year 3		Year 4		.....		.....		.....	
	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG	AID	GOG
Activity Sub-Total Tech. Assist.	96	0	2149	0	1785	0	1432	0	513	0	260	0	6234	0
Activity Sub-Total Salaries	33	1318	268	1479	437	6909	413	6938	385	6938	320	6930	1855	30512
Activity Sub-Total Oper. Cost	237	12	891	12	866	33	810	58	672	83	639	108	4115	306
Activity Sub-Total Commodities	1926	0	1623	0	1237	0	1716	336	1555	336	1438	336	9496	1008
Activity Sub-Total Training	80	0	164	0	102	0	98	0	45	0	43	0	508	0
Activity Sub-Total Local Travel	48	0	105	0	229	0	225	0	218	0	211	0	1036	0
TOTAL COMPONENTS 1,2,3,4	2400	1330	5201	1491	4656	6942	4696	7332	3386	7357	2910	7374	23249	31826
Management & Administration														
a. Chief of Party			90		90		90		90		90		450	
b. HOE Coordinator	30		30		30		30		30		30		180	
c. PSC - U.S.A.I.D.	60		120		120		120		120		120		660	
d. Home Office Coordinator			25		25		25		25		25		125	
e. Office salaries			13		13		13		13		13		65	
f. Office operating expenses			15		15		15		15		15		75	
g. Office equipment			5										5	
h. Travel expenses			2		2		2		2		2		10	
Sub-Total Management & Admon.	90	0	300	0	295	0	295	0	295	0	295	0	1570	0
Total Components & Management A.	2490	1330	5501	1491	4951	6942	4991	7332	3681	7357	3205	7374	24819	31826
Inflation (5% Compounded)	0		435		504		552		580		489		2480	0
Contingency	200		350		350		350		350		351		1951	0
Evaluation, Audit and Special Studies	50		100		150		100		100		250		750	0
G R A N D T O T A L . . .	2740	1330	6386	1491	5956	6942	5893	7332	4631	7357	4295	7374	30000	31826

A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
COMPONENT I														
BILINGUAL EDUCATION														
1. Mapping														
Technical Assist.														
a. long-term			134		65								199	0
b. short-term			9		1								10	0
Local Salaries			57		23								81	0
Operational Costs														0
a. Maintainance/Gasoline			10		4								14	0
b. Supplies			1										1	0
c. Office Rental			16		8								23	0
Commodities														0
a. Vehicles			37										37	0
b. Computer hardware/													0	0
Software			19										19	0
c. Furniture			3										3	0
d. Photocopier			5										5	0
Training			13										13	0
Local Travel			22		7								29	0
Activity Sub-Total	0	0	327	0	108	0	0	0	0	0	0	0	435	0
2. Revising Texts and Guides														
Technical Assist.														
a. long-term			150		300	120	150	120					600	240
b. short-term			45		45		30						120	0
Local Salaries						126		63					0	189
Operational Costs														
a. Maintainance/gas													0	0
($30,000)						30		10					0	40
													0	0
b. Supplies						90		50					0	140
c. Rents (15,000)						15		7					0	22
d. Insurance (13,000)						13		7					0	20
Commodities														
a. Desktop Publishing													0	0
(2,000)							2						2	0
b.													0	0
c.													0	0
Training													0	0
Local Travel			1		2		1						4	0
Activity Sub-Total	0	0	196	0	347	394	183	257	0	0	0	0	726	651

A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
3. Expansion														
Technical Assist.														
a. long-term							120		60	120		120	180	240
b. short-term							30		30		15		75	0
Local Salaries								63		126		126	0	315
Operational Costs														
a. Maintainance/Gas (50,000)								40		50		50	0	140
b. Supplies (100,000)								50		100		100	0	250
c. Rents (15,000)								7		15		15	0	37
d. Insurance (13,000)								7		13		13	0	33
Commodities														
a. Furniture								0		0		0	0	0
b. Texts					177	0	900	0	900	0	900	0	2877	0
c. Vehicles (5x 15,000)					85								85	0
Training													0	0
Local Travel						128	2	128		128		128	2	512
Activity Sub-Total	0	0	0	0	262	128	1052	295	990	552	915	552	3219	1527
Activity Sub-Total Tech. Assist.	0	0	338	0	411	120	330	120	90	120	15	120	1184	480
Activity Sub-Total Local Salaries	0	0	57	0	23	126	0	126	0	126	0	126	80	505
Activity Sub-Total Oper. Cost	0	0	27	0	12	148	0	178	0	178	0	178	39	682
Activity Sub-Total Commodities	0	0	64	0	262	0	902	0	900	0	900	0	3028	0
Activity Sub-Total Training	0	0	13	0	0	0	0	0	0	0	0	0	13	0
Activity Sub-Total Local Travel	0	0	23	0	9	128	3	128	0	128	0	128	35	512
Sub-Total Component I	0	0	523	0	717	522	1235	552	990	552	915	552	4380	2178

A.I.D. Budget Master Best Project ($000) - Dollar (FI) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC
COMPONENT II														
TEACHER SERVICES														
1. In-Service Training														
Technical Assist.														
a. long-term			300		150		150						600	0
b. short-term					45								45	0
Local Salaries													0	0
Operational Costs														
a. Materials		20		30		40		25		25		25	0	165
b. Gasoline, etc.		5		5		5		5		5		5	0	30
c. Printing, Composition		50		150		150		100		50		50	0	550
Commodities														
a. Equipment			60		100								160	0
b. Vehicles	85												85	0
c.													0	0
Training													0	0
Local Travel			2	15	1	15	1	15		15		15	4	75
Activity Sub-Total	85	75	362	200	296	210	151	145	0	95	0	95	894	820
2. Supervisors														
Technical Assist.														
a. long-term			150		150								300	0
b. short-term							30		30		0		60	0
Local Salaries													0	0
Operational Costs														
a. Materials		25		25		25		25		25		25	0	150
b. Maintenance, Gas, Insura.		75		150		150		150		150		150	0	825
c.													0	0
Commodities														
a. Vehicles	374												374	0
b. Motorcycles	600												600	0
c. Equipment	80	120	25	25									105	145
Training			65	0	33	0	33	0	33	0	33	0	197	0
Local Travel		31	1	30	1	29		30		30		30	2	180
Activity Sub-Total	1054	251	241	230	184	204	63	205	63	205	33	205	1638	1300

A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
3. Materials														
Commodities														
a. canastas		350		350		350		350		350		350	0	2100
Activity Sub-Total	0	350	0	350	0	350	0	350	0	350	0	350	0	2100
4. Community Participation														
Technical Assist.														
a. long-term													0	0
b. short-term			45				15		15				75	0
Local Salaries													0	0
Operational Costs													0	
a.													0	0
b.													0	0
c.													0	0
Commodities													0	0
a. Advertising Contract			105		105		105		105				420	0
b.													0	0
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	150	0	105	0	120	0	120	0	0	0	495	0
Activity Sub-Total Tech. Assist.	0	0	495	0	345	0	195	0	45	0	0	0	1080	0
Activity Sub-Total Salaries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Oper. Cost	0	175	0	360	0	370	0	305	0	255	0	255	0	1720
Activity Sub-Total Commodities	1139	470	190	375	205	350	105	350	105	350	0	350	1744	2245
Activity Sub-Total Training	0	0	65	0	33	0	33	0	33	0	33	0	197	0
Activity Sub-Total Local Travel	0	31	3	45	2	44	1	45	0	45	0	45	6	255
Sub-Total Component II	1139	676	753	780	585	764	334	700	183	650	33	650	3027	4220

A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
COMPONENT III														
ALTERNATIVE METHODOLOGIES														
1. Interactive Radio														
Technical Assist.														
a. long-term			388		360		360		180		90		1378	0
b. short-term			165		135		75		15		8		398	0
Local Salaries			116		192		192		172		152		824	0
Operational Costs														
a. Office			94		42		42		42		35		254	0
b. Pilote Activities			255		163		163		111		88		779	0
c. Gas, Maintainance			4		9		9		9		7		38	0
Commodities														
a. Studio Equipment			223		0		0		0		0		223	0
b. Computers and Supplies			96		0		0		0		0		96	0
c. Vehicles			74										74	0
Training			31		8		4		3		1		47	0
Local Travel			7		8		8		5		4		32	0
Activity Sub-Total	0	0	1452	0	917	0	853	0	536	0	385	0	4143	0
2. Escuela Nueva														
Technical Assist.														
a. long-term			318										318	0
b. short-term					15		15		15		15		60	0
Local Salaries	33		81		81		81		81		35		390	0
Operational Costs														
a. vehicle maintanence			2		2		2		2		2		10	0
b. materials	26		52		26		26		13		13		156	0
c.													0	0
Commodities														
a. Furniture	210												210	0
b. Vehicles	23												23	0
c. Equipment	30												30	0
d.														
Training	59		20										79	0
Local Travel	7		9		7		7		7		7		42	0
Activity Sub-Total	387	0	482	0	130	0	130	0	117	0	72	0	1318	0

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A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
Activity Sub-Total Tech. Assist.	0	0	871	0	510	0	450	0	210	0	113	0	2154	0
Activity Sub-Total Local Salaries	33	0	196	0	273	0	273	0	252	0	187	0	1214	0
Activity Sub-Total Oper. Cost	26	0	406	0	241	0	241	0	176	0	145	0	1236	0
Activity Sub-Total Commodities	263	0	393	0	0	0	0	0	0	0	0	0	656	0
Activity Sub-Total Training	59	0	51	0	8	0	4	0	3	0	1	0	126	0
Activity Sub-Total Local Travel	7	0	16	0	15	0	15	0	12	0	11	0	75	0
Sub-Total Component III	387	0	1934	0	1047	0	983	0	653	0	457	0	5461	0

A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
COMPONENT IV														
EDUCATIONAL ADMINISTRATION														
1. MIS														
Technical Assist.														
a. long-term	21		222		237		235		33		10		758	0
b. short-term	75		118		117		102		15		2		429	0
Local Salaries	0		14		14		14		7		7		56	0
Operational Costs													0	0
a. Supplies	36		96		95		86		62		61		438	0
Commodities													0	0
a. Equipment	54		211		137		120-		12		0		534	0
Training	1		35		61		61		9		9		176	0
Local Travel	10		18		31		33		33		27		152	0
Activity Sub-Total	197	0	716	0	692	0	651	0	171	0	116	0	2543	0
2. Basic Research														
Technical Assist.														
a. long-term	0		0		0		0		0		0		0	0
b. short-term	0		45		45		0		0		0		90	0
Local Salaries	0		0		0		0		0		0		0	0
Operational Costs													0	0
a. Supplies	0		0		0		0		0		0		0	0
Commodities													0	0
a. Research Contracts	0		210		263		221		168		168		1030	0
Training Material/Costs	0		0		0		0		0		0		0	0
Local Travel	0		0		0		0		0		0		0	0
Activity Sub-Total	0	0	255	0	308	0	221	0	168	0	168	0	1120	0

A.I.D. Budget Master Best Project ($000) - Dollar (FX) and Local Currency (LC) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
3. Personnel														
Technical Assist.														
a. long-term													0	0
b. short-term			60										0	0
Local Salaries													60	0
Operational Costs													0	0
a.													0	0
Commodities													0	0
a. Software			180		20		20		20		20		0	0
Training													260	0
Local Travel													0	0
													0	0
Activity Sub-Total	0	0	240	0	20	0	20	0	20	0	20	0	320	0
Activity Sub-Total Tech. Assist.	96	0	445	0	399	0	337	0	48	0	12	0	1337	0
Activity Sub-Total Salaries	0	0	14	0	14	0	14	0	7	0	7	0	56	0
Activity Sub-Total Oper. Cost	36	0	98	0	95	0	86	0	62	0	61	0	438	0
Activity Sub-Total Commodities	54	0	601	0	420	0	361	0	200	0	188	0	1823	0
Activity Sub-Total Training	1	0	35	0	61	0	61	0	9	0	9	0	176	0
Activity Sub-Total Local Travel	10	0	18	0	31	0	33	0	33	0	27	0	152	0
Sub-Total Component IV	197	0	1211	0	1020	0	892	0	359	0	304	0	3983	0

* * * A.I.D. RESUME OF BUDGET MASTER BEST PROJECT ($000) * * *

* * * RESUME * * *	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
Activity Sub-Total Tech. Assist.	96	0	2149	0	1665	120	1312	120	393	120	140	120	5755	479
Activity Sub-Total Salaries	33	0	268	0	310	127	287	126	259	126	194	126	1351	504
Activity Sub-Total Oper. Cost	62	175	531	360	348	518	327	483	238	434	206	433	1712	2403
Activity Sub-Total Commodities	1456	470	1248	375	887	350	1368	350	1205	350	1086	350	7252	2244
Activity Sub-Total Training	60	0	164	0	102	0	98	0	45	0	43	0	508	0
Activity Sub-Total Local Travel	17	31	60	45	57	172	52	173	45	173	38	173	269	767
TOTAL COMPONENTS 1,2,3,4	1724	676	4421	780	3369	1287	3444	1252	2185	1201	1708	1202	16851	6398
Management & Administration														
a. Chief of Party			90		90		90		90		90		450	0
b. MOE Coordinator	0	30	0	30	0	30	0	30	0	30	0	30	0	180
c. PSC - U.S.A.I.D.	60		120		120		120		120		120		660	0
d. Home Office Coordinator			25		25		25		25		25		125	0
e. Office salaries			13	0	13	0	13	0	13	0	13	0	65	0
f. Office operating expenses			15	0	15	0	15	0	15	0	15	0	75	0
g. Office equipment			5	0									5	0
h. Travel expenses			2	0	2	0	2	0	2	0	2	0	10	0
Sub-Total Management & Admin.	60	30	270	30	265	30	265	30	265	30	265	30	1390	180
Total Components & Management A.	1784	706	4691	810	3634	1317	3709	1282	2450	1231	1973	1232	18241	6578
Inflation (5% Compounded on FX and 15% Compounded on LC)	0	0	169	266	126	378	142	410	89	411	78	411	604	1876
Contingency	200		350		350		350		350		351		1951	0
Audit and Evaluation Activities	50		100		150		100		100		250		750	0
GRAND TOTAL...	2034	706	5310	1076	4260	1695	4301	1692	2989	1642	2652	1643	21546	8454
	2740		6386		5955		5993		4631		4295		30000	

G.O.G. Budget Master Best Project ($000) - On Going (ONG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
COMPONENT I														
BILINGUAL EDUCATION														
1. Mapping														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries													0	0
Operational Costs														
a. Maintainance/Gasoline													0	0
b. Supplies													0	0
c. Office Rental													0	0
Commodities														
a. Vehicles													0	0
b. Computer hardware/ Software													0	0
c. Furniture													0	0
d. Photocopier													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Revising Texts and Guide														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries					5400		2700						8100	0
Operational Costs														
a. Maintainance/gas ($30,000)													0	0
													0	0
b. Supplies					21		10						31	0
c. Rents (15,000)													0	0
d. Insurance (13,000)													0	0
Commodities														
a. Desktop Publishing (2,000)													0	0
b.													0	0
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	5421	0	2710	0	0	0	0	0	8131	0

G.O.G. Budget Master Rent Project (8000) - On Going (ONG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
3. Expansion														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries							2700		5400		5400		13500	0
Operational Costs														
a. Maintainance/Gas (50,000)													0	0
b. Supplies (100,000)							11		21		21		53	0
c. Rents (15,000)													0	0
d. Insurance (13,000)													0	0
Commodities														
a. Furniture								336		336		336	0	1008
b. Texts													0	0
c. Vehicles (5x 16,000)													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	0	0	2711	336	5421	336	5421	336	13553	008
Activity Sub-Total Tech. Assist.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Local Salaries	0	0	0	0	5400	0	5400	0	5400	0	5400	0	21600	0
Activity Sub-Total Oper. Cost	0	0	0	0	21	0	21	0	21	0	21	0	84	0
Activity Sub-Total Commodities	0	0	0	0	0	0	0	336	0	336	0	336	0	008
Activity Sub-Total Training	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Local Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total Component I	0	0	0	0	5421	0	5421	336	5421	336	5421	336	21684	008

G.O.G. Budget Master Best Project ($000) - On Going (ONG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
COMPONENT II														
TEACHER SERVICES														
1. In-Service Training														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries		44		175		175		175		175		175	0	919
Operational Costs														
a. Materials													0	0
b. Gasoline, etc.													0	0
c. Printing, Composition								25		50		75	0	150
Commodities														
a. Equipment													0	0
b. Vehicles													0	0
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	44	0	175	0	175	0	200	0	225	0	250	0	1069
2. Supervisors														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries	1000		1000		1000		1000		1000		1000		6000	0
Operational Costs														
a. Materials		12		12		12		12		12		12	0	72
b. Maintenance,Gas,Insura.													0	0
c.													0	0
Commodities														
a. Vehicles													0	0
b. Motorcycles													0	0
c. Equipment													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	1000	12	1000	12	1000	12	1000	12	1000	12	1000	12	6000	72

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G.O.G. Budget Master Best Project ($000) - On Going (ONG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	---	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
3. Materials														
Commodities														
a. cassettes														
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88. Achievement Testing														
Technical Assist.														
a. long-term														
b. short-term														
Local Salaries													0	0
Operational Costs													0	0
a. Materials														
b. Printing														
c.													0	0
Commodities													0	0
a. Equipment														
b.													0	0
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Community Participation														
Technical Assist.														
a. long-term														
b. short-term													0	0
Local Salaries													0	0
Operational Costs													0	0
a.														
b.													0	0
c.													0	0
Commodities													0	0
a. Advertising Contract														
b.													0	0
c.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Tech. Assist.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Salaries	1000	44	1000	175	1000	175	1000	175	1000	175	1000	175	000	19
Activity Sub-Total Oper. Cost	0	12	0	12	0	12	0	37	0	62	0	87	0	22
Activity Sub-Total Commodities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Training	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Local Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total Component II	1000	56	1000	187	1000	187	1000	212	1000	237	1000	262	000	11

G.O.G. Budget Master Best Project ($000) - On Going (ONG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
COMPONENT III														
ALTERNATIVE METHODOLOGIES														
1. Interactive Radio														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries													0	0
Operational Costs														
a. Office													0	0
b. Pilote Activities													0	0
c. Gas, Maintainance													0	0
Commodities														
a. Studio Equipment													0	0
b. Computers and Supplies													0	0
c. Vehicles													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Escuela Nueva														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries	250		250		250		250		250		250		1500	0
Operational Costs													0	0
a. vehicle maintanence													0	0
b. materials													0	0
c.													0	0
Commodities													0	0
a. Furniture													0	0
b. Vehicles													0	0
c. Equipment													0	0
d.													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	250	0	250	0	250	0	250	0	250	0	250	0	[illegible]	0
Activity Sub-Total Tech. Assist.	0	0	0	0	0	0	0	0	0	0	0	0	[illegible]	0
Activity Sub-Total Local Salaries	250	0	250	0	250	0	250	0	250	0	250	0	500	0
Activity Sub-Total Oper. Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Commodities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Training	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Local Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total Component III	250	0	250	0	250	0	250	0	250	0	250	0	500	0

G.O.G. Budget Master Best Project ($000) - On Going (OHG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	OHG	NEW	OHG	NEW	OHG	NEW	OHG	NEW	OHG	NEW	OHG	NEW	OHG	NEW
COMPONENT IV														
EDUCATIONAL ADMINISTRATION														
1. MIS														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries	24		54		84		113		113		105		493	0
Operational Costs													0	0
a. Supplies													0	0
Commodities													0	0
a. Equipment													0	0
Training													0	0
Local Travel													0	0
Activity Sub-Total	24	0	54	0	84	0	113	0	113	0	105	0	13	
88. Research														
Commodities														
a. Research Contracts													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Basic Research														
Technical Assist.														
a. long-term	0	0	0		0		0		0		0		0	0
b. short-term	0	0	0		0		0		0		0		0	0
Local Salaries	0	0	0		0		0		0		0		0	0
Operational Costs													0	0
a. Supplies	0	0	0		0		0		0		0		0	0
Commodities													0	0
a. Research Contracts	0	0	0		0		0		0		0		0	0
Training Material/Costs	0	0	0		0		0		0		0		0	0
Local Travel	0	0	0		0		0		0		0		0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G.O.G. Budget Master Best Project ($000) - On Going (ONG) and New (NEW) Costs

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
3. Personnel														
Technical Assist.														
a. long-term													0	0
b. short-term													0	0
Local Salaries													0	0
Operational Costs													0	0
a.													0	0
Commodities													0	0
a. Software													0	0
Training													0	0
Local Travel													0	0
. . . .													0	0
Activity Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Tech. Assist.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Salaries	24	0	54	0	84	0	113	0	113	0	105	0	93	0
Activity Sub-Total Oper. Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Commodities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Training	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Local Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total Component IV	24	0	54	0	84	0	113	0	113	0	105	0	93	0

* * * G.O.G. RESUME Of BUDGET MASTER BEST PROJECT ($000) * * *

* * * RESUME * * *	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total	
	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW	ONG	NEW
Activity Sub-Total Tech. Assist.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Salaries	1274	44	1304	175	6734	175	6763	175	6763	175	6755	175	29593	919
Activity Sub-Total Oper. Cost	0	12	0	12	21	12	21	37	21	62	21	87	84	222
Activity Sub-Total Commodities	0	0	0	0	0	0	0	336	0	336	0	336	0	1008
Activity Sub-Total Training	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Activity Sub-Total Local Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL COMPONENTS 1,2,3,4	1274	56	1304	187	6755	187	6784	548	6784	573	6776	598	29677	2149
Management & Administration														
a. Chief of Party													0	0
b. NOE Coordinator													0	0
c. PSC - U.S.A.I.D.													0	0
d. Home Office Coordinator														
e. Office salaries														
f. Office operating expenses														
g. Office equipment														
h. Travel expenses														
Sub-Total Management & Admon.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Components & Management A.	1274	56	1304	187	6755	187	6784	548	6784	573	6776	598	29677	2149
Inflation (0% Compounded)	0		0		0		0		0		0		0	0
Contingency	0		0		0		0		0		0		0	0
Audit and Evaluation Activities	0		0		0		0		0		0			0
GRAND TOTAL...	1274	56	1304	187	6755	187	6784	548	6784		6776	598	29677	2149
	1330		1491		6942		7332		7357		7374		31826	

ANNEX H.1

BASIC EDUCATION STRENGTHENING PROJECT
TECHNICAL ASSISTANCE REQUIREMENTS
LEVEL OF EFFORT

The attached table details the technical assistance level of effort requirements for the four project components. Technical assistance has been divided into four categories: international long-term; international short-term; Guatemalan long-term; and Guatemalan short-term. Overall level of effort totals for these categories are as follows:

International Long-Term Assistance

Bilingual Education	78	mos.	-or-	6.5 yrs.
Teacher Services	72	mos.	-or-	6.0 yrs.
Alternative Methodologies	114	mos.	-or-	9.5 yrs.
Education Administration	37	mos.	-or-	3.1 yrs.
T O T A L	301	months	or	25 yrs., 1 mo.

International Short-Term Assistance

Bilingual Education	13.5 months
Teacher Services	12.0 months
Alternative Methodologies	30.5 months
Education Administration	39.0 months
T O T A L	95.0 person m

Guatemalan Long-Term Assistance

Bilingual Education	240 mos.	-or-	20 yrs.
Teacher Services	----		--
Alternative Methodologies	----		--
Education Administration	85 mos.	-or-	7 yrs. 1 mo.
T O T A L	325 months	or	27 yrs.,1 mo.

Guatemalan Short-Term Assistance

Bilingual Education	4 mos.
Teacher Services	--
Alternative Methodologies	--
Education Administration	10 mos.
T O T A L	14 months

TECHNICAL ASSISTANCE AND LEVEL OF EFFORT REQUIREMENTS

COMPONENT I - BILINGUAL EDUCATION

TYPE	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Int'l-Long-Term						
1. Mapping-Mayan Linguistics Specialist		12	6			
2. Early Childhood Bilingual Educ. Specialist		6	12	6		
3. Qualitative Evaluation Specialist		6	12	6		
4. Textbook Design and Production Specialist				8	4	
Sub-Total Int'l LT (78 person months or 6.5 person yrs)		24	30	20	4	
Int'l-Short-Term						
1. Computer Cartography		0.5				
2. Language Planning Specialist		1	1	1		
3. Bilingual Achievement Test Specialist		1	1	1		
4. Applied Linguistics Specialist		1	1	1		
5. Impact Evaluation Specialist				1	1	1
Sub-Total Int'l ST (13.5 Person Months)		3.5	3	4	2	1

TYPE	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Guatemalan Long-Term						
1. Administrative Specialist			12	12	12	12
2. Supervision Specialist			12	12	12	12
3. Training Specialist			12	12	12	12
4. Evaluation Specialist			12	12	12	12
5. Social Marketing Specialist			12	12	12	12
Sub-Total Local LT (240 person months or 20 person years)			60	60	60	60
Guatemalan Short-Term						
1. Mayan Dialectology		1	1			
2. Language Planning		1	1			
Sub-Total Local ST		2	2			

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ACTIVITY	PROJECT YEAR YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
COMPONENT: EDUCATION ADMINISTRATION						
A. Management Information System						

COMPÓNENT II - TEACHER SERVICES

T Y P E	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Int'l Long-Term						
1. In-Service Teacher Training Specialis		12	12	12		
2. Publications Specialist		12				
3. Teacher Supervision Specialist		12	12			
Sub-Total Int'l LT (72 person months or 6.0 person years)		36	24	12		
Int'l Short-Term						
1. Magazine Evaluation Specialist			3			
2. Supervision Follow-up				2	2	
3. Social Marketing Expert		3		1	1	
Sub-Total Int'l ST (12 person months)		3	3	3	3	

COMPONENT III - ALTERNATIVE METHODOLOGIES

T Y P E	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Int'l Long-Term						
1. Interactive Radio Expert		12	12	12	12	6
2. Radio Language Specialist		12	12	12		
3. Escuela Nueva Administration Specialist		12				
4. Curriculum Evaluation Specialist		12				
Sub-Total Int'l LT (114 person months or 9.5 person years)		48	24	24	12	6

T Y P E	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Int'l Short-Term						
1. Sociolinguistics Expert		1	2			
2. Applied Linguist		1	2			
3. Evaluation Specialist			2.5	3.0	1	0.5
4. Interactive Radio System Specialist		1.0	1.0	2.0		
5. Computer Systems Specialist		1.5				
6. Radio Production Specialist		2.0	1.5			
7. Acoustic Design Engineer		0.5				
8. Audio Recording Design Engineer		1.5				
9. Sound Equipment Specialist		0.5				
10. Script Development Specialist		2.0				
11. Escuela Nueva Follow-up			1.0	1.0	1.0	1.0
Sub-Total Int'l ST (30.5 person months)		11.0	10.0	6.0	2.0	1.5

COMPONENT IV - EDUCATION ADMINISTRATION

TYPE	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Int'l Long-Term						
1. Educational Planner/MIS Specialist		1	12	12	12	
Sub-Total Int'l LT (37 months)		1	12	12	12	
Int'l Short-Term						
1. MIS Planning Consultant	1	2				
2. Distributed System Specialist	1	1	2	1		
3. Central Level Training Expert		1	2	2	1	
4. Regional Policy and Planning Specialist	1	2	2	2		
5. Regional Training Specialist	2	2	2	2		
6. Research and Testing Specialist		3	3			
7. Computerized Personnel Specialist		4				
Sub-Total Int'l ST (39 person months)	5	15	11	7	1	

T Y P E	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Guatemalan Long-Term						
1. Senior Systems Analyst/Programmer	1	12	12	12	6	
2. Programming Specialist			12	12	12	6
Sub-Total Local LT (85 person months or 7 years 1 month)	1	12	24	24	18	6
Guatemalan Short-Term						
1. MIS Installation Expert		1	3	3	2	1
Sub-Total Local ST (10 months)		1	3	3	2	1

ANNEX H.2

BASIC EDUCATION STRENGTHENING PROJECT
VEHICLE PROCUREMENT

ACTIVITY	NUMBER	T Y P E	UNIT PRICE
Mapping	1	4 wheel drive	$ 17,000
Bilingual Expansion	5	4 wheel drive	$ 17,000
In-Service Teacher Training	5	4 wheel drive	$ 17,000
Supervision	22	4 wheel drive	$ 17,000
Interactive Radio	4	4 wheel drive	$ 17,000
Escuela Nueva	1	4 wheel drive	$ 17,000
Sub-Total	38	4 wheel drive vehicles	

MOTORCYCLE PROCUREMENT

ACTIVITY	NUMBER	T Y P E	UNIT PRICE
Mapping	10	125-175 a.c.	$ 2,000
Supervision	300	125-175 a.c.	$ 2,000
Interactive Radio	3	125-175 a.c.	$ 2,000
Escuela Nueva	3	125-175 a.c.	$ 2,000
Sub-Total	316	Motorcycles	

ANNEX H.3

COMPONENT IV ILLUSTRATIVE COMMODITIES LIST

Microcomputer Equipment

2 Super-microcomputers (80386, 25 MHz), each with 4 Mb RAM, 300 Mb disc storage, 2 1.2Mb (5.25 inch) and 1.44 Mb (3.5 inch) floppy drives, 120 Mb streaming tape backup, 80387 math coprocessor, color graphics monitor, 2 parallel ports, 1 multiport I/O board (8 terminal capacity), 8 serial lines for terminals/PC's, 2400 bps modem, 4 monochrome/graphics terminals, 1.0 kVa uninterruptible power supply, 1 laser printer with 2 Mb memory.

36 Microcomputers (80286, 16MHz or better), each with 2 Mb RAM, 30-40 Mb disc drive, 1.44 Mb floppy drive, 80287 math coprocessor, streaming tape backup drive, color graphics monitor and VGA/EGA card, parallel and 2 serial ports of interconnection, and 24 pin dot matrix printer.

- Uninterruptible power supplies in stand-alone and shared configurations, as determined by technical assistance team according to location.

- Software:

* UNIX compatible (SCO XENIX V) multi-user operating system with VPix for DOS applications
* Windows/multitasking environment
*

ord Processing (WordPerfect) with Spanish/English spell checker, thesaurus and punctuation checker.

* Excel/Lotus work-alike spreadsheet
* Oracle/Focus database managing system
* dBase III + database program
* Terminal emulation program (YTerm, Termix)
* Smartcom or equivalent communications package
* SPSS or equivalent statistical analysis package
* STEP version 3 Educational Planning model
* Desktop publishing software (PageMaker)

Microfilm Equipment

1 Microfilm unit with dual 16 mm microfilming capability, automatic document numbering and marking functions, data indexing interface options.

1 Microfilm processing unit suitable for office environment operatio

1 16 mm microfilm reader.

Annex H.4

ILLUSTRATIVE TRAINING PLAN

As outlined in Annex H. 1, a substantial amount of long-term technical assistance is envisioned for the BEST project. In all cases it is anticipated that these long-term advisors will work side-by-side with their MOE counterparts, and in so doing, will provide significant on-the-job training Additionally, several specific training events have been built into the project design. They are outlined below by project component.

Bilingual Education

In-Country: Three courses each in WordPerfect and DBASE for locally hired staff of linguistic mapping activity during year 2.

United States: Two people from mapping activity for a total of twenty days in computer assisted cartography during year 2.

Teacher Services

In-Country: One major training course for all teachers during year 2. Follow-up courses in four major regions; one each in years 3, 4, 5 and 6.

Alternative Methodologies

Third-Country: 30 observation trips planned for teachers, technical orientors, and administrative staff to Colombia to learn about the escuela nueva methodology first hand. Tours will consist of ten days and occur during the first two years of the project.

Third Country: Two observation trips to Honduras for Radio Math programming staff.

United States: Three 20-day training events in interactive radio technology during year two.

Education Administration

In-Country: Ten seminars of 10 days each for the regionalization of the MIS during years 3 and 4.

United States: One year each of long-term training for three USIPE personnel in MIS theory and practice, during years 2, 3, and 4.

BEST PROJECT - OVERVIEW OF IMPLEMENTATION SCHEDULE

ACTIVITY	PROJECT YEAR: YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
A. Mapping						
1. Consultant on board, local staff hired, office established		xx				
2. Training of local staff		xx				
3. Evaluation instruments and techniques designed		xx				
4. Rural enumerators collect baseline data		xx xx	xx			
5. Data processors enter data		xx	xx			
6. Microcomputer cartography program generated and applied to data elements			xx xx			
7. Mapping study produced			xx			
B. Revising Texts and Teachers' Guides						
1. Formation of curriculum revision committee and work plan established		xx				
2. Prototype for revised texts and guides developed		xx	xx xx xx xx			
3. PRONEBI evaluation unit trained to systematically collect observational data			xx xx			
4. Prototype texts and guides field tested			xx xx	xx		
5. Final revisions and approval made on prototypes				xx xx		
C. Expanding PRONEBI Model						
1. Detailed expansion plan developed			xx xx			
2. Textbook design for four additional language groups completed			xx xx	xx xx		
3. Contract for school furniture let			xx	xx		

ACTIVITY	PROJECT YEAR: YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
4. Contract for printing of textbooks and guides let			xx	xx		
5. Furniture and textbooks distributed by grade						
a. grade 1				xx xx		
b. grade 2					xx xx	
c. grade 3					xx xx	
d. grade 4						xx xx
COMPONENT: TEACHER SERVICES						
A. In-Service Teacher Training						
1. SIMAC hires new staff for distance training and teachers' magazine	xx					
2. Consultants arrive, work plans and schedules developed		xx xx				
3. Subject area for first 3 training courses chosen, based on needs assessment		xx				
4. Distance training modules designed		xx xx				
5. Distance training modules field tested, revised, and approved			xx xx			
6. First three modules reproduced and distributed			xx xx			
7. Technical orientors trained to conduct group discussions			xx			
8. First three courses implemented and evaluated			xx xx			
9. Magazine lay-out designed		xx xx				
10. Prototype issue developed and issued for feedback			xx xx			
11. Production of magazine every two months initiated			xx xx			

ACTIVITY	PROJECT YEAR					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
12. Impact evaluation of magazine on annual basis initiated				XX XX		
13. Impact evaluation of initial distance training modules conducted				XX		
14. Successful modules continued to be implemented				XX		
15. Designs for new modules made and implemented				XX XX	XX XX	
B. Teacher Supervision						
1. Vehicles and motorcycles procured	XX					
2. Supervisors' furniture and equipment procured	XX					
3. Consultant arrives and work plan established		XX XX				
4. Supervisors' job description reviewed, revised, and approved; performance criteria established		XX				
5. Nation-wide training workshop for supervisors designed and implemented		XX				
6. Follow-up workshops conducted in four regions			XX	XX	XX	XX
7. On-the-job training with DGEB staff at central level conducted		XX XX	XX			
C. Student Materials						
1. Agreement with Chamber of Industry negotiated and signed H. B. 13		XX				
2. Work plan and schedule established		XX				
3. School selection made for program expansion, for each year		XX				
4. Type of materials for packages selected, based on grade		XX				

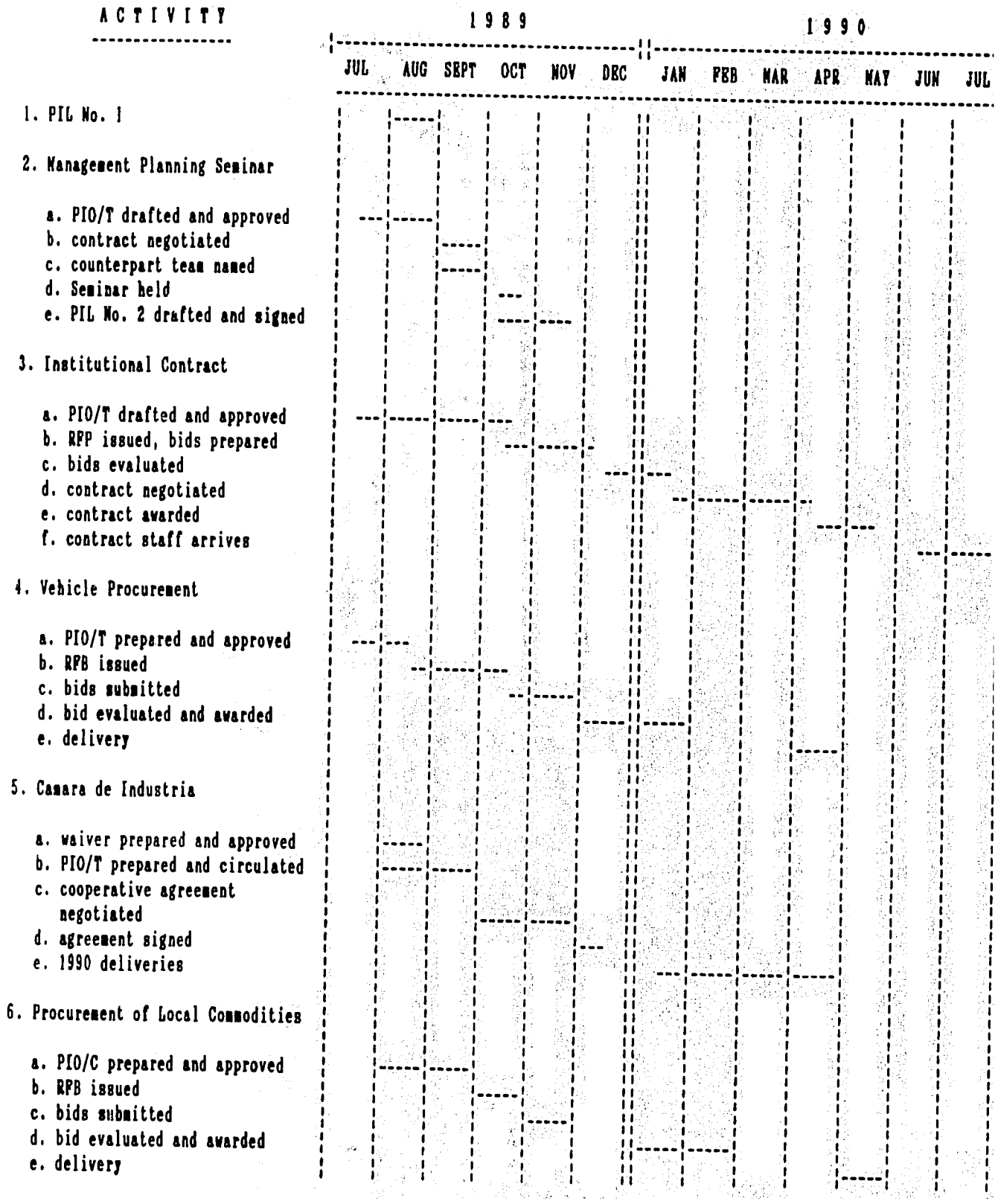
CTIVITY	PROJECT YEAR: YEAR	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
5. Private sector contributions raised		XX	XX	XX	XX	XX
6. Materials procured; student material packages distributed						
a. grade 1	XX	XX	XX	XX	XX	XX
b. grade 2		XX	XX	XX	XX	XX
c. grade 3			XX	XX	XX	XX
d. grade 4				XX	XX	XX
e. grade 5					XX	XX
f. grade 6						XX
D. Community Participation						
1. Short-term consultant arrives, MOE basic education social marketing strategy established		XX				
2. Market research conducted		XX				
3. Three campaign themes established		XX				
4. Campaign one designed and implemented			XX			
5. Impact evaluation conducted			XX			
6. In-service distance training module on community participation in education designed and implemented			XX			
7. Relevant articles written on community participation for teachers' magazine			XX	XX		
8. Follow-on campaigns and impact evaluations conducted				XX XX	XX XX	
COMPONENT: ALTERNATIVE METHODOLOGIES						
A. Interactive Radio						
1. Consultants arrive, office established, local staff hired		XX XX				
2. Planning		XX				

ACTIVITY	PROJECT YEAR: YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
3. Training		XX XX				
4. Commodity procurement		XX XX				
5. Script development and adaptation						
a. preschool		XX XX	XX			
b. grade 1			XX XX	XX		
c. grade 2				XX XX	XX	
d. grade 3					XX XX	XX
6. Program production and broadcast						
a. preschool			XX XX XX			
b. grade 1				XX XX XX		
c. grade 2					XX XX XX	
d. grade 3					XX	XX XX
7. Program production and broadcast						
a. preschool			XX XX XX			
b. grade 1				XX XX XX		
c. grade 2					XX XX XX	
d. grade 3					XX	XX XX
Escuela Nueva						
1. Consultant arrives, local staff hired, work plan established	XX	XX XX				
2. Observation tours to Colombia conducted	XX	XX				
3. School sites selected		XX				
4. Furniture and equipment procured		XX XX				
5. Materials adapted and printed		XX XX				
6. Teacher and supervisory training conducted		XX	XX			
7. Student and community committees formed			XX XX			
8. Pilot initiated, with periodic observation and review			XX XX	XX XX XX XX	XX XX	
9. First annual evaluation conducted				XX		
0. Adjustments in pilot design made				XX	XX	

ACTIVITY	PROJECT YEAR: YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
COMPONENT: EDUCATION ADMINISTRATION						
A. Management Information System						
1. Technical assistance arrives, work plan developed		xx xx				
2. Interactive planning with users conducted		xx xx				
3. USIPE staff training conducted		xx	xx xx xx xx	xx xx xx xx	xx xx xx xx	
4. Hardware specifications developed and equipment procured			xx xx xx			
5. Customized operating software and communications system for information distribution developed			xx xx			
6. Data collection instruments revised			xx xx			
7. Regional expansion of MIS planned			xx			
8. Regional training conducted			xx	xx	xx	xx
9. System on regional level installed			xx	xx	xx	xx
B. Applied Education Research						
1. MOE Research Committee formed	xx					
2. Research agenda established		xx				
3. Defined and published research criteria, series of research studies with local university sub-contractor negotiated		xx xx				
4. Field studies begin		xx xx	xx xx xx xx	xx xx xx xx	xx xx xx xx	xx xx
5. Study results analyzed			xx xx	xx xx	xx xx	xx xx
6. Results reported			xx xx	xx xx	xx xx	xx xx
7. Results disseminated			xx xx	xx xx	xx xx	xx xx

ACTIVITY	PROJECT YEAR					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
C. Personnel Administration						
1. Short-term technical assistance arrives and software needs assessed		XX XX				
2. System alternatives discussed with MOE counterparts and selection made		XX				
3. Specifications for software package defined		XX				
4. Software package procured and installed			XX XX			
5. Appropriate MOE staff trained in use of package			XX XX			
6. Follow-up conducted				XX	XX	XX

ACTIVITY SCHEDULE FOR PROJECT YEAR ONE



ANNEX J

STATISTICAL INDICATORS, BASELINE LEVELS AND PROJECTIONS

1. Introduction

This Annex contains updated statistical baseline figures and projections for indicators that have been selected for BEST Project Tracking. The figures and projections are based on a reanalysis of official Guatemalan statistics using A.I.D.'s Primary Education Tracking System (PETS), a mathematically advanced variation of traditional cohort analysis. Projections of levels of the indicators were computed under two sets of assumptions: future levels without the BEST Project, and future levels with the BEST Project. Computing the difference between these levels gives an estimate of the increment of the total expected change in each indicator that can be attributed directly and exclusively to the BEST Project, independent of other influences. The PETS model uses regression equations to make projections that can be plotted graphically on a year-by-year basis, yielding intermediate annual benchmarks for Project Tracking. It should be remembered that, despite the sophisticated mathematical model used for this analysis, the incremental differences attributed to the BEST project really represent estimates made by the Mission based mainly on experience in other projects and in other settings.

The raw data tables used to compute the figures reported in this Annex can be found in Bulk Annex 7, available from USAID/Guatemala.

The Guatemalan primary education system is characterized by low access and low efficiency, especially in the rural areas which account for 55.7 percent of total enrollment. The combination of very high repetition rates and substantial overage enrollments create a difficult environment in which to teach, often complicated by one-room school situations operating in virtual isolation from the Ministry of Education. The isolation of teachers, combined with the lack of basic teaching materials and supplies, leads to low motivation and poor attendance.

Guatemala's educational statistics system obtains enrollment and promotion data for public and private schools, broken down by grade, age, and sex, and has provided reasonably high coverage since 1979. No regular publication of these results is produced, but the Documentation and Statistics Division of USIPE keeps detailed tabulations available for consultation. Because the tabulation process currently is mostly manual, considerable delays in processing are common (typically, a year and a half after data collection), and access to the data is limited to gross pre-defined tabulations or a search of the individual source documents by school. A prior effort to improve data processing and access, assisted by the World Bank (Loan 2328-GU), has been largely abandoned due to shifts in interest by the Ministry's Computer Center.

As part of the CAEFTS activity, the data from Guatemala have been incorporated into the Primary Education Tracking System (PETS) model. these data, principally enrollments, are combined with population projections and a number of assumptions, in order to derive indicators of educational efficiency, access, and productivity for the country. The PETS model permits the use of the UNESCO (Standard) or the Schiefelbein method for the calculation of transition rates. The UNESCO method relies on reported numbers of repeaters, data of notoriously low reliability subject to substantial under-reporting. The Schiefelbein method uses mathematical comparisons of age- and grade-specific enrollments by year to derive repetition and dropout rates. The details of both methods are far too complex to discuss here, but suffice it to say that the Schiefelbein method usually provides a more accurate picture of true repetition rates, frequently two to three times the officially reported figures.

The PETS model provides the capability of projecting historical transition rates into the future under a variety of assumptions. For the purposes of the Basic Education Strengthening (BEST) Project, it also allows assumptions to be made about the impact of the project to produce a hypothetical projection, and this projection may then be compared to the historically-based ("Baseline") projection. These projections allow the user to estimate grade-specific enrollments, numbers of repeaters, dropouts, and promoted students by year, and key indicators to be calculated for evaluating the efficiency of the system. Since improvements in educational systems often take years to show their impact, the model permits following the behavior of hypothetical cohorts of 1,000 students throughout the period of projection.

The PETS model was so used by the Project Paper development team. Data were updated, corrected, and input to the model, and a series of runs was performed using the Schiefelbein approach. For consistency, this model will be used to measure the Project's progress against benchmarks. An important clarification that should be made is that all data correspond to the total primary system: both public and private sectors are included in all analyses. This is not as serious as it sounds: the public sector comprises over 85 percent of primary enrollments in the country. Baseline and Project (BEST) models were compared and generated the numeric basis for the economic analyses detailed elsewhere. The purpose of this annex is to document the assumptions used in this modeling exercise, and to include the results of the projections in such a manner as to permit project tracking against the projections made. The graphics included also assist the reader in better understanding the Guatemalan primary education system.

Definition of Key Efficiency and Access Indicators

1. Gross Enrollment Ratio (GER): This access indicator is the ratio of all students enrolled in primary school (grades 1-6) divided by the number of children in the population of "official" school age (i.e., 7-12 years old). Gross enrollment ratios are thus insensitive to and give "credit" to school systems where large numbers of overage (i.e., 13 years and

older) students are still enrolled in primary school. In Guatemala, 155,009 students, or 14.0 percent of total primary enrollment, were over the age of 12 in 1987. It should be noted that this figure does not include 12-year-old first-graders, for example, who are clearly over age for the grade in which they are enrolled.

2. Net Enrollment Ratio: This ratio is similar to the above, except that only children of "proper" school age (i.e., 7-12 years) are counted among enrollments. Net enrollment ratios are smaller than gross enrollments, and indicate how well a system is enrolling students at the proper time and in the planned manner. In Guatemala, net (7-12 year old) enrollments amounted to 922,826 in 1987, and the estimated 7-12 year old population was 1,410,217; thus the net enrollment ratio was 65.4 percent, as compared to the GER of 78.4 percent for the same year. The net enrollment ratio still ignores children over age for the particular grade in which they are enrolled, but better reflects this pattern than does the GER.

3. Primary Completion (Retention) Rates (GRADRATE): This efficiency indicator is the percentage of students who enter the primary system who eventually graduate from a given grade level, usually sixth grade. This indicator does not consider how long it may take a student to graduate (e.g., 6 grades in 6 years versus in 10 years), but does reflect the percentage of students who complete their prescribed education within the formal school system.

4. Years to Produce a Sixth Grade Graduate (SYGRAD and SYGRAD2): These efficiency indicators measure the average number of years (not grades) of schooling required to produce a sixth grade graduate. SYGRAD considers only the years of schooling received by those who do graduate from sixth grade, and SYGRAD 2 also takes into account the years of schooling received by those who drop out before completing sixth grade. Both measures indicate the degree of repetition occurring in the system; SYGRAD2 includes the "wastage" due to dropouts. SYGRAD2 is thus a more global indicator of efficiency of the primary education system than SYGRAD.

5. Repetition Rates: This rate represents the percentage of students in a particular grade who are repeating that grade (one or more times). Repetition rates have a major impact on the efficiency of a system, and especially on the SYGRAD and SYGRAD2 indicators. The more repeaters in a system, the longer students will tend to remain in the system prior to graduation or eventual dropout; obviously, this process requires more resources to be spent on each student. The Guatemalan system is characterized by extremely high repetition rates in the early grades, leading to huge enrollments in these grades as students cycle over and over in the same grade while new students come in. In a perfect system with no repetition, first and second grade enrollments should be

approximately equal: in Guatemala, there are 64.1 percent more students in first than in second grade. This problem is especially marked in rural areas: there are 77.5 percent more first graders than second graders.

6. Dropout Rate: This is the number of students who drop out of school within or between a grade, divided by the enrollment in the grade. Dropouts affect completion rates (see 3., above) and represent wasted resources in terms of the goals of the school system. In Guatemala, dropouts are often the product of excessive repetition, as parents decid that the child cannot or does not gain from schooling. The dropout rate is a function of students in a grade during a given year, so if repetition is high, student cohorts suffer the cumulative effects of repeating a grade-specific dropout rate.

7. Promotion Rate: This is the number of students who actually enter the next grade for the first time, divided by the number of students in the prior grade in the year before. The sum of repetition, dropout, and promotion rates must equal 100 percent. Dropout rates are in fact determined by repetition and promotion rates, since dropout rates must be determined indirectly.

8. Entrance Rate: This rate represents the percentage of students by age who are enrolled in school. The enrollment rate for the entering school age (7 years) is used as a proxy to calculate first-time entrance rates into the school system. The entrance rate is most affected by expansion of the school system, (i.e., the creation of additional spaces for new students). The BEST project does not contemplate significant expansion of the school system, and thus the entrance rates are unaltered from the Baseline Projections. In fact, some of the activities of the project may increase first-time enrollments by enhancing the perceived value of school; but if additional places are not made available, the demand for enrollment will not be met and entrance rates would thus not necessarily increase.

A Note on Sex Differences

PETS runs for the Central American countries are now to incorporate sex-specific data for the purpose of tracking progress towards greater equality of access to the primary education system. These data were not available in sufficient quantity to perform these runs at the time of Project Paper development. An examination of 1987 enrollment data by grade, however points out the problem in Guatemala. Assuming that the school-age population is composed of approximately equal numbers of males and females, the primary enrollments should also be similar by sex. Overall, this is not the case, as the following table reveals.

1987 Primary Enrollments by Sex

Grade	Males	Females	Total	% Female
First	195,644	169,531	365,175	46.4%
Second	120,756	101,843	222,599	45.8%
Third	97,933	79,266	177,199	44.7%
Fourth	78,598	62,074	140,672	44.1%
Fifth	61,506	48,271	109,777	44.0%
Sixth	49,363	39,859	89,222	44.7%
TOTAL	603,800	500,844	1,104,644	45.3%

Female enrollments in primary schools are about 10 percent less than expected based on population figures. The following two tables present similar analyses, separated by urban and rural schools, and clarify where the problem originates.

Grade	Males	Urban Females	Total	% Female
First	64,416	59,030	123,446	47.8%
Second	46,840	43,257	90,097	48.0%
Third	42,797	38,952	81,749	47.6%
Fourth	39,263	34,717	73,980	46.9%
Fifth	33,958	29,785	63,743	46.7%
Sixth	29,374	26,566	55,940	47.5%
TOTAL	256,648	232,307	488,955	47.5%

Grade	Males	Rural Females	Total	% Female
First	131,228	110,501	241,729	45.7%
Second	73,916	58,586	132,502	44.2%
Third	55,136	40,314	95,450	42.2%
Fourth	39,335	27,357	66,692	41.0%
Fifth	27,548	18,486	46,034	40.2%
Sixth	19,989	13,293	33,282	39.9%
TOTAL	347,152	268,537	615,689	43.6%

Whereas the relative proportion of female students by grade remains essentially constant across grades in urban schools, rural schools show a strong decline from first to sixth grade, where less than 40 percent of students are female. This pattern is illustrated in the graphic on the next page.

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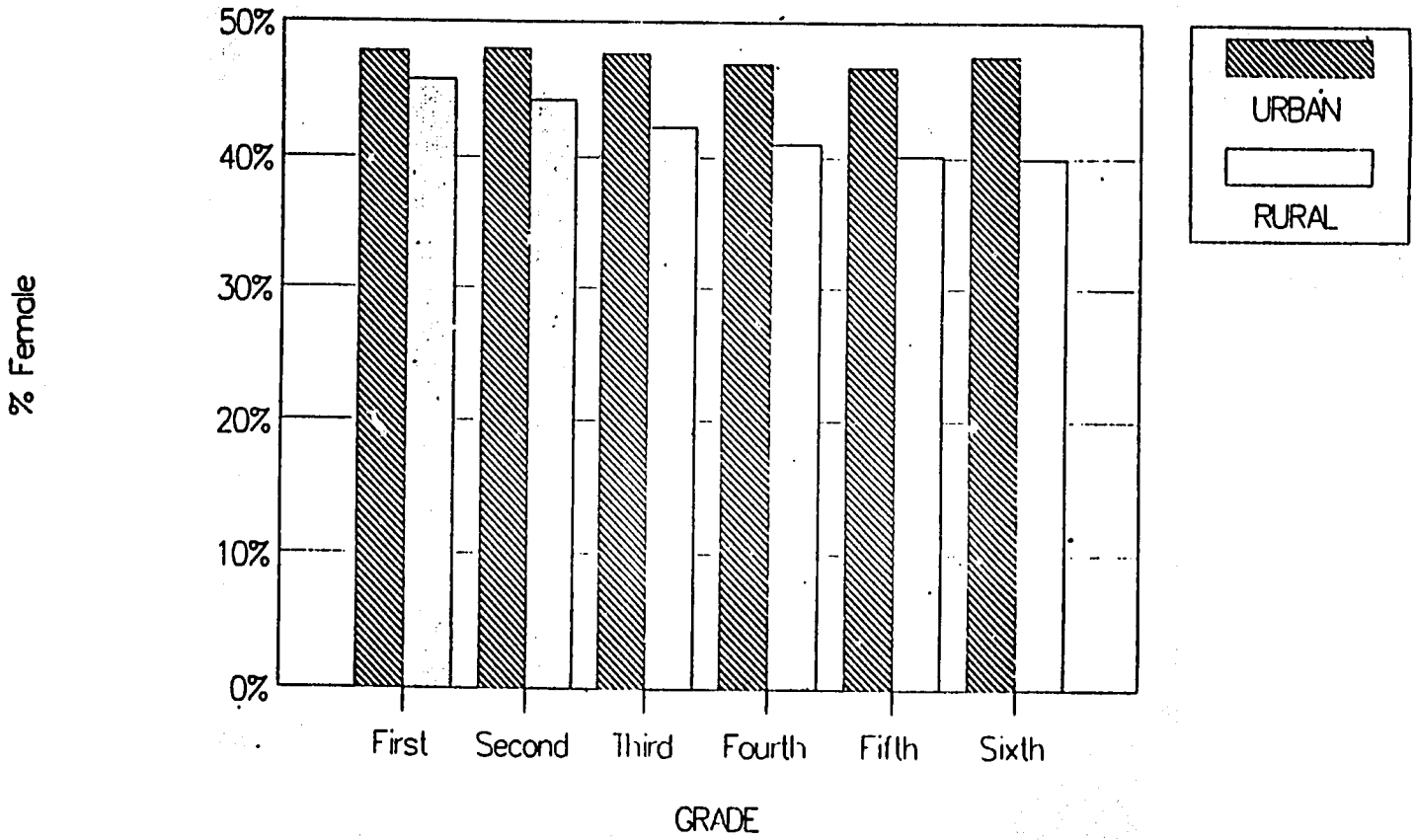
Sex Distribution of Enrollment

1987 – By Grade



A pertinent question regarding rural female enrollments is why they decline so markedly. Sex-specific runs of the PETS model would provide appropriate repetition and dropout rates for each grade, but these have not been performed. The 1987 enrollment data, however, do illustrate aspects of the rural process:

Rural 1987 First Grade Enrollments
By Sex and Age

Age	Male	Female	Male (%)	Female (%)
7-8	73,884	63,148	56.3%	57.1%
9-10	38,713	32,930	29.5%	29.8%
11+	18,631	14,423	14.2%	13.1%
Total	131,228	110,501		

Rural 1987 Sixth Grade Enrollments
By Sex and Age

Age	Male	Female	Male%	Female%
11-12	5,339	4,489	26.7%	33.8%
13-14	9,874	6,449	49.4%	48.5%
15+	4,776	2,355	23.9%	17.7%
Total	19,989	13,293		

As may be observed, first grade enrollments are roughly equal in terms of the proportion of over-age students by sex. The sixth grade enrollments, however, show a striking decline in the numbers of females aged 15 and above. This would correspond to a pattern of female withdrawal from school at around 14 years of age for such reasons as household assistance or marriage. The project as such may help to change the perceived relevance of primary education to some degree, but the most striking impact on female education would actually be a reduction in repetition rates, which would allow females to complete more grades before turning 14. If greater efficiency in the primary education system is achieved under the project, it may be expected that females would be major beneficiaries of these improvements, resulting in far greater numbers of females graduating from higher grades.

THE PETS RUNS

Enrollment data were checked against official figures where possible and several corrections made to the "GUATTEST" file used in earlier runs at the USAID Mission. 1984 data were generated using the USIPE reported grade total enrollments and applying the 1983 age structure to these totals to generate 1984 grade-by-age enrollments. The 1988 data were derived using the same process, using 1988 grade enrollments and the 1987 age structure for each grade. Initial PETS 2.0 runs fitted the Schiefelein model to the data set under assumptions of 5 percent of sixth graders repeating and 4 percent of all repeaters dropping out. Linear regressions were fit to project rates to the year 2000. These results yielded extremely high repetition rates, unrealistically low dropout rates, and odd directions to the regression trends. These results were not improved by excluding 1984-1985 data (public sector students were automatically promoted in 1985, leading to low repetition in that year but large increases in repetition rates in subsequent years). Finally, the run selected as best fit used a higher sixth grade repetition rate (7 percent) and the asumption that 8 percent of repeaters drop out. Regression trends were examined in relation to historical trends, and target values selected for the year 2000. A slight correction was made to the estimated dropout rate in 1987 for fifth grade prior to the targeting process, as it was clearly out of line with historical data. This run serves as the "baseline" projection to which project effects are compared.

It should be noted that the Schiefelbein method calculates much higher repetition rates than the Standard, or UNESCO, model. Although simple examination of the Guatemalan population figures, and the massive reduction of enrollments from first to second, and second to third grade, enrollments makes clear that excessive repetition occurring in these grades, the estimates provided by the Schiefelbein model nonetheless appear to be higher than would be expected. Similarly, it would also seem that dropout rates should be higher than the model reports. While many parameters of the model were altered to attempt to force these two rates to behave more in line with expectations, the final product of interest is, of course, a comparison of the baseline and Project projections. Given that the basic trends depicted by the model are similar in both cases, the comparison provides a reasonable basis for evaluating relative Project impact.

The enrollments and rates produced by the baseline and project runs of the model were extracted and placed into spreadsheets, where numbers of repeaters, dropouts, and promoted students from each grade and for each year were calculated. These data form the basis for the computation of the economic (due to additional years of schooling received by more children) and costs impacts (reduction of repetition and wastage due to dropouts) associated with the Project.

Listings are provided of the key input data and rate assumptions used by the model, as well as the population figures used. Entrance rates were not altered in association with the Project, because school space increases are

not direct inputs of the Project. The population data are from the CELADE, projections (GUATEMALA: Estimaciones y Proyecciones de Poblacion: 1950-2025), published in 1985. Linear interpolation was apparently used to estimate the population between the five-year intervals presented in that document; the source tables are by simple ages.

2. Repetition Rates

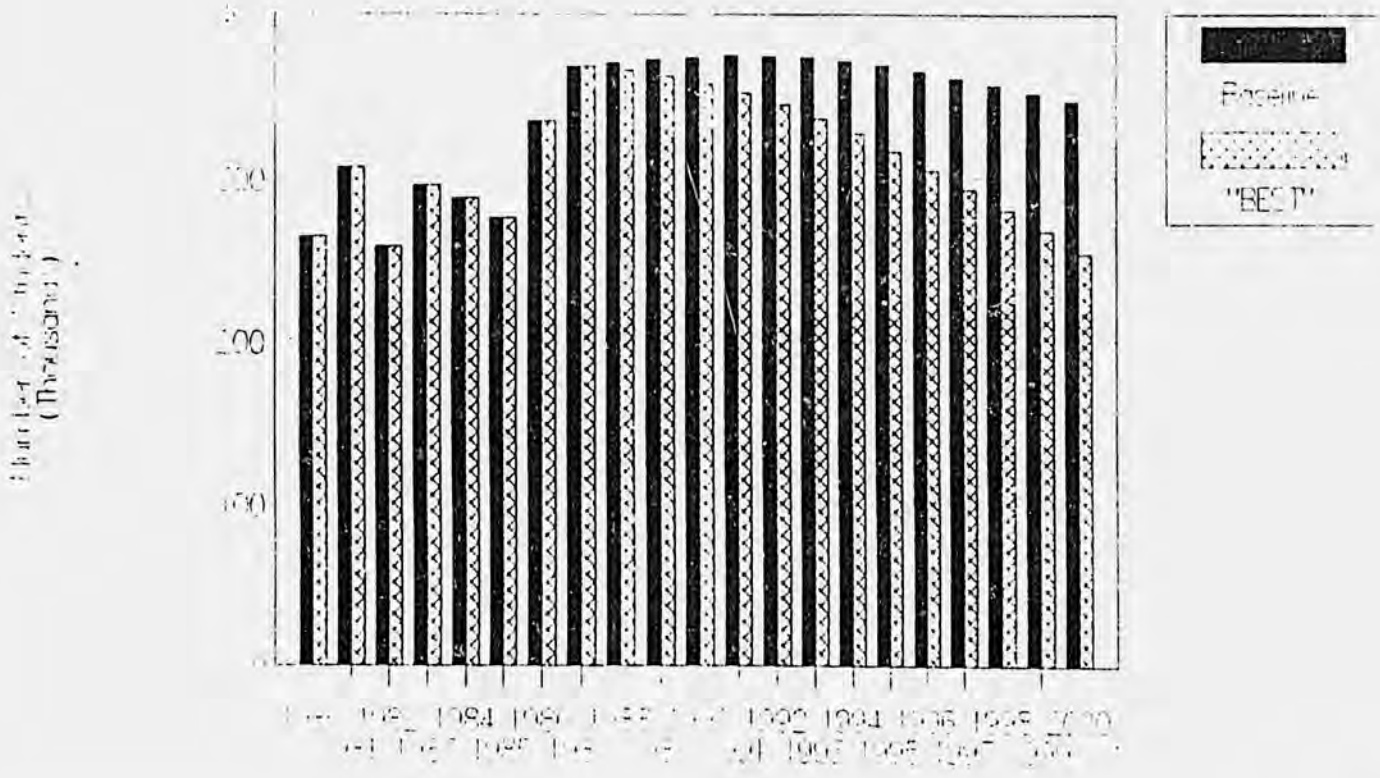
One key indicator of instructional quality and of the internal efficiency of the primary school system is the repetition rate. The overall system-wide repetition rate obscures very significant differences among grade levels. High repetition rates in the early grades lead to discouragement and dropping out. The repetition rates in the upper grades are lower because the remaining students are the survivors. Improved internal efficiency requires trying to reduce the high repetition rates, especially in the lower grades. The consequences of reduced repetition include a reduction in the number of years required to produce a sixth grade graduate (see Section III, below) and reduction in the on-time graduation rate (see Section 4 below).

Figure 1 displays projected system-wide repetition expressed as numbers of repeaters in the system in all grades taken together, with and without the BEST Project.

Figure 1

REPEATERS from GRADES 1-6

Baseline versus "BEST" Projections



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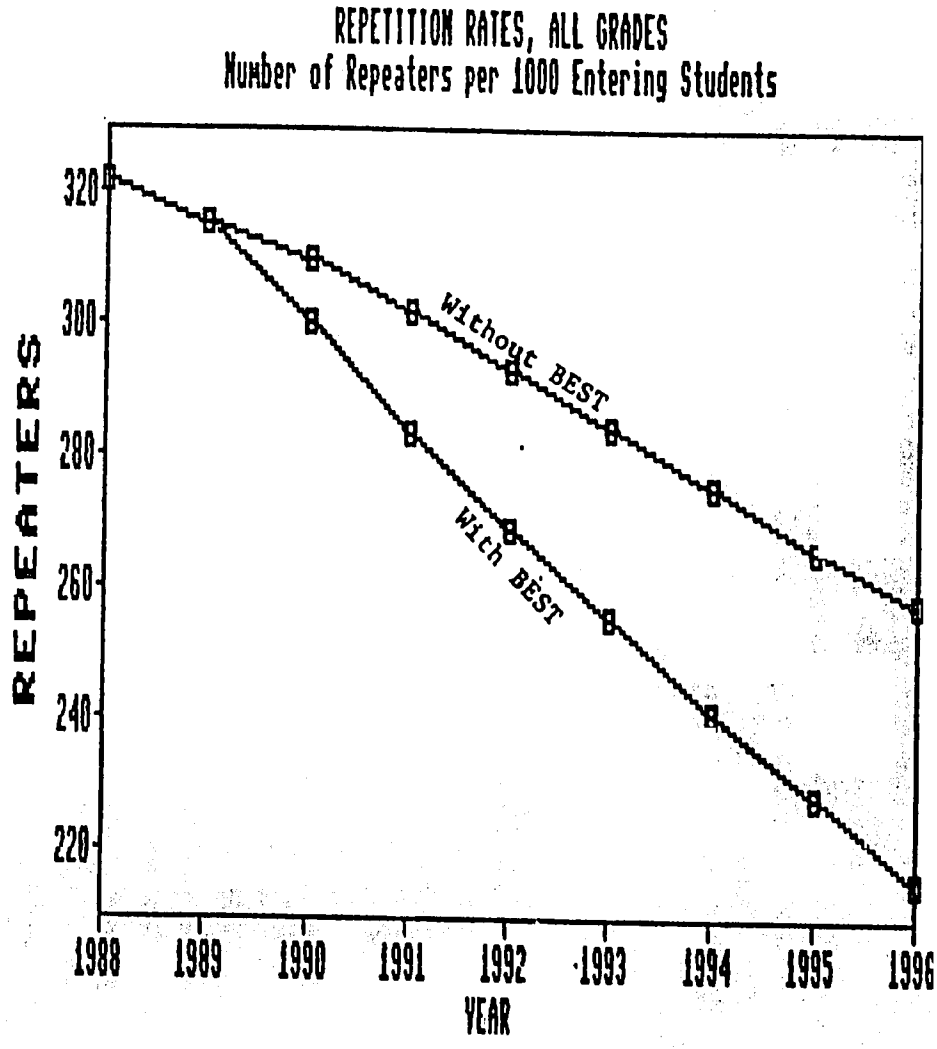
The projected changes in the repetition rate, computed as the number of students per 1,000 who repeat, is presented graphically in Figure 2.

Figure 2



The exact numbers of projected repeaters are included in Table 1, and the repetition rates are in Table 2.

Overall, a reduction in the repetition rate from the 1989 baseline figure of 318 per thousand to 215 per thousand in 1996, the year following the BEST Project, is projected. This overall change of 103 students per thousand represents a 32 percent improvement. Of this total improvement, it is estimated that a change of about 43 students per thousand, a 13 percent improvement, will be directly attributable to the BEST Project, independent of other factors.

Table 1

TOTAL	Repeaters		Dropout		Promoted	
	Base	Project	Base	Project	Base	Project
1980	263,855	263,855	53,804	53,804	485,745	485,745
1981	306,362	306,362	102,724	102,724	466,490	466,490
1982	257,380	257,380	55,527	55,527	535,209	535,209
1983	295,475	295,475	74,146	74,146	560,508	560,508
1984	287,134	287,134	89,702	89,702	603,129	603,129
1985	275,206	275,206	84,291	84,291	656,977	656,977
1986	334,854	334,854	71,624	71,624	634,303	634,303
1987	367,715	367,715	92,982	92,982	644,426	644,426
1988	370,656	365,440	94,430	94,249	673,767	679,164
1989	372,282	361,739	96,477	95,188	702,652	715,045
1990	373,692	357,301	98,516	96,203	733,004	753,247
1991	374,498	351,602	99,989	96,798	766,705	795,619
1992	374,106	344,400	101,255	97,053	803,154	841,211
1993	373,168	336,084	102,616	96,937	839,297	887,284
1994	371,320	326,650	103,315	96,538	875,251	932,239
1995	368,399	316,015	104,196	96,559	910,456	975,323
1996	365,232	304,572	104,433	95,792	944,944	1,017,492
1997	360,799	292,615	105,322	94,433	979,079	1,059,165
1998	356,595	280,193	105,653	93,440	1,013,077	1,100,089
1999	351,775	267,042	106,326	92,631	1,047,222	1,141,218
2000	346,719	253,549	106,384	91,513	1,082,288	1,182,946

252.0

Table 2

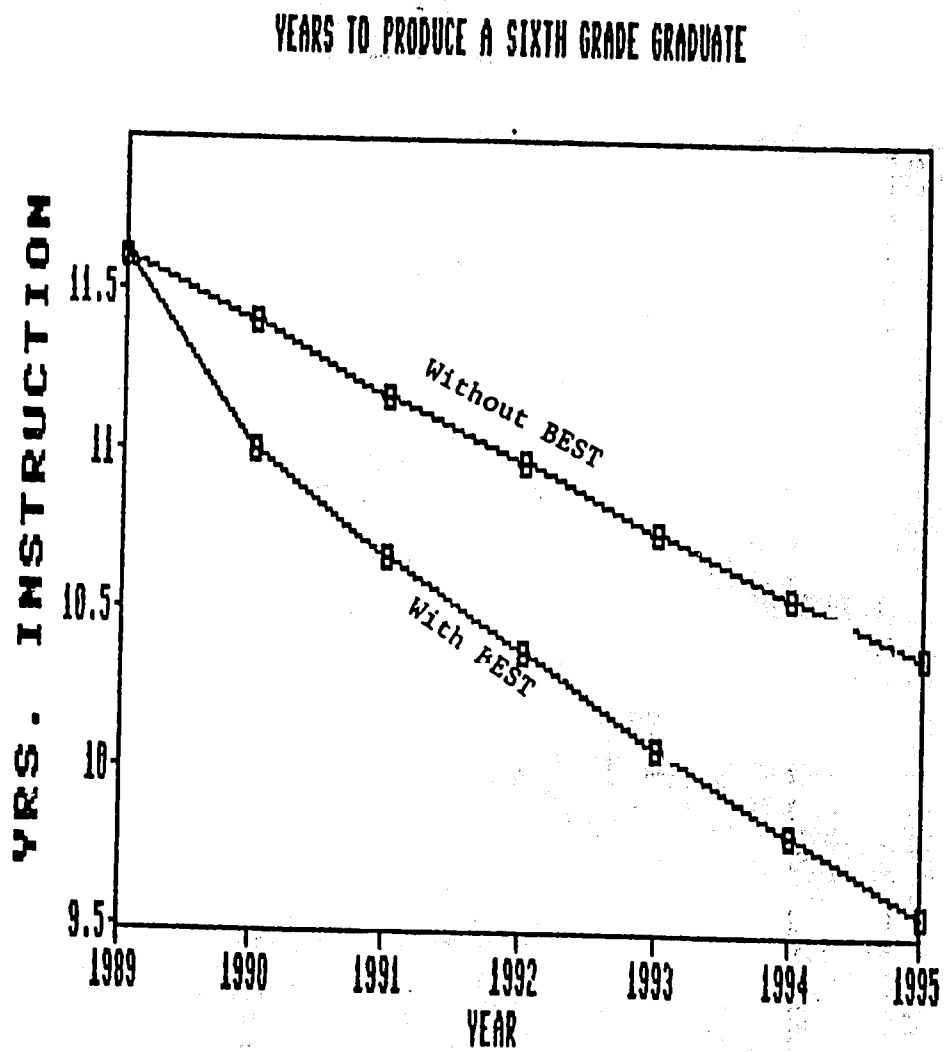
Grades 1 through 6

TOTAL	Total		Rep.Rate		DropRate		PromRate	
	Base	Project	Base	Project	Base	Project	Base	Project
1980	803,404	803,404	32.8%	32.8%	6.7%	6.7%	60.5%	60.5%
1981	875,576	875,576	35.0%	35.0%	11.7%	11.7%	53.3%	53.3%
1982	848,116	848,116	30.3%	30.3%	6.5%	6.5%	63.1%	63.1%
1983	930,129	930,129	31.8%	31.8%	8.0%	8.0%	60.3%	60.3%
1984	979,965	979,965	29.3%	29.3%	9.2%	9.2%	61.5%	61.5%
1985	1,016,475	1,016,475	27.1%	27.1%	8.3%	8.3%	64.6%	64.6%
1986	1,040,781	1,040,781	32.2%	32.2%	6.9%	6.9%	60.9%	60.9%
1987	1,105,122	1,105,122	33.3%	33.3%	8.4%	8.4%	58.3%	58.3%
1988	1,138,853	1,138,853	32.5%	32.1%	8.3%	8.3%	59.2%	59.6%
1989	1,171,411	1,171,972	31.8%	30.9%	8.2%	8.1%	60.0%	61.0%
1990	1,205,212	1,206,751	31.0%	29.6%	8.2%	8.0%	60.8%	62.4%
1991	1,241,192	1,244,018	30.2%	28.3%	8.1%	7.8%	61.8%	64.0%
1992	1,278,515	1,282,664	29.3%	26.9%	7.9%	7.6%	62.8%	65.6%
1993	1,315,080	1,320,305	28.4%	25.5%	7.8%	7.3%	63.8%	67.2%
1994	1,349,886	1,355,427	27.5%	24.1%	7.7%	7.1%	64.8%	68.8%
1995	1,383,052	1,387,896	26.6%	22.8%	7.5%	7.0%	65.8%	70.3%
1996	1,414,609	1,417,856	25.8%	21.5%	7.4%	6.8%	66.8%	71.8%
1997	1,445,200	1,446,214	25.0%	20.2%	7.3%	6.5%	67.7%	73.2%
1998	1,475,325	1,473,723	24.2%	19.0%	7.2%	6.3%	68.7%	74.6%
1999	1,505,324	1,500,891	23.4%	17.8%	7.1%	6.2%	69.6%	76.0%
2000	1,535,391	1,528,009	22.6%	16.6%	6.9%	6.0%	70.5%	77.4%

3. Years to Produce a Sixth Grade Graduate

Figure 3 summarizes projected changes in the number of years of instruction required by the system, on the average, to produce one sixth grade graduate. Overall, a reduction of 20 percent is projected for this indicator between 1989 and 1996, from 11.65 years to 9.32 years. Of this total improvement of 2.33 years, 0.87 year is directly attributable to the BEST Project, representing an 8 percent improvement.

Figure 3

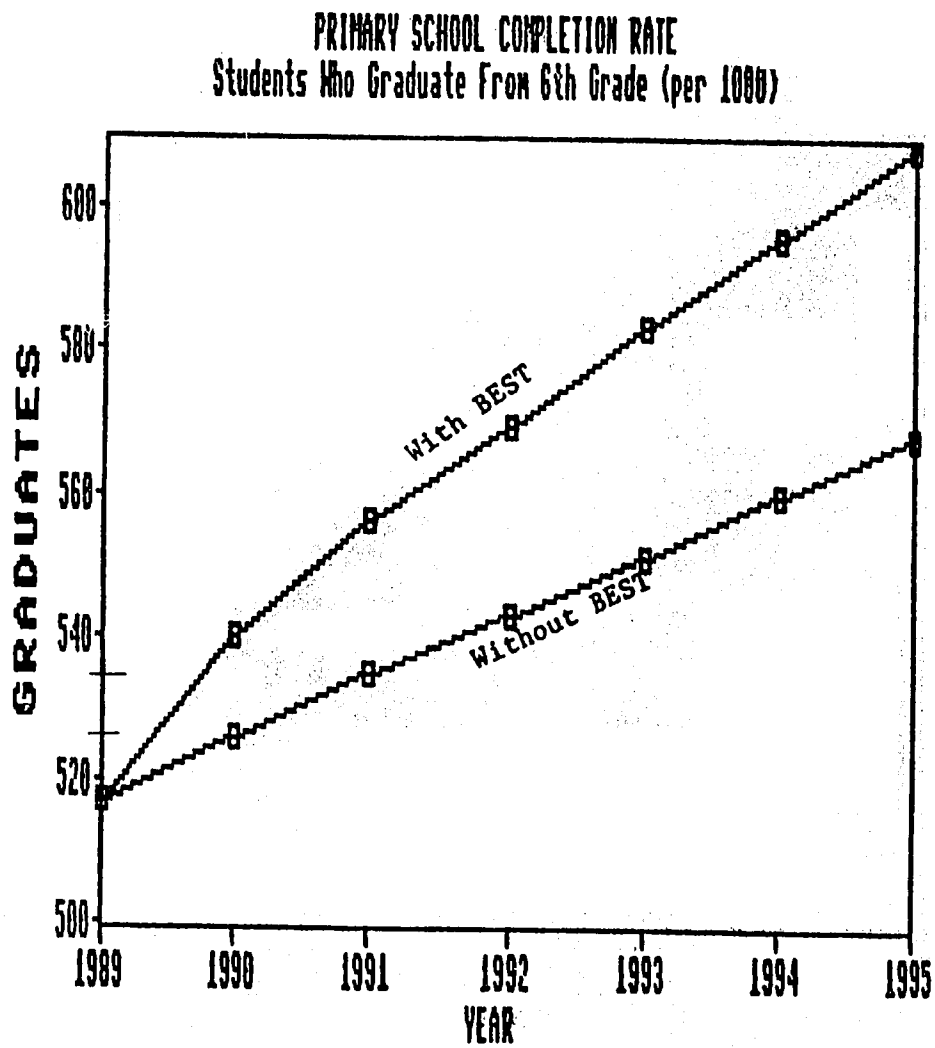


4. Completion Rates

a. Overall Completion

The "Completion Rate" is computed as the number of students per 1,000 who eventually complete the sixth grade, regardless of the number of years it takes. Projected primary school completion rates, with and without the BEST Project, are summarized in Figure 4.

Figure 4

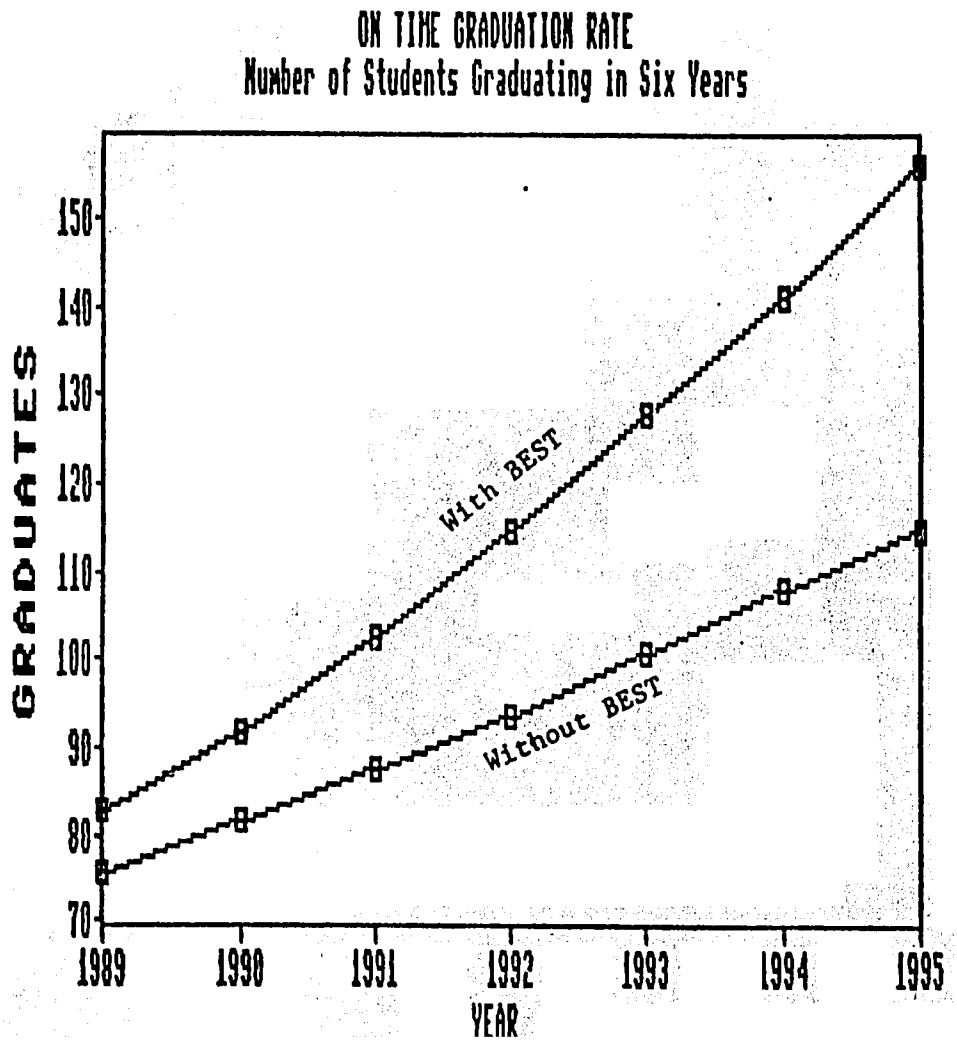


An overall improvement of 22 percent is projected in completion rates between 1989 and 1996, from 509 completers per 1,000 entering students in 1989 to 621 in 1996. Of the total improvement of 22 percent about 9 percent is directly attributable to the BEST Project.

b. <u>On - Time Completion</u>

Due to reduced repetition, a considerable increase is projected in the number of students who complete the sixth grade in the minimum of six years of study. A 146 percent increase is projected, from the 1989 baseline figure of 70 students per 1,000 entering students who graduate on time, to 172 in 1996. Of this 146 percent increase, 70 percent is estimated as the effect of the BEST Project interventions, independent of other factors. Figure 5 summarizes these projections.

Figure 5



5. Dropout Rate

The Dropout Rate is expected to decline by 17 percent, overall, from a 1989 baseline figure of 82 students per 1,000 who dropout, to a 1996 estimate of 68 students per 1,000. Of this 17 percent change, 7 percent will be directly and independently attributable to BEST Project interventions. Figures 6 and 7 summarize the projected improvement in dropout rates. Table 2 contains dropout numbers projected by this analysis.

Figure 6

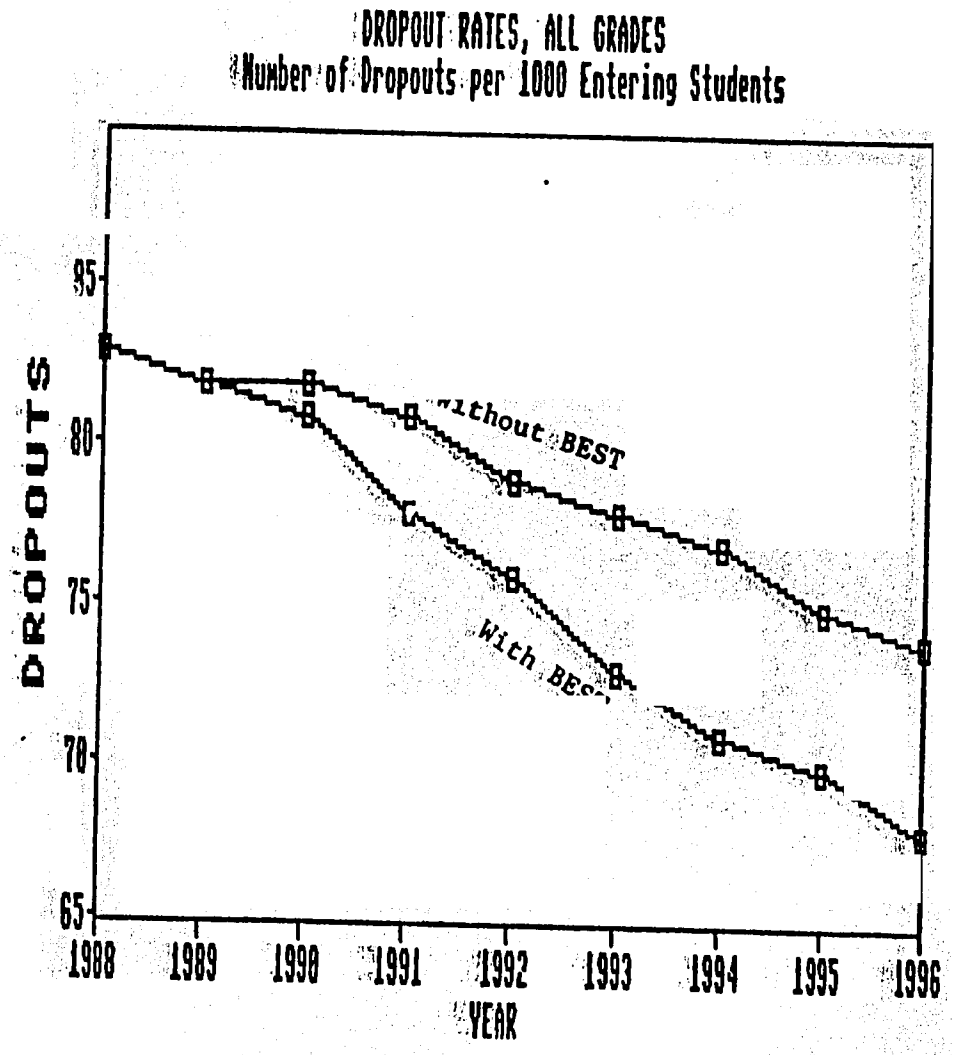
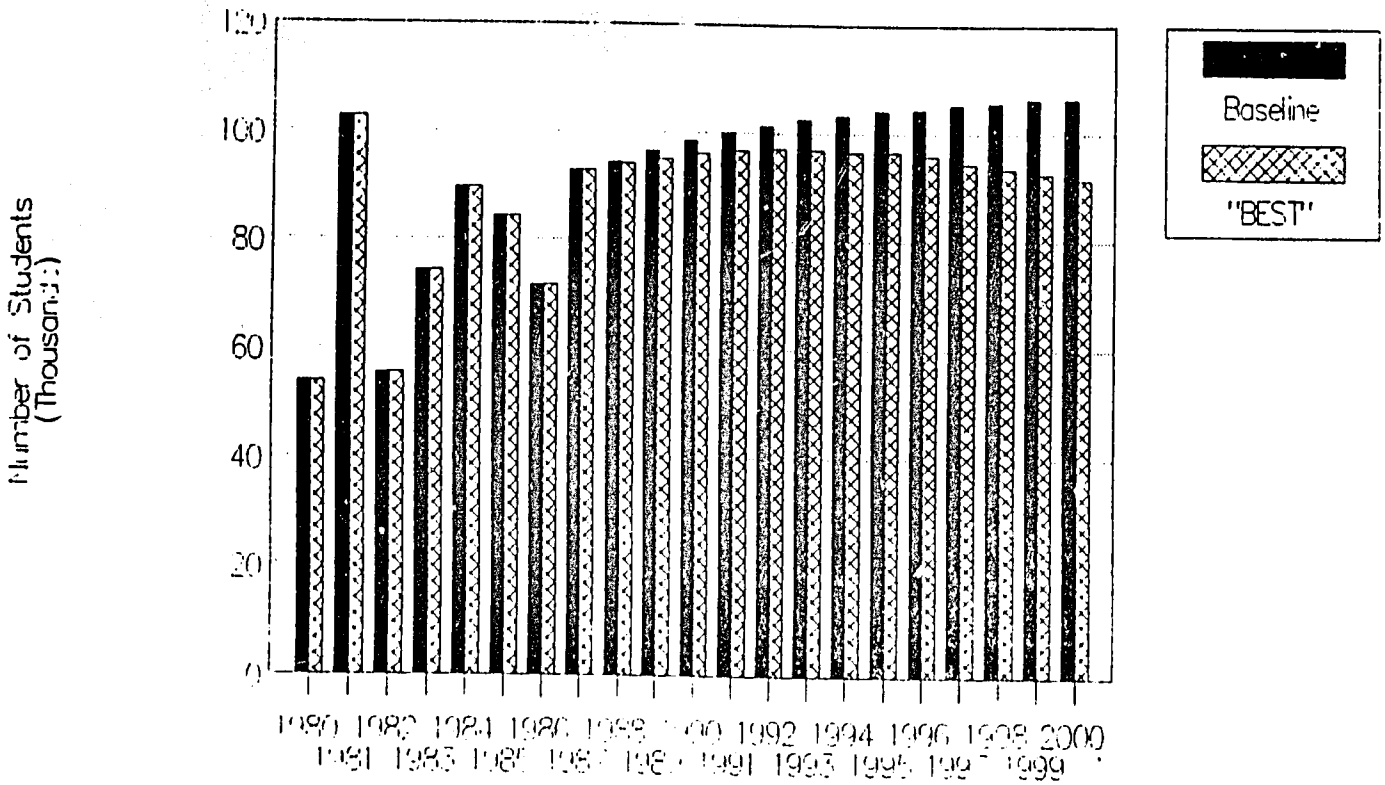


Figure 7

DROPOUTS from GRADES 1-6

Baseline versus "BEST" Projections



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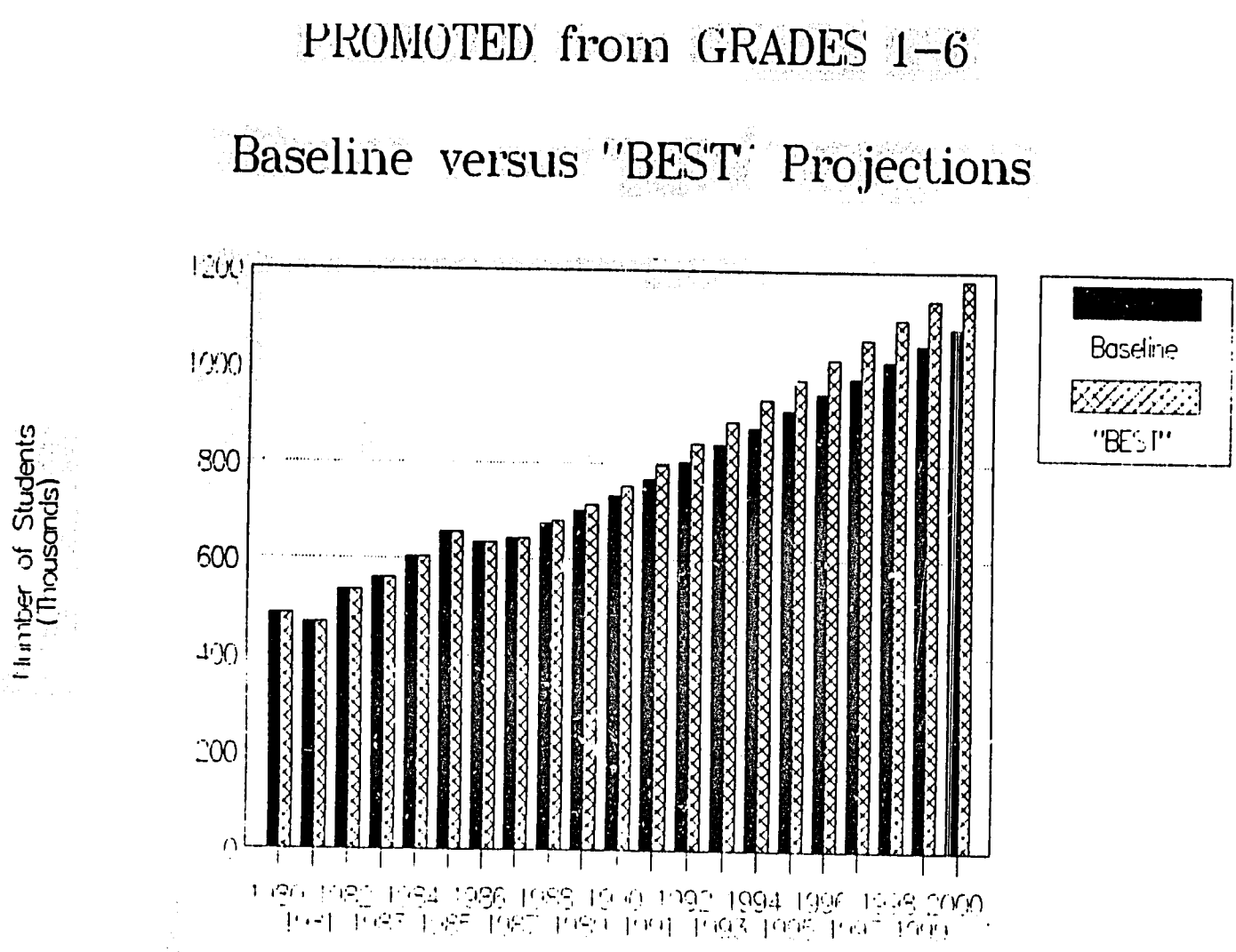
6. **Promotion Rate**

The Promotion Rate will increase by 20 percent overall, from 600 students per 1,000 in 1989 to 718 per 1,000 in 1996. Of this overall 20 percent improvement, 8 percent will be attributable directly to this BEST Project. Figure 8 summarizes overall promotion trends. Table 2 contains projected promotion numbers.

Figure 8



7. Enrollment

The BEST Project is not working directly to increase primary school enrollment by expanding infrastructure, but the World Bank Second Basic Education Project and the Government of Guatemala will be continuing to expand access. The BEST Project will produce two counter vailing trends on enrollment due to increased retention rates that will result from the BEST Project, overall enrollment may increase. This trend, however, should be partially offset by more rapid progress of students through the system, tending to reduce enrollment. Overall enrollment, of course, will continue to increase as a function of growth in the school age population. However, because of rapid population growth, the enrollment rate is not expected to rise markedly. Figure 9 summarizes enrollment growth projections, and figure 10 shows how the pattern of enrollment by grade will change as a result of the BEST Project.

Figure 9

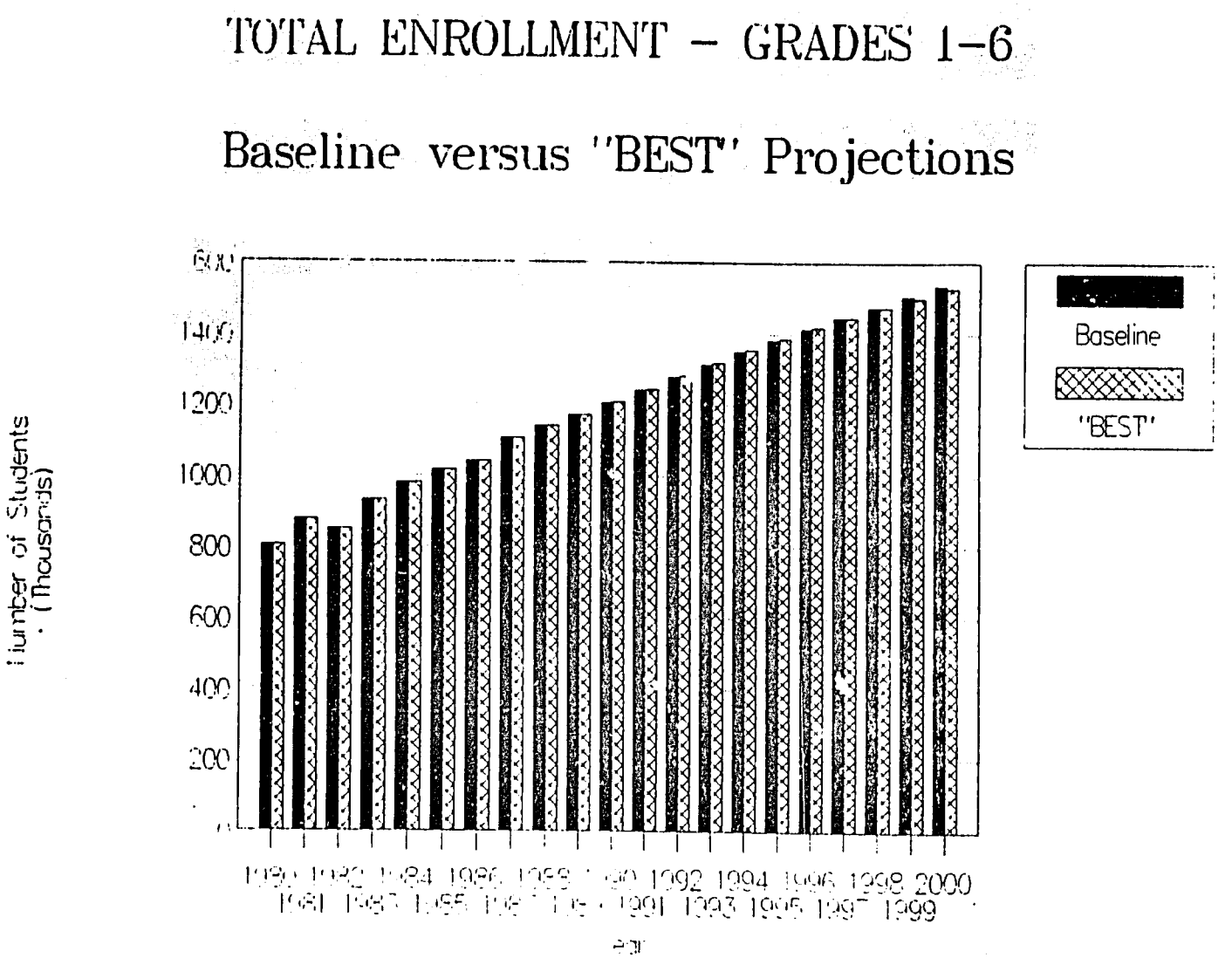


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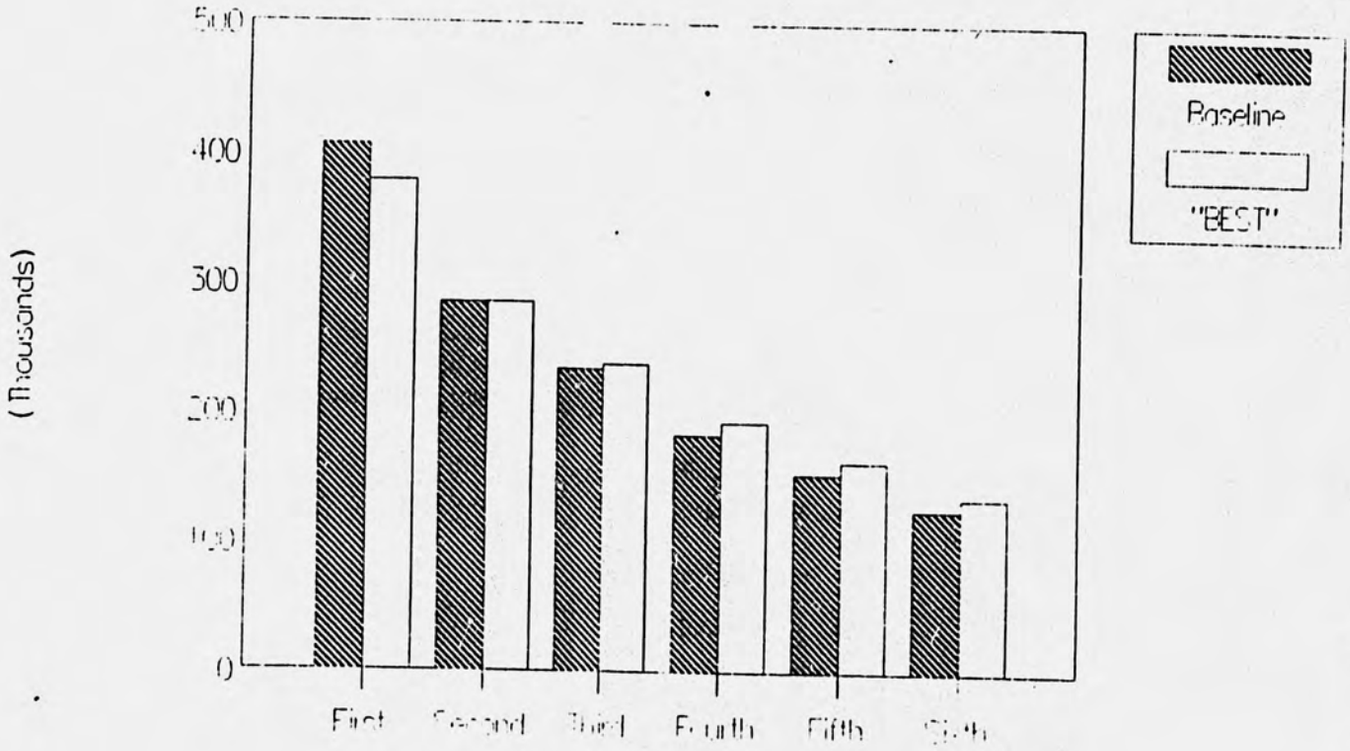
Figure 10

Projected 1995 Enrollments by Grade
Baseline versus "BEST" Projections



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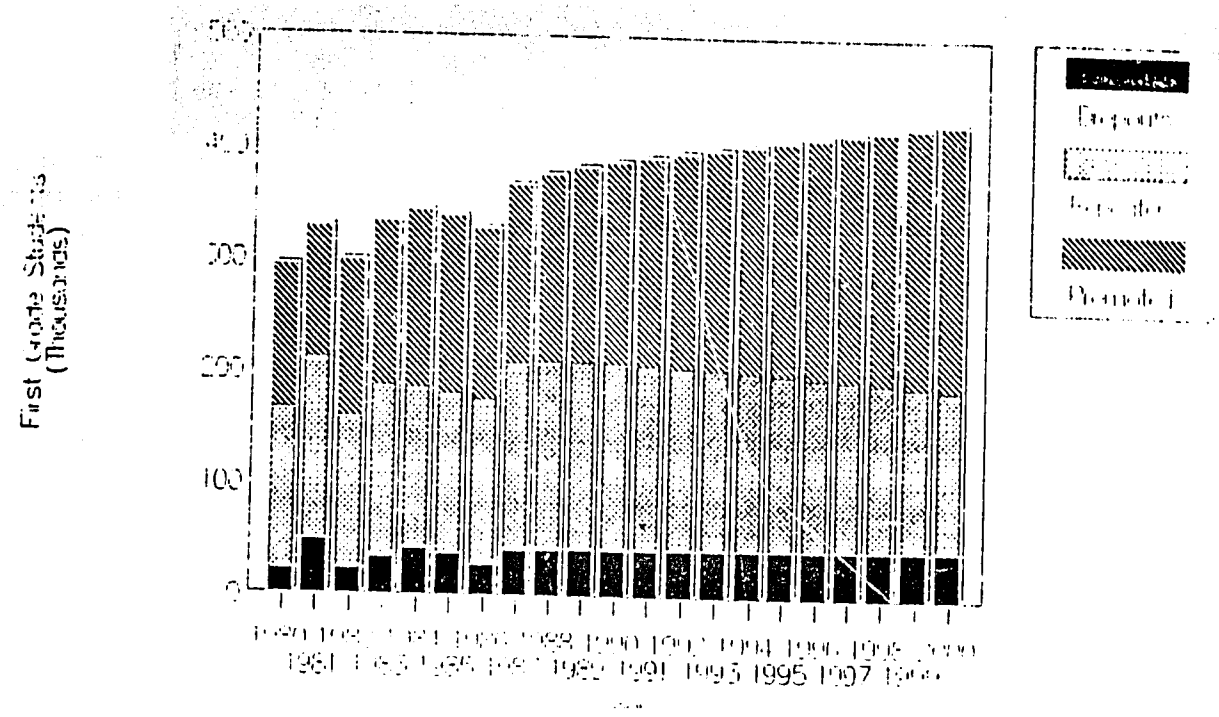
8. Summary: Combined Indicators by Grade Level

Figure 11 consists of 6 pages of summary graphics showing projections of dropouts, repeaters, promotions, and total enrollment by grade level and by year. A number of interesting predictions emerge from these graphics. For example, on the first page, the statistical model predicts that the BEST Project could actually reduce the growth of first grade enrollment to almost nothing. This is because the 43 percent repetition rate among first graders declines faster with BEST than without BEST, causing students who would normally repeat and stay in first grade instead to be promoted instead. As a result, second grade enrollment increases rapidly, while first grade enrollment remains stable.

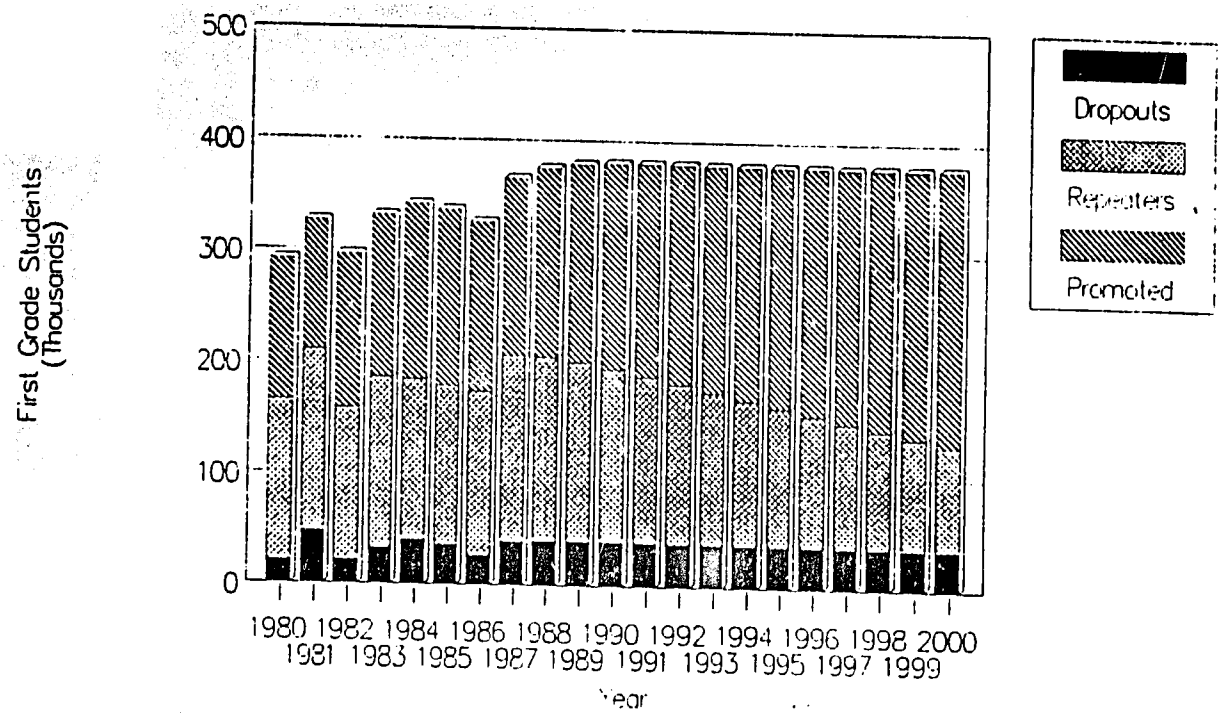
FIRST GRADE BASELINE PROJECTION

Dropouts, Repeaters and Promoted



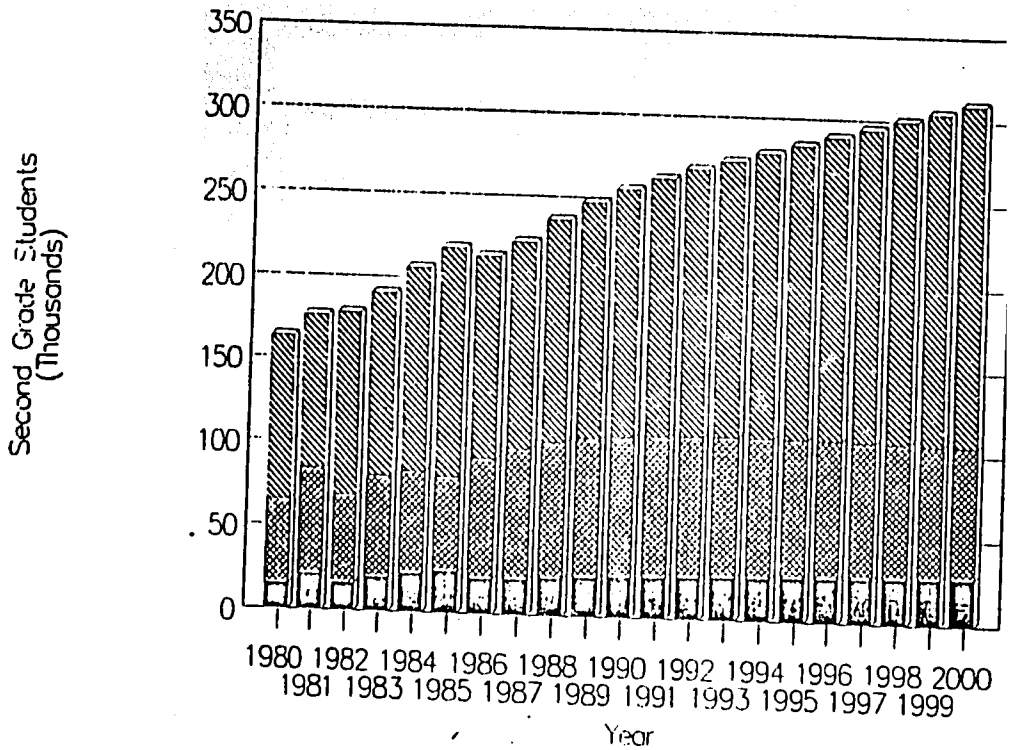
FIRST GRADE "BEST" PROJECTION

Dropouts, Repeaters and Promoted



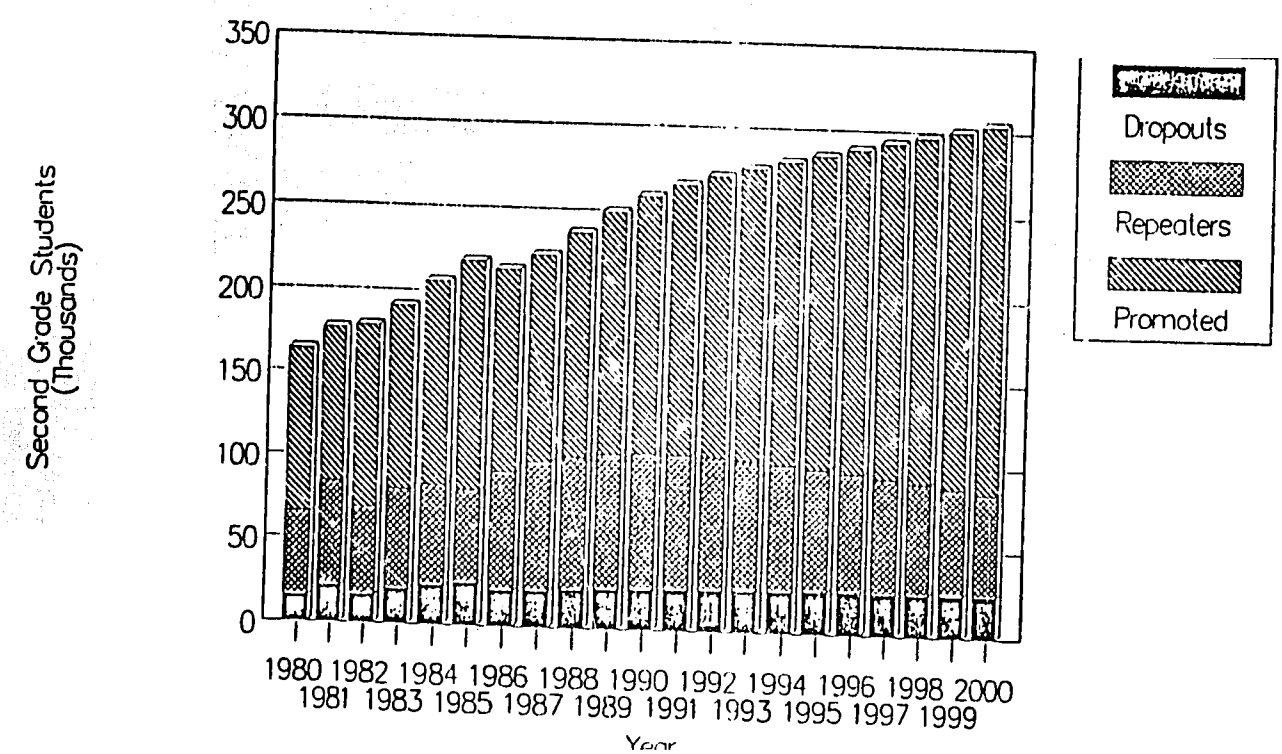
SECOND GRADE BASELINE PROJECTION

Dropouts, Repeaters and Promoted



SECOND GRADE "BEST" PROJECTION

Dropouts, Repeaters and Promoted



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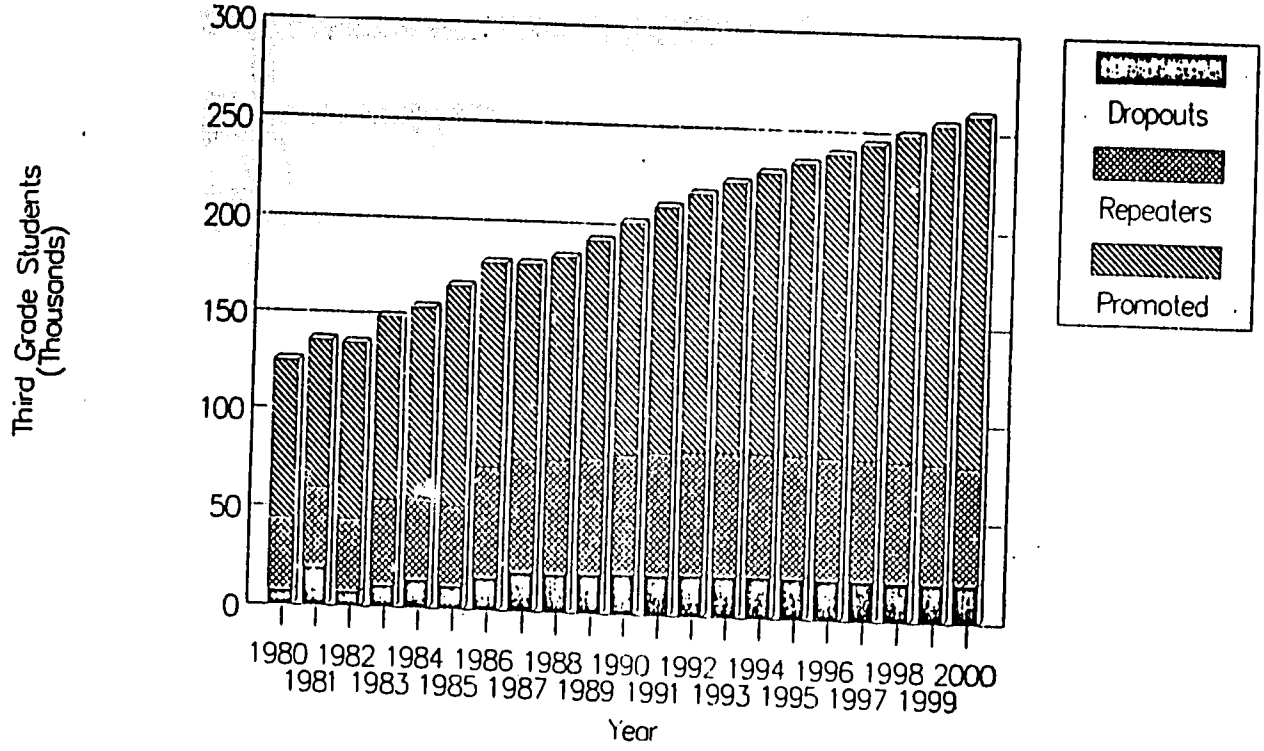
THIRD GRADE BASELINE PROJECTION

Dropouts, Repeaters and Promoted



THIRD GRADE "BEST" PROJECTION

Dropouts, Repeaters and Promoted

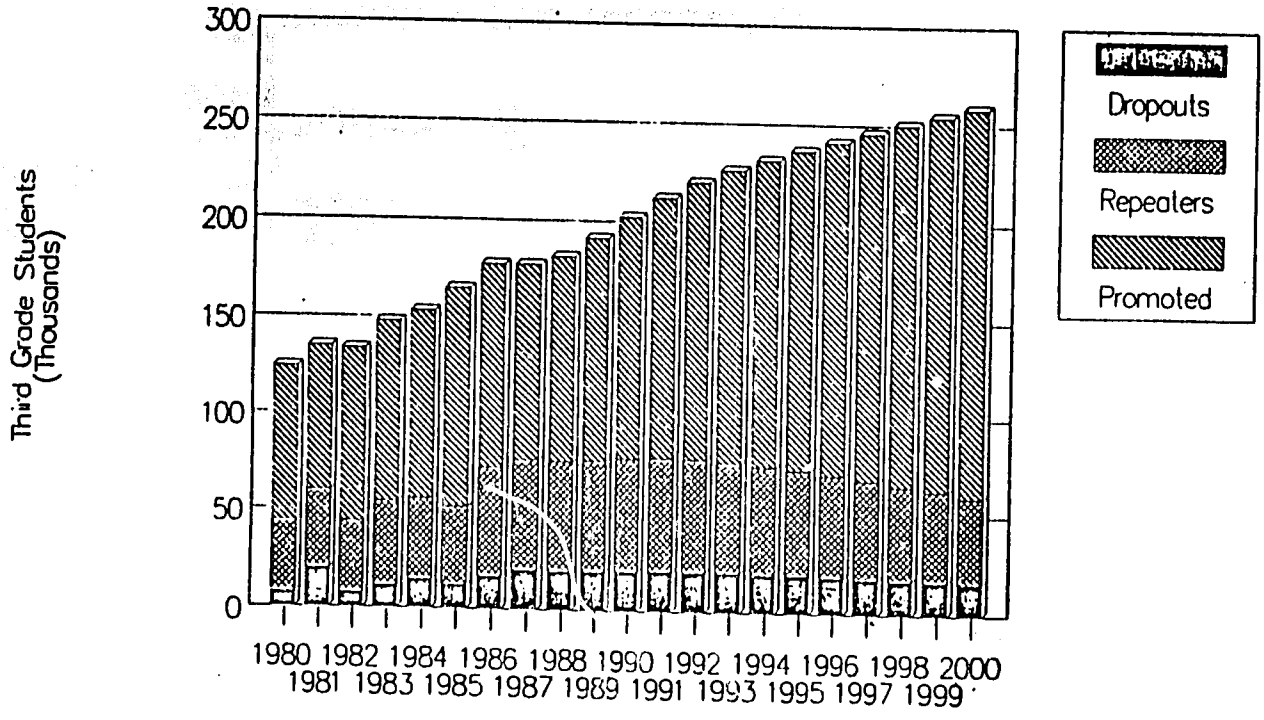
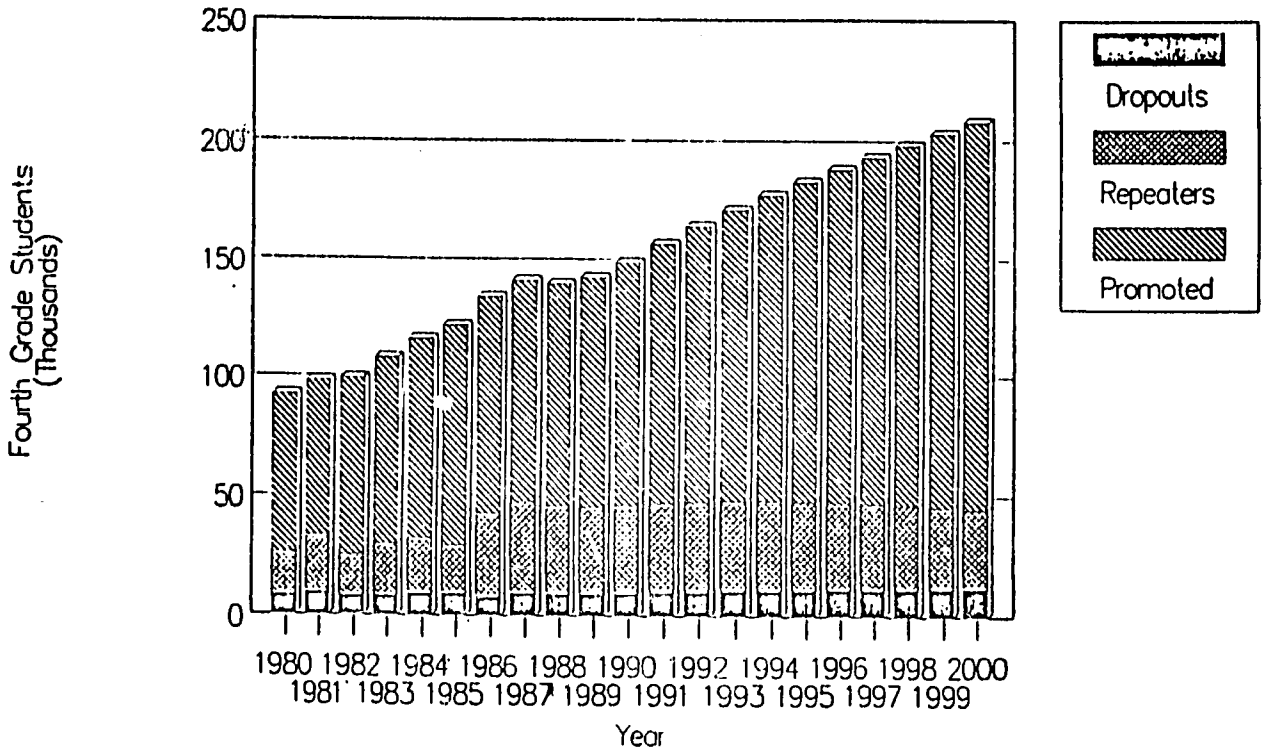


Figure 14

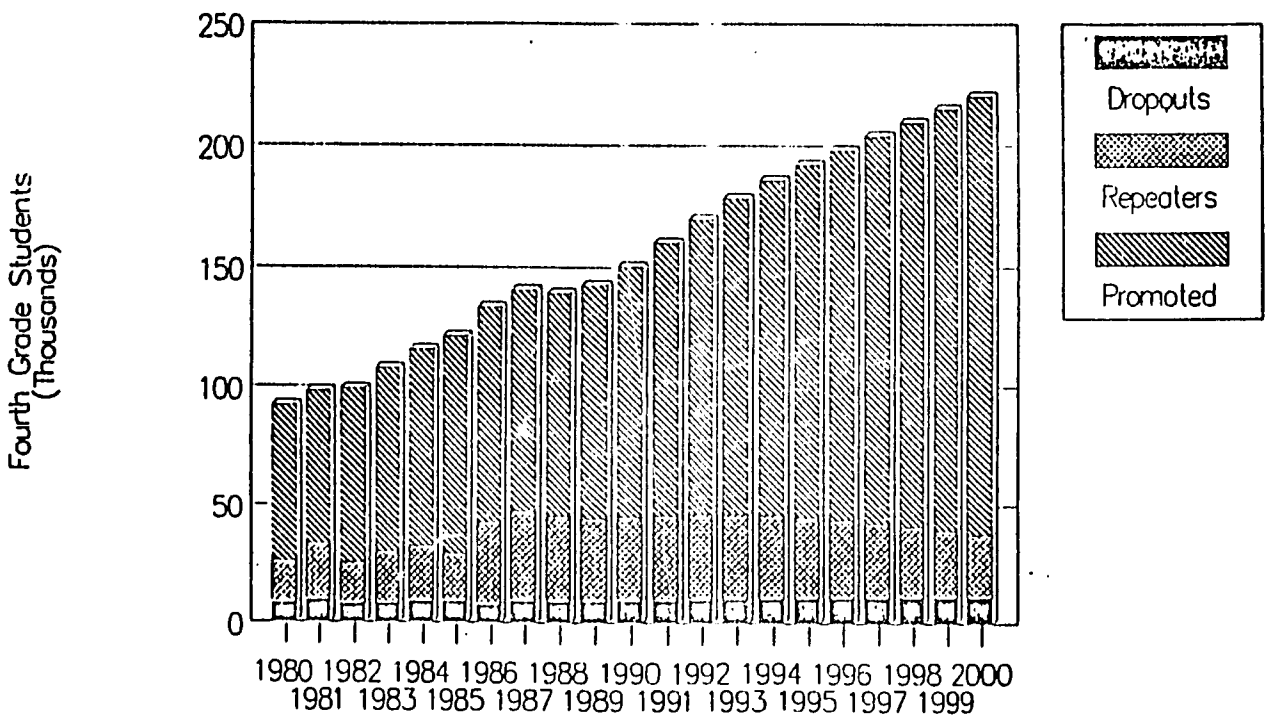
FOURTH GRADE BASELINE PROJECTION

Dropouts, Repeaters and Promoted



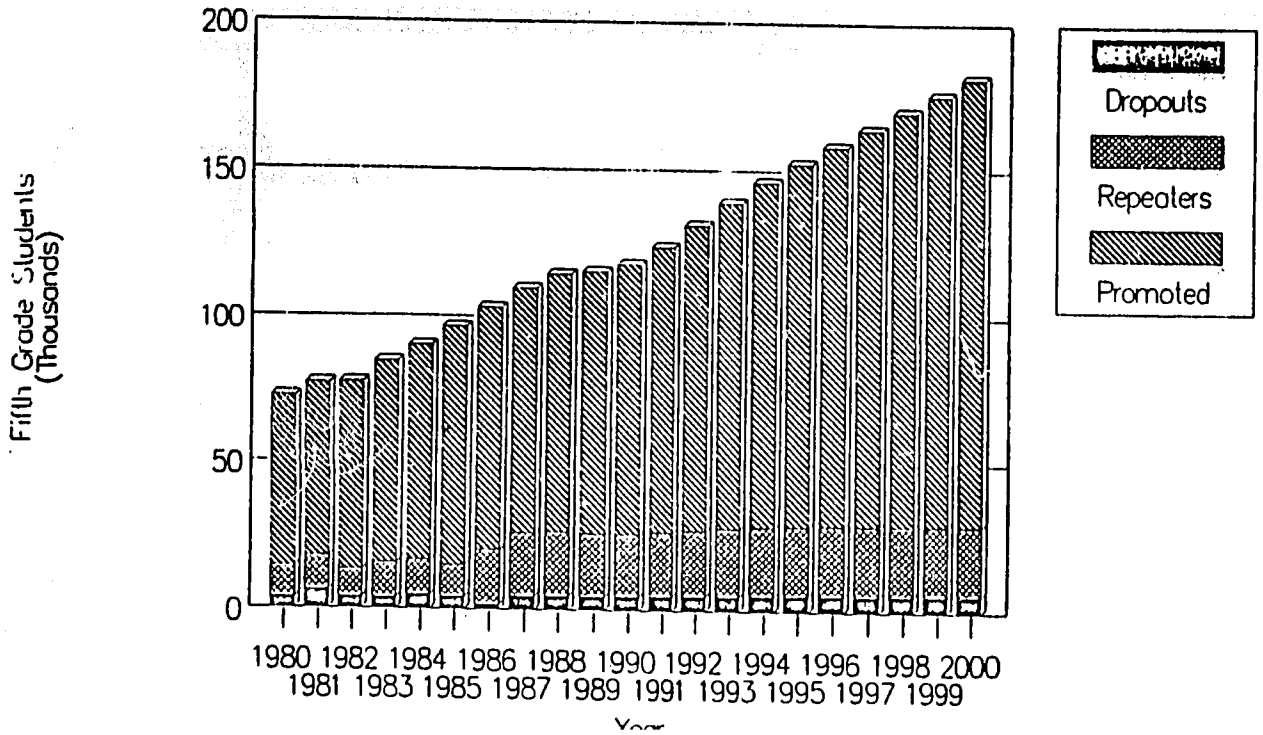
FOURTH GRADE "BEST" PROJECTION

Dropouts, Repeaters and Promoted



FIFTH GRADE BASELINE PROJECTION

Dropouts, Repeaters and Promoted



FIFTH GRADE "BEST" PROJECTION

Dropouts, Repeaters and Promoted

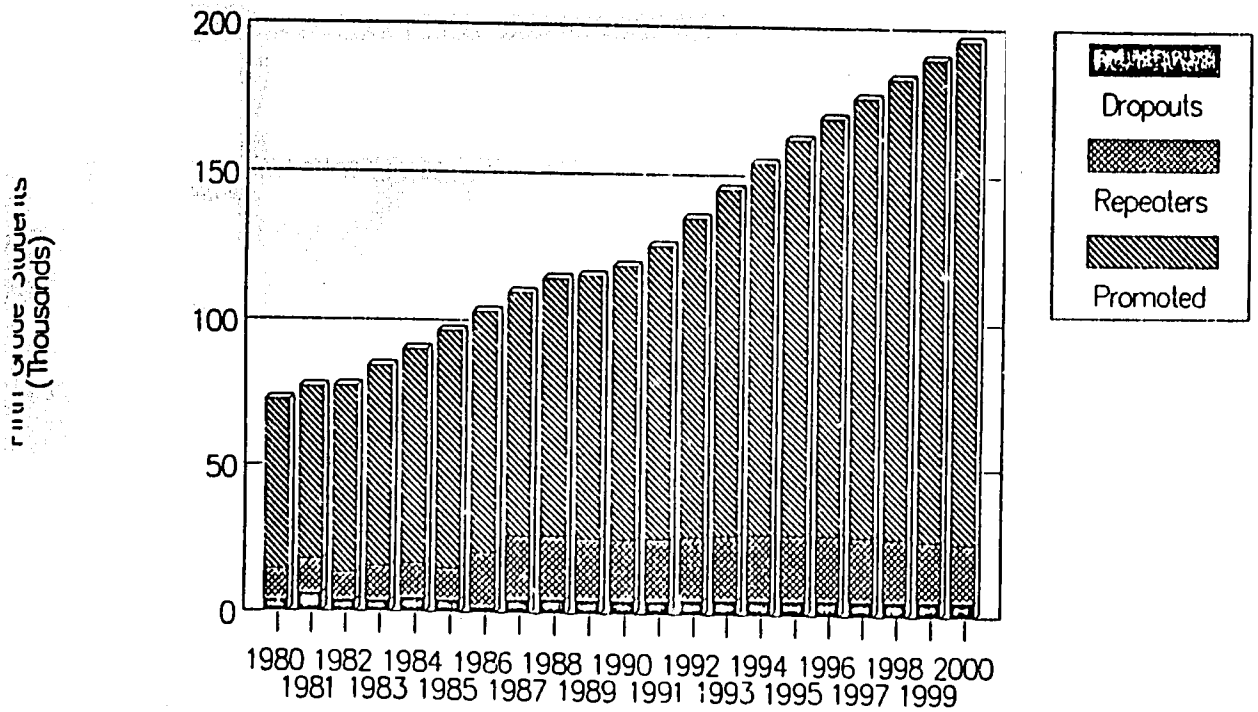
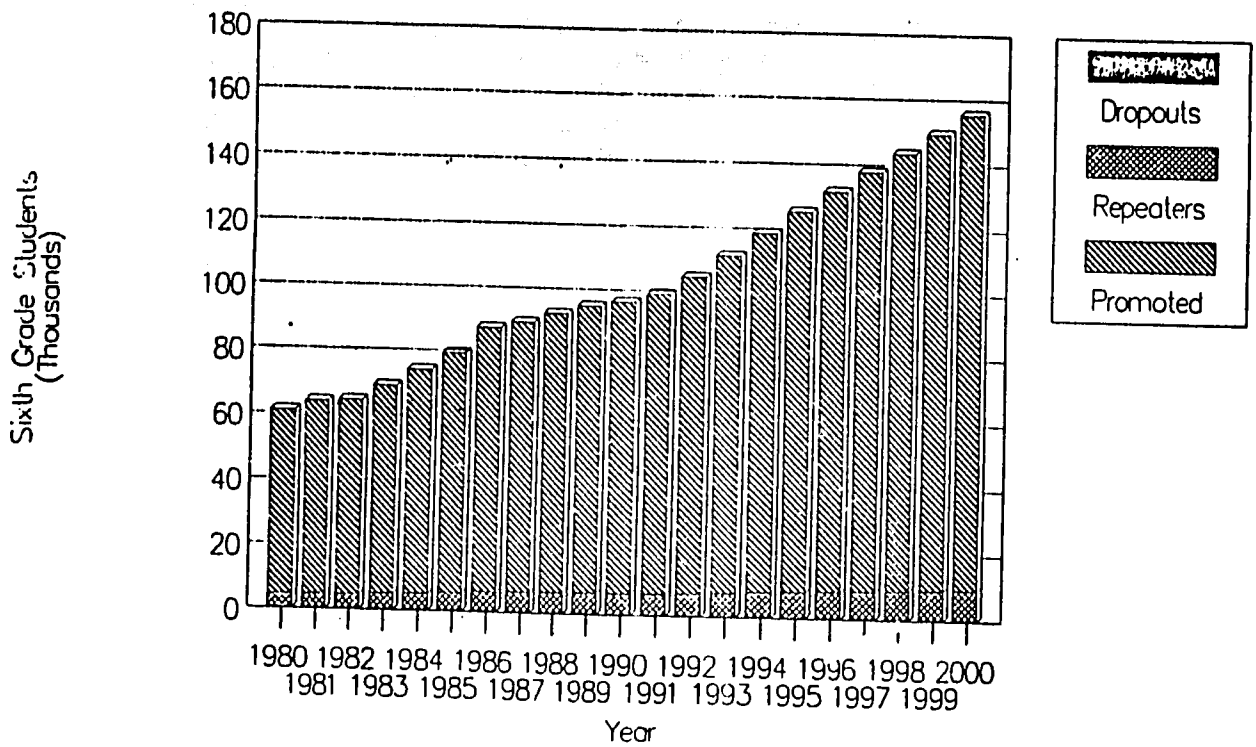


Figure 1

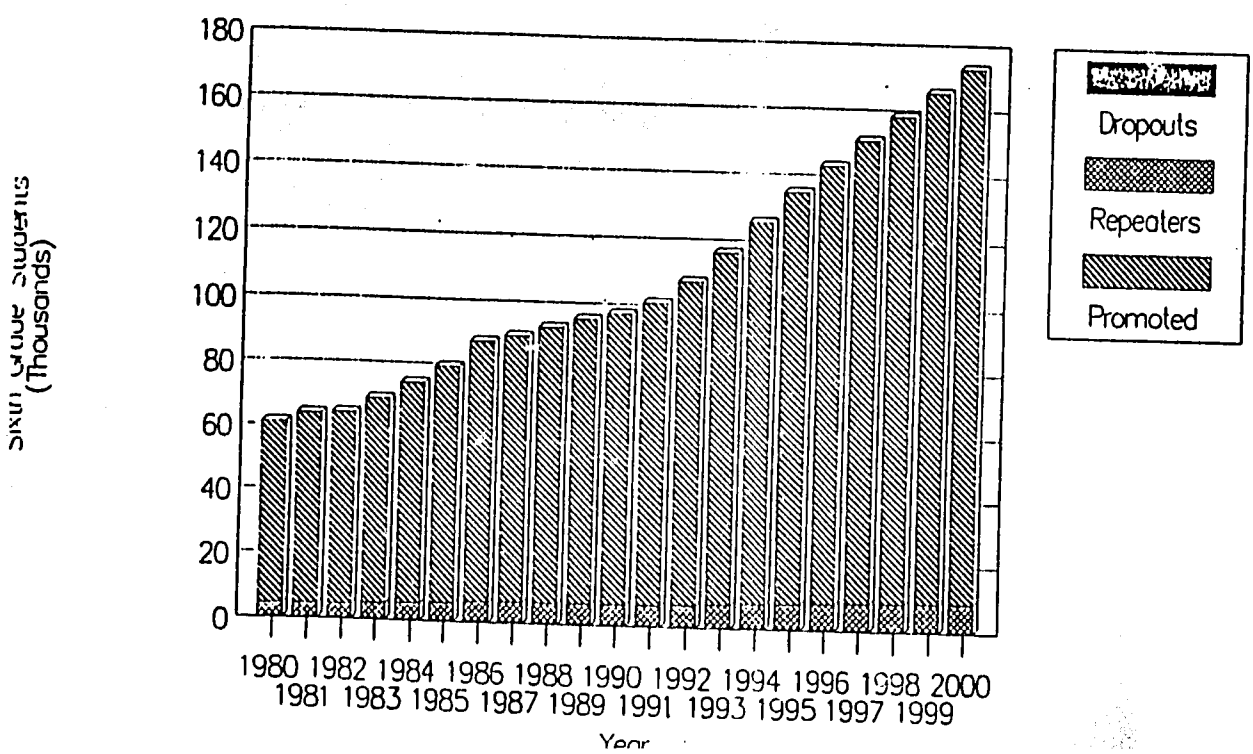
SIXTH GRADE BASELINE PROJECTION

Dropouts, Repeaters and Promoted



SIXTH GRADE "BEST" PROJECTION

Dropouts, Repeaters and Promoted



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Future Analysis

The statistics and projections summarized in this Annex are agregated for the entire Guatemalan educational system. As implementation gets under way, the Mission will re-run the PETS model for several different subgroups representing special concerns, to determine comparative efficiency indicators and to establish some special atch up objectives and benchmarks. First, this entire analysis will be repeated, controlling for gender, to determine the differential repetition, graduation, promotion, and dropout rates for males and females. Second, the analysis will be run, controlling for ethnic background, to determine the differential performance of indigenous and ladino children, and for comparing PRONEBI with non-PRONEBI schools.

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E.O. 12356: N/A
TAGS:
SUBJECT: ENVIRONMENTAL DETERMINATION FOR ENTREPRENEURIAL DEVELOPMENT (520-0380) AND BASIC EDUCATION STRENGTHENING (520-0374) PROJECTS

1. IAC DEPUTY ENVIRONMENTAL OFFICER WILSON APPROVED REQUEST FOR CATEGORICAL EXCLUSION FOR SUBJECT IEES ON MAY 16, 1989. IEE NUMBER FOR ENTREPRENEURIAL DEVELOPMENT PROJECT (520-0380) IS IAC-IEE-89-41. IEE NUMBER FOR BASIC EDUCATION STRENGTHENING PROJECT (520-0374) IS IAC-IEE89-42. COPY OF ENVIRONMENTAL DETERMINATIONS IS BEING POUCHED TO MISSION FOR INCLUSION IN PROJECT FILES. BAKER
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LAC-IEE-89-42

ENVIRONMENTAL THRESHOLD DECISION

Project Location	:	Guatemala
Project Title	:	Basic Education Strengthening
Project Number	:	520-0374
Funding	:	$30 million
Life of Project	:	Six years
IEE Prepared by	:	Alfred Nakatsuma USAID/Guatemala
Recommended Threshold Decision	:	Categorical Exclusion
Bureau Threshold Decision	:	Concur with Recommendation
Comments	:	None
Copy to	:	Anthony J. Cauterucci, Director USAID/Guatemala
Copy to	:	Liliana Ayalde, USAID/Guatemala
Copy to	:	Alfred Nakatsuma, USAID/Guatemala
Copy to	:	Frank Zadroga, REMS/ROCAP
Copy to	:	Elizabeth Warfield, LAC/DR/CEN
Copy to	:	IEE File

John O Wilson Date MAY 16 1989

John O. Wilson
Deputy Environmental Officer
Bureau for Latin America
and the Caribbean

Initial Environmental Examination

Project Location :Guatemala

Project Title :Basic Education Strengthening

Funding :$30 million

Project Descriptic

The goal of the project is to improve the productivity, quality of life and democratic participation of the Guatemalan people. The project purpose is to improve the efficiency, coverage and administration of basic education services.

To achieve the goal and purpose, the project will provide $30 million in A.I.D. grant funds over six years to support GOG efforts to improve basic education through the following four components:

(1) The bilingual education component will consolidate the existing A.I.D.-supported bilingual education program by upgrading the instructional material, streamlining the methodology, and developing a long-range expansion plan to achieve full coverage of the indigenous population.

(2) The teacher services component will improve the quality of teaching by providing a new national in-service teacher training program to upgrade teachers' knowledge, skills and sense of professional commitment.

(3) The expanding coverage and access component will provide a research and development program to develop and test a low-cost, non-traditional methodology for basic education services.

(4) The administrative improvement component will provide technical assistance for improving routine administrative functions in the Ministry of Education, continued support for the Ministry's decentralization program, development of a computerized management information system, and a public information program to track the progress of changing basic education services.

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Environmental Impact

The proposed project will not involve activities that have an effect on the natural and physical environment. The activities which will be carried out qualify for a categorical exclusion according to Section 216.2 (c) (2) (i) of 22 CFR as "education, technical assistance or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)."

Recommendation

Based on the categorical exclusion discussed above, the Mission recommends that the Basic Education Strengthening Project be given a Categorical Exclusion determination requiring no further environmental review.

Concurrence: _____
Anthony J. Cauterucci
Mission Director

5/11/89
Date