

# A.I.D. EVALUATION SUMMARY

(BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS)

192 872 36  
PART I  
PD-ABI-153

IDENTIFICATION DATA

<p><b>A. REPORTING A.I.D. UNIT:</b> USAID/Guatemala <small>(Mission or AID/W Office)</small></p> <p>(ES# _____ )</p>	<p><b>B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN?</b> yes <input checked="" type="checkbox"/> slipped <input type="checkbox"/> ad hoc <input type="checkbox"/></p> <p>Eval. Plan Submission Date: FY ___ Q ___</p>	<p><b>C. EVALUATION TIMING</b> Interim <input type="checkbox"/> final <input checked="" type="checkbox"/> ex post <input type="checkbox"/> other <input type="checkbox"/></p>			
<p><b>D. ACTIVITY OR ACTIVITIES EVALUATED</b> (List the following information for project(s) or program(s) evaluated; If not applicable, list title and date of the evaluation report)</p>					
Project #	Project/Program Title <small>(or title &amp; date of evaluation report)</small>	First PROAG or equivalent (FY)	Most recent PACD (mo/yr)	Planned LOP Cost ('000)	Amount Obligated to Date ('000)
520-0282	Primary Education Improvement Project	FY 85	07/93	13.5	13.5

ACTIONS

E. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR	Name of officer responsible for Action	Date Action to be Completed
<p><b>Action(s) Required</b></p> <p>1. Consolidate the bilingual education program administration and services in the 800 existing schools before expanding the program to additional schools. <i>The BEST Project was amended to include the consolidation of the program in 800 schools as a CP to expansion to additional schools.</i></p>	ERamos, DIR/PRONEBI	FY 95
<p>2. Coordinate with 10 bilingual schools in Quiché, that are applying the NEU methodology, to prepare a teacher training plan. <i>The BEST Project amendment requires that a training plan be developed to include NEU strategies.</i></p>	ERamos, DIR/PRONEBI	1/95
<p>3. Train all PRONEBI personnel, central and regional, to ensure administrative adequacy of the program to consolidate the impact of bilingual education. <i>The BEST project amendment includes in its plan the contracting of training specialists to improve the administration of the BEST Project.</i></p>	ERamos, TRG/PRONEBI	7/94
<p>4. Develop a strategy to increase girls' academic achievement and coordinate the strategy with the Girls' Education Program. <i>In conjunction with PRONEBI personnel, the Girls' Education activity personnel will develop this strategy.</i></p>	GNúñez/JDíaz	8/94
<p>5. MOE should develop a plan to gradually absorb the operating and personnel costs currently financed by USAID. <i>This action was included in the BEST Project amendment CPs and covenants and was negotiated with the Minister of Education to incorporate all costs by 1996.</i></p>	Ministry of Education	Completed

(Attach extra sheet if necessary)

APPROVALS

**F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION:** mo 3 day 2 yr 94

**G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS:**

Signature Typed Name	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Susan Clay OH&E	Ernestina R. de Ramos PRONEBI, DIR	Margaret Kromhout PDSO	William Stacy Rhodes DIR	
Date: <u>3-11-94</u>	Date: <u>maxia...</u>	Date: <u>3/15/94</u>	Date: <u>W.S.R. Rhodes</u>	

- a

H. EVALUATION ABSTRACT (do not exceed the space provided)

The purpose of the project is to improve the quality, coverage, and efficiency of primary school services through the provision of relevant bilingual education programs to indigenous children in the four major language areas (92 percent of the indigenous population) in the Guatemalan Highlands. The project was implemented by the National Program of Bilingual Education (PRONEBI) of the Ministry of Education of the Government of Guatemala. The final evaluation was conducted by an Academy for Educational Development (AED) team over a period of three months. The evaluation was based on a document review, interviews with key Ministry of Education personnel and teachers, and observations of twelve classrooms over an entire school day. The evaluation assessed the impact of the project on educational efficiency and quality among students and teachers; the impact of the project on program staff and families of participating children; the impact of the project in institutionalizing bilingual education within the MOE; and the success of a continued expansion of bilingual education. The major findings and conclusions are:

ABSTRACT

- The bilingual education project has had a positive impact on educational efficiency by decreasing the dropout and repetition rates and by increasing the promotion rate among the target population of indigenous children.
- The project has had a positive impact on academic achievement among the target population and on teacher performance;
- Participation in the bilingual education program has had a positive effect on children's acquisition of Spanish language skills;
- The project needs to reorient its approach to have an equal impact on both boys and girls;
- The project needs to strengthen its training of teachers by focusing on specific skills needed and by teaching to the skills.
- The project needs to strengthen the research and promotion programs;
- The project needs to strengthen and improve the administrative capacity of the National Program of Bilingual Education before expanding bilingual services to additional schools.
- The Government of Guatemala needs to provide greater support, both in budget increases and in administrative strengthening, in order to ensure the institutionalization of bilingual education services.

I. EVALUATION COSTS

COSTS

1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (US\$)	Source of Funds
Name	Affiliation			
Bruce Pearlman	AED Administration	96 pd	\$66,482	520-0282 Project Funds
Kjell Enge	AED Anthropologist			
Ray Chesterfield	AED Educator			
Jack Corbet	AED Financial Analyst			
2. Mission/Office Professional Staff Person-Days (estimate) <u>30</u> person days		3. Borrower/Grantee Professional Staff Person-Days (estimate) <u>15</u> person days		

b

# A.I.D. EVALUATION SUMMARY PART II

## J. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS (Try not to exceed the 3 pages provided) Address the following items:

- Purpose of activity(ies) evaluated
- Purpose of evaluation and Methodology used
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office: AID/OH&E

Date this summary prepared: October 30, 1993

Title and Date of Full Evaluation Report: Rural Primary Education Improvement Project  
Final Evaluation

The project purpose is to strengthen and expand the Guatemalan bilingual education program and to improve the relevance and efficiency of rural education services for indigenous children. At the time the Improvement of Rural Primary Education Project was designed in 1984, 42 percent of Guatemala's population were members of Mayan indigenous groups that speak 22 different languages. These groups make up the bulk of the rural population engaged in subsistence agriculture. They have been traditionally ill-served by the educational system as only 40 percent of those of school age were estimated to be in school when the project began, and of those 50 percent dropped out by the end of first grade.

The project developed a curriculum appropriate for Mayan speaking children, developed bilingual educational materials, trained bilingual teachers, and created an evaluation unit to monitor the progress of the bilingual program on improving student achievement.

The purpose of the final evaluation is to assess the success of the project in meeting outcomes projected in the logical framework and to assess its impact on indigenous children and their families. The objectives for the evaluation are: a) to determine the impact of the project in creating a sustainable infrastructure for the delivery of relevant bilingual education within the Ministry of Education; b) to measure the impact of the project on secondary beneficiaries such as program staff, teachers, and the families of participating children; c) to determine the number of direct beneficiaries (students) served by the project and the educational benefits accrued in terms of achievement, grade level completed, and lower dropout and repetition rates; and d) to assess the potential success of continued expansion of the bilingual education program.

The evaluation used a multimethod design that included statistical analysis of existing quantitative data; extensive interviews with parents, teachers, and administrators; and observations of student and teacher interactions in the classroom.

A critical review was carried out of the following AID documents: the Project Paper, implementation letters, and previous evaluations, as well as the Implementing Unit documents, reports, administrative manuals, training plans and materials, annual plans, and studies carried out by the evaluation unit; in addition, the evaluation conducted in-depth interviews covering impact and sustainability with key individuals who were directly involved in the implementation of the project; 48 interviews with PRONEBI teachers in the four major language areas with questions of impact of bilingual education; twelve classroom observations using established ethnographic methods, including the recording of setting, the number of students, and the classification and description of specific events and activities; special efforts to record the activities over an entire school day to place innovative activities in their proper context; and careful notes translated into displays and matrices for analysis.

## Major Recommendations

Increased emphasis should be given to girls' academic achievement. PRONEBI should coordinate closely with the Girls' Education program to develop strategies to encourage teachers to promote the academic performance of girls.

Any expansion of the bilingual education program should be undertaken with care. It is likely that the conditions that contributed to the success of the bilingual education project, such as having instructional materials in the schools; having bilingual teachers in place; having an adequate physical infrastructure; and having the administrative structure at both the central and regional levels to design and deliver quality bilingual education, must exist to assure the continued impact as the program expands.

Additional training should be provided to teachers, especially in using interactive strategies with children. Training should be provided for all new PRONEBI personnel to ensure administrative adequacy of the program to consolidate the impact of bilingual education.

A plan should be developed whereby the MOE gradually absorbs the operating and personnel costs currently financed by AID.

## Discussion

The recommendations were discussed with the Vice Minister of Education and other officials and they agreed in that support to the Implementing Unit (PRONEBI) was necessary to comply with the recommended actions, since the bilingual education continued to be financed under other Project. The USAID Mission determined that these actions recommended be included into the BEST Project Amendment as conditions precedent and covenants. These actions are already implemented by USAID and the compliance of the CPs are in the hand of the Ministry of Education and PRONEBI.

## Lessons Learned

1. Set realistic benchmarks in coordination with Government officials and beneficiaries
2. All projects should contain a policy dialogue component to ensure that actions are sustained and institutionalized.
3. The implementing organization should develop a program to ensure job security for qualified administrative and technical personnel and reward personnel for professional development.
4. Coordination among donors can avoid duplication of efforts and maximize the use of all resources targeted to a given program.
5. In the development of bilingual education materials, the varying levels of bilingualism that exist among target populations must be taken into consideration.
6. A well-developed bilingual education program, at least in rural areas of developing countries, can be more effective than programs in the second language, through participation of schools that use the national curriculum in the official language.

**Findings and conclusions:**

- 1) The project has had a positive impact on educational efficiency among the target population of indigenous children. Girls showed an impressive reduction in dropouts when compared to other sample children over time. PRONEBI schools showed steady and statistically significant increases in promotion rates and corresponding decreases in repetition and dropout rates at each grade level over the life of the project.
- 2) The project has had a positive impact on educational quality among the target population. Test data show PRONEBI children outperforming children in comparison schools on seven of the eight measures of academic achievement where significant differences were found. PRONEBI teachers spend more time in class on the average and devote more time to subject matter than teachers in schools without the bilingual curriculum which also serve indigenous children.
- 3) Participation in the PRONEBI program has had a positive effect on children in terms of Spanish language acquisition. On three of the four valid measures of Spanish language proficiency, PRONEBI children performed better than their comparison group.
- 4) The PRONEBI program has not had an equal impact on boys and girls. Although the PRONEBI program has had a positive impact on both boys and girls, boys generally had significantly higher academic performance, better promotion rates, and lower repetition rates. Girls in the program, however, showed superior trends in terms of lower dropout rates over the life of the project.
- 5) The instructional materials developed under the project are effective and consistent with the results found in improved achievement in PRONEBI schools. Their effectiveness can be improved through greater specification of the skills and abilities expected of bilingual children at each grade level, and by stimulating an interactive approach using instructional materials and activities between students and teachers.
- 6) The project has had a positive but limited impact on teachers. Teachers expressed a need for more training focused on materials and on literacy in the mother tongue.
- 7) The project has had a positive impact on parents in terms of knowledge and acceptance of bilingual education; however, more research and promotion of the program are needed. Parent attitudes are generally favorable and are generally related to positive gains in their children's ability to read, write, and speak Spanish. Thus, publicizing the positive impact on students should increase parental support of the program.
- 8) The project developed a trained corps of administrative staff; however, in the last two years, there has been an exodus of trained staff to other positions within the Ministry of Education and PRONEBI must begin again to build its administrative capacity.
- 9) The project has not fully institutionalized bilingual education within the Ministry of Education. Commitment of the Government of Guatemala to bilingual education is measured by expenditures for the program. Such expenditures rose from virtually nothing in 1984 to over 7 percent of all primary education expenditures in 1991. This occurred while the overall primary education share of the MOE budget remained relatively constant (between 30 and 35 percent during the life of the project). However, institutionalization at the regional level has yet to be passed into law, and the rate at which the Ministry will take over full financial responsibility for bilingual education has yet to be determined and agreed upon.

**K. ATTACHMENTS (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier)**

Evaluation Report  
Scope of Work

ATTACHMENTS

**L. COMMENTS BY MISSION, AID/W OFFICE AND BORROWER/GRANTEE**

- The evaluation report satisfied the requirements of the scope of work.
- The evaluation team included a financial analyst, two anthropologists, and a management specialist. Three of the four evaluators had prior experience evaluating bilingual education activities in Guatemala under the Basic Education Strengthening (BEST) Project. The previous experience of the team in Guatemala and the competency of the team members in their areas of expertise contributed to the high quality of the data analysis, the findings, and the recommendations.
- The scope of work required extensive observations of PRONEBI classroom interactions to permit the evaluation to describe PRONEBI interventions and to evaluate their impact on student attendance, retention, and achievement.
- The evaluation presented a synthesis of the findings and recommendations in a specially designed format that would permit immediate use and action by the Ministry of Education. The findings and recommendations were fully accepted by the Ministry of Education and incorporated into its budget and technical planning.

MISSION COMMENTS ON FULL REPORT

XD-ABI-153-A

IN 87237

**RURAL PRIMARY EDUCATION IMPROVEMENT PROJECT  
USAID/GUATEMALA**

**Final Evaluation**

**June 1993**

**This report was prepared under Contract No. AID/LAC 0032-C-00-9036-00 (TSO 67) between USAID/Guatemala and the Academy for Educational Development, with subcontractors Juárez and Associates and Management Sciences International.**

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### **Acknowledgements**

To be successful, any evaluation requires considerable cooperation and support from those participating in the evaluation process. During this evaluation, the PRONEBI staff treated the evaluation activities positively. They dealt openly and professionally with the individual members of the evaluation team and went out of their way to grant the many requests made by us for necessary information.

It has been a pleasure to work with the dedicated personnel of PRONEBI. Many individuals took time from their busy schedules to meet with us at length and answer our questions. These include not only PRONEBI personnel, but staff from MOE and other government agencies. We thank them all. We especially would like to thank Licda. Ernestina Reyes, Director of PRONEBI, for her unflagging support and for providing us with complete access to PRONEBI. We should also thank Licda. Liliana Ovando, Chief of Administration, for her considerable support and Lic. Domingo Pérez, Chief of Training, and Lic. Rosa Simon, Chief of Research and Evaluation, for helping to orient us to the information available. We would like to thank Marfaelena Jefferds for assistance with qualitative data analysis. Special recognition also must be given to the directors, teachers, children, and community members who gave freely of their time when visited by the evaluation team.

We also appreciate the time and input provided to us by USAID personnel. The staff at OH&E were always responsive. We thank Licda. Gloria Cordón and Licda. Miriam Casteñeda for their untiring efforts. Special thanks go to Lic. Julio Díaz who served as technical officer for this evaluation and provided us with technical guidance and logistical support throughout the project. We also extend our thanks to Education Officer, Susan Clay, for her input and support.

Although the conclusions found in this report are the authors' own, to the degree that this evaluation contributes to the improvement of educational services for rural communities in Guatemala, each of the individuals mentioned above must be given credit.

## EXECUTIVE SUMMARY

### Introduction

In January of 1993, USAID/Guatemala contracted the Academy for Educational Development (AED) to provide an evaluation team that would assess the impact of Project No. 520-0282, the Primary Education Improvement Project (Bilingual Education). The evaluation had the objectives of: a) determining the impact of the project on direct beneficiaries -- students and teachers; b) assessing the impact of the project on secondary beneficiaries such as program staff and the families of participating children; c) examining the impact of the project in creating a sustainable infrastructure within the Ministry of Education for the delivery of bilingual education; and d) assessing the success of a continued expansion of the bilingual education program. A four-person team carried out the evaluation using a multimethod design which included: statistical analysis of existing quantitative data; extensive interviews with parents, teachers, and administrators; and observations of student and teacher interactions in the classroom.

### Background

The Rural Primary Education Improvement Project (520-0282) was authorized on October 17, 1984, for a five-year period ending in October 1990. It was designed to provide relevant bilingual education to the indigenous children of the Guatemalan Highlands and to create a permanent capability within the Ministry of Education to deliver that education. The U.S. contribution was to be \$10.2 million in loan and \$3.3 million in grant funds while the Government of Guatemala contribution was to be \$25 million, for an expected life of project total of \$38.5 million. Because of a devaluation of the quetzal, there existed a surplus of \$3.7 million in local currency three years into the project. These funds were reprogrammed to extend the life of project through November 30, 1991 for grant funds and an additional year extension through September 30, 1992 for the loan agreement.

### Findings

The executive summary is presented in the form of a series of questions and answers that address the major issues of the final evaluation of the Rural Primary Education Improvement Project. The principal recommendations resulting from the findings reached are then presented.

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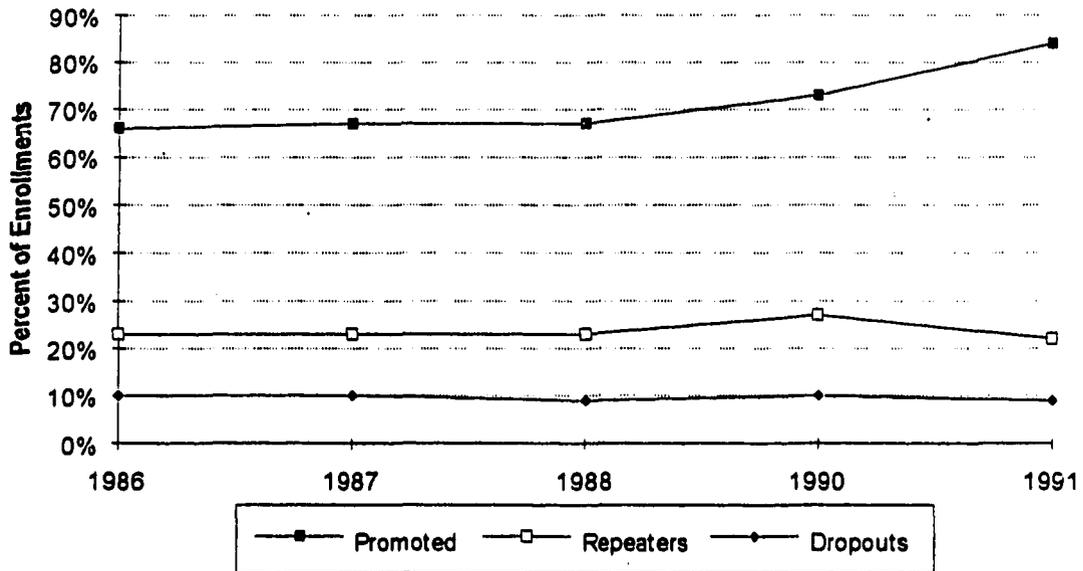
Has the Rural Primary Education Improvement project had a positive impact on educational efficiency among the target population of indigenous children?

---

YES

When compared to a national sample of similar children, the participants in PRONEBI (Programa Nacional de Educación Bilingüe) generally exhibited similar promotion and dropout rates for each grade level in each year for which data were available. PRONEBI girls showed an impressive reduction in dropouts when compared to other sample children over time. Comparisons of the relative efficiency within the PRONEBI complete intensive schools showed steady increases in promotion rates and corresponding decreases in repetition and dropout rates at each grade level over the life of the project. Figure A provides the overall trends in efficiency among PRONEBI schools for each year of the project.

**Figure A.**  
**PRONEBI: All Primary Grades**  
**Promotion, Repetition and Dropout**



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**Has the project had a positive impact on educational quality among the target population of indigenous children?**

---

**YES**

Test data show PRONEBI children outperforming children in comparison schools on seven of the eight measures of academic achievement where significant differences were found. When children were compared by gender, the trends found in the overall comparisons continued to hold true. Boys in PRONEBI schools significantly outscored comparison boys on seven of eight measures where differences were found. PRONEBI girls were favored on all six of the measures showing significant differences between groups. Despite the positive results for both sexes, when boys and girls were compared, boys, in general, significantly outperformed girls. Greater variation was found on national test data. PRONEBI students, however, performed as well as comparison children in one department, better than the comparison group in two departments, and less well than the comparison children in two additional departments.

Classroom observation data suggest that PRONEBI teachers spend more time in class on the average and devote more time to subject matter than teachers in schools without the bilingual curriculum, but which also serve indigenous children. This additional practice with subject matter may explain the positive academic achievement gains made by PRONEBI children.

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**Has participation in the PRONEBI bilingual program had a negative effect on the acquisition of Spanish language skills?**

---

**NO**

There appears to be no "price to be paid" for participation in a bilingual program in terms of acquisition of Spanish. On three of the four valid measures of Spanish language proficiency, PRONEBI children performed better than their comparison group counterparts. Most of the PRONEBI children's significant gains were in the last two years of the project when teachers had gained more experience with the methodology and more bilingual teachers were in place. Further, PRONEBI students performed as well or significantly better than comparison children on all measures of other subject matter, suggesting a clear advantage for learning content in the mother tongue while learning a second language.

---

**Has the PRONEBI program had a similar impact on both boys and girls?**

---

**NO**

Although the PRONEBI program has had a positive impact on both boys and girls, boys generally had significantly higher academic performance, better promotion rates, and lower repetition rates. Girls in the program, however, had superior trends in terms of lower dropout rates over the life of the project.

---

**Are the instructional materials developed under the project effective?**

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**YES**

The consistent results found in improved achievement in PRONEBI schools attest to the effectiveness of the instructional materials. Their effectiveness can be improved, however, through greater specification of the skills and abilities expected of bilingual/bicultural children at each grade level and by linking the use of the instructional materials to activities that can be easily carried out by students and teachers interactively to develop the desired skill levels.

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**Has the project had a positive impact on teachers?**

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**YES, but it is not sufficient**

Teachers are generally positive about the training that they have received and project-provided teacher training has reached its coverage goals. There is, however, a generally expressed need by teachers for more training. These training needs focus on the use of the materials and on literacy in the mother tongue.

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**Has the project had an positive impact on parents in terms of knowledge about and acceptance of bilingual education?**

---

**YES, however, more research and promotion of the program are needed.**

The available data suggest that bilingual education has had a positive impact on parents in many communities, as parent attitudes are generally favorable. There is, however, a considerable amount of variation from community to community and between language groups. Parents' attitudes are generally related to positive gains in their children's ability to read, write, and speak Spanish. Thus, publicizing the positive impact on students should increase parental support of the program.

---

**Has the project had an impact on developing a trained corps of administrative staff to coordinate bilingual education delivery?**

---

**YES AND NO**

A trained corps of administrative personnel was developed under the project. However, due to a 65 percent turnover rate primarily in the last two years since project completion, most PRONEBI positions are not occupied by trained and experienced people. Nearly all investments made in personnel in the past have been lost to PRONEBI. Although many of these individuals are serving in other capacities within the Ministry of Education, PRONEBI, itself, is nearly starting from the beginning in the administrative area.

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**Has the project created a permanent administrative capacity within PRONEBI to carry out the expansion of bilingual services contemplated under the BEST project?**

---

**NO**

As regionalization was not envisioned in the original project design, the project did not prepare PRONEBI for regionalization. PRONEBI does not have well designed and well defined administrative systems at the central level. It cannot respond quickly and accurately to inquiries with information at hand. Structure, function, roles, policies, and procedures are largely ad hoc or informal. At the same time, its local structures (regional, departmental) are not well defined and lines of communication between the two levels are fuzzy. Weaknesses in administrative governance, infrastructure, and process will result in the same sort of loose administration at the lower levels. Nothing is gained from the decentralization of a weak

administrative system, but a weaker system. PRONEBI administrative structures must be strengthened if expansion and regionalization are to be successful.

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**Has the project contributed to the long-term sustainability of bilingual education within the Ministry of Education?**

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**YES. However, the Bilingual Education Program was not fully institutionalized under the project.**

Commitment of the Government of Guatemala to bilingual/bicultural education is shown by the increasing expenditures for the program. Such expenditures rose from virtually nothing in 1984 to over 7 percent of all primary education expenditures in 1991. This occurred while the overall primary education share of the MOE budget remained relatively constant (between 30 and 35 percent during the life of the project). The institutional structure of bilingual education within the Ministry's educational regionalization program has yet to be passed into law and the scope of the bilingual education program as well as the rate at which the Ministry will take over full financial responsibility for bilingual education has yet to be determined.

### **Major Recommendations**

The positive trends in keeping girls in school, combined with the general lag in girls' achievement, promotion, and repetition rates, when compared to males, suggest that increased emphasis should be given to girls' academic achievement. PRONEBI should coordinate closely with the Girls in Development (GID) program of the BEST project to develop strategies to encourage teachers to promote the academic performance of girls.

If PRONEBI continues to collect enrollment, promotion, repetition, and dropout data, their activities should be coordinated with the Computer Center of the MOE in order to have data on both PRONEBI and comparable non-PRONEBI groups in every area where PRONEBI operates.

Any expansion of the National Bilingual Education Program should be undertaken with care. It is likely that the conditions that contributed to the success of the Rural Primary Education Improvement project, such as: having instructional materials in the schools; having bilingual teachers in place; having an adequate physical infrastructure; and having the administrative structure at both the central and regional levels to design and deliver quality bilingual education must exist to assure the continued impact as the program expands.

Additional training should be provided to teachers, especially in using interactive strategies with children. In developing a training design, the PRONEBI training unit should examine successful training models such as that of the Nueva Escuela Unitaria for its relevance to bilingual education delivery.

Emphasis should not be placed on further revisions of the texts and teachers guides. Rather, detailed grade-level expectations and accompanying scope and sequence charts for each subject should be developed and emphasis should be placed on developing mechanisms that provide teachers with easy-to-use activities that allow children to use the texts and other resources in an interactive context to acquire the desired skills.

Training must be provided to all new PRONEBI personnel to ensure administrative adequacy of the program to consolidate the impacts of the Rural Primary Education Improvement Project.

AID and the MOE should continue to provide financial support to the bilingual education program in order to build on the gains obtained under the project. A plan should be developed whereby the MOE gradually absorbs the operating and personnel costs currently financed by AID.

## I. INTRODUCTION

In January of 1993, USAID/Guatemala contracted the Academy for Educational Development (AED) to provide an evaluation team that would assess the impact of Project No. 520-0282, the Primary Education Improvement Project (Bilingual Education). The study was carried out over approximately a three month period. The evaluation had the objectives of: a) determining the impact of the project on direct beneficiaries, students, and teachers; b) assessing the impact of the project on secondary beneficiaries such as program staff and the families of participating children; c) examining the impact of the project in creating a sustainable infrastructure within the Ministry of Education for the delivery of bilingual education; and d) assessing the success of a continued expansion of the bilingual education program.

### A. Project Background

The Rural Primary Education Improvement Project (520-0282) was authorized on October 17, 1984, for a five-year period ending in October 1990. It was designed to provide relevant bilingual education to the indigenous children of the Guatemalan Highlands and to create a permanent capability within the Ministry of Education to deliver that education. The U.S. contribution was to be \$10.2 million in loan and \$3.3 million in grant funds while the Government of Guatemala contribution was to be \$25 million, for an expected life of project total of \$38.5 million. Because of a devaluation of the quetzal, there existed a surplus of \$3.7 million in local currency three years into the project. These funds were reprogrammed to extend the life of the project through November 30, 1991 for grant funds and an additional year extension through September 30, 1992 for the loan agreement.

The project was designed to build on the success of an experimental bilingual education project which was funded by AID between 1980-1984. This project developed prototype bilingual materials and tested the effect of the materials in a model in which the language of instruction was gradually shifted from the indigenous language to Spanish over a four-year period. The results of that project, in which the academic achievement, drop-out rates, retention, and failure of indigenous children in 40 pilot schools were compared to a similar group of children in comparison schools, led to the institutionalization of PRONEBI by government decree and the development of the Rural Primary Education Project.

At the time the Improvement of Rural Primary Education project was designed in 1984, 42% of Guatemala's population were members of Mayan indigenous groups that speak 22 different languages. These groups make up the bulk of the rural population engaged in subsistence agriculture. They have traditionally been ill-served by the educational system as only 40% of those of school age were estimated to be in school when the project began, and of those 50% dropped out by the end of first grade.

The project incorporated a phased implementation plan for the design, production, and distribution of textbooks as well as the placement and training of teachers. It is implemented by the National Bilingual Education Program (PRONEBI) which is under the direction of the

Directorate of Rural Socio-Education (Socio-Educativo Rural), which is responsible for all rural primary education in the country. The project consists of six components:

Administration and Supervision was to help finance the creation of a permanent implementation unit within the Ministry of Education. This unit of the National Bilingual Education Program was to be responsible for the administration of bilingual education throughout the country;

Curriculum Development was responsible for developing bilingual texts and instructional materials that are consistent with the national curriculum that reflect the indigenous culture. These materials are to serve children in preschool through fourth grade;

The third component finances the printing of the bilingual texts and teachers guides as well as the purchase of desks, blackboards, and other equipment for rural schools. This component was to be carried out in close cooperation with a World Bank project that financed the production of the texts;

A fourth component consisted of three training activities. These were upgrading of bilingual preschool teachers ("promotores"), in-service training for teachers in the use of the new bilingual materials, and university training for supervisors and central office personnel;

The fifth component was the establishment of a research and evaluation component within PRONEBI to monitor the progress of the bilingual program on student achievement;

The final component was to provide long-term technical assistance in the areas of bilingual primary school curriculum development, anthropology/linguistics, research and evaluation, training, field supervision, and project administration. Both national and international professionals supplied long-term technical assistance. This component also funded scholarships for long-term overseas training of key technical staff.

During the course of the project, a number of documents have been produced which track the progress of the project toward its goals. These include: annual operating plans; a 1987 process evaluation of the project; the 1988 expansion plan, developed as part of the Guatemala Primary Education Sub-sector Assessment of that year; and PRONEBI's longitudinal statistical studies of the effects of the project, as well as occasional studies by the evaluation unit.

## **B. Evaluation Team**

A four-person team consisting of Bruce Perlman, an expert in educational administration (Administration Specialist and Chief of Party), Kjell Enge, an anthropologist with extensive experience in the integration of qualitative and quantitative data sets (Anthropologist/Statistician), Ray Chesterfield, and educator who has evaluated both bilingual programs for young children and rural primary school programs in Latin America (Instructional Materials Specialist), and Jack Corbert, a well known financial analyst (Finance

Specialist) were responsible for the evaluation. Several Guatemalan researchers were added to the team to participate in the fieldwork component of the study.

### **C. Methodological Approach**

The evaluation used a multimethod design that included statistical analysis of existing quantitative data, extensive interviews with parents, teachers, and administrators, and observations of student and teacher interactions in the classroom.

Review of Documents. A critical review was made of AID documents including the project paper, implementation letters and previous evaluations, as well as PRONEBI documents such as project descriptions, periodic reports, administrative manuals, training plans and materials, annual plans, and studies carried out by the research and evaluation unit. In addition, all available curriculum materials and texts were reviewed for their technical adequacy and appropriateness.

Interviews with Key Personnel. Through discussions with AID and PRONEBI personnel involved in the project, a list of key personnel was developed. The principal criterion in developing the list was to choose individuals who were directly involved in the implementation of the project as related to the objectives. In-depth interviews covering impact and sustainability were held with each set of key personnel. The interviews were in a topical format that was broad enough so that the areas of common knowledge of the key personnel overlapped, thereby providing multiple perspectives on the same phenomena (see the annexes for a list of persons contacted).

Teacher Interviews A teacher interview schedule was developed built on the teacher interview schedule used in the BEST midterm evaluation but focused exclusively on questions of impact of bilingual education. Two fieldworkers were trained to administer the interview and data were analyzed from 48 interviews with PRONEBI teachers in the four major language areas.

Classroom Observation Twelve classroom observations were made using established ethnographic methods, including the recording of setting, the number of students, and the classification and description of specific events/activities. In order to detect possible influence or effects, a special effort was made to record the activities over an entire school day to place innovative activities in their proper context; the times and duration of activities were recorded for both overall class exercises as well as for individual student time spent doing specific tasks. Careful notes were taken and translated into displays and matrices for analysis.

### **Analytical Strategies**

**Efficiency.** The principal concern was to examine promotion, repetition, and dropout rates in order to identify trends during the years from 1986 to 1991. Ideally, data should have been collected on students who used the bilingual curriculum and a control group who

did not. PRONEBI collected information only in their own schools, indicating relative increases and decreases in promotion, repetition and dropout rates. The Unidad de Informática at the MOE, however, collected such data in schools nation-wide which were disaggregated by municipality according to whether or not a school was a formal part of PRONEBI. Unfortunately, these data are only available for 1989, 1990, and 1991.

The analytical strategy followed was to present data from both sources, examine trends, and determine the consistency between PRONEBI's own student tracking and the other Ministry data. In order to make this comparison, the MOE Unidad de Informática was asked to provide nation-wide listings by municipality of students registered, promoted, not promoted, and dropouts disaggregated by sex, urban/rural, and PRONEBI/no PRONEBI. PRONEBI, on the other hand, provided the same type of information on its students, beginning with 1986.

To facilitate the most valid comparisons possible, it was decided to use data only from schools in the four major languages from both sources. Furthermore, only municipalities that had both PRONEBI and non-PRONEBI schools were selected from the MOE data, otherwise there would be no valid basis for comparison. One difficulty was that the MOE data presented dropouts as having been drawn from both promoted and students destined to repeat a grade; consequently, the sum of the three percentages exceeded 100, while the PRONEBI data did not. To compensate for this discrepancy, only promotion and dropout rates are presented and discussed from the MOE information, while repetition rates have been added to the analysis of the PRONEBI figures.

Quality. PRONEBI has collected test data in PRONEBI schools and in comparison schools since 1986. However, complete tests in every subject were not given every year, and many covered only one or two language groups. For the purposes of this evaluation, the largest and most complete data sets covering all four linguistic groups were chosen to compare relative achievement between PRONEBI and control groups. In 1986, only math scores have been examined; in 1987, math and oral and written Spanish; in 1988, oral Spanish and Mayan; in 1989, oral Spanish and math; in 1990, math; and in 1991, oral Spanish and practical arts.

Another source of test scores was from a subset of achievement tests administered by the BEST Project testing activity to over 18,000 first, second, and third graders nation-wide. Ostensibly, the purpose of these tests was to measure the effectiveness of the SIMAC curriculum in order to improve SIMAC teacher training efforts. A substantial part of the sample, however, consisted of PRONEBI schools and schools using other non-SIMAC curricula. The complete raw data sets were obtained and test data from PRONEBI schools and schools using non-SIMAC curricula were placed in a smaller data file for a comparative analysis; the new data set consisted of 2705 cases in the departments of Chimaltenango, Sololá, Totonicapán, Huehuetenango, and Alta Verapaz.

Both the PRONEBI and BEST data were analyzed in a similar manner. Comparisons of means were done using independent sample t-tests with a Levene's test for equality of variances. The mean scores on the tests were then tabulated and notations were made as to whether or not the means were differed significantly. The means were disaggregated to determine if there were any significant differences between language groups and gender. In

addition, t-tests were to explore the possibility of computed gender difference within both PRONEBI and comparison groups as well as between groups.

#### **D. Assumptions**

The evaluation team made several assumptions in carrying out this study that should be made explicit.

First, the study assumes that there will be an expansion of the national bilingual education program. One of the objectives of the BEST project is to support continued consolidation and expansion of the bilingual education program. Thus, while the exact nature, level, and timing of expansion was being determined at the time of the evaluation, it is clear that expansion of the program will take place.

Second, the team in its analysis assumed that PRONEBI will operate within the structure of the MOE decentralization effort. Thus, to the extent possible, the outcomes of the Rural Education Improvement project were examined in relation to the regional education framework created to decentralize the Guatemalan education system.

Third, the team assumed that terms such as "Indigenous," "PRONEBI schools," and "Non-PRONEBI schools," as reported in the various data sources, were used in a sufficiently uniform manner across these sources to allow comparison of the results.

Finally, it was assumed that comparison of the impact of the project on the different linguistic groups would be of interest for future program planning. Thus, data have been analyzed for each of the major linguistic groups served by PRONEBI, whenever possible.

#### **E. Methodological Constraints**

The major methodological constraint was the lack of complete data sets that would allow comparison of project impact across the life of the project. Multiple measures of impact were collected where possible. However, as these measures were for a specific year or series of years within the life of the project, they could not be tied directly to inputs such as delivery of textbooks or staff development activities. Rather, they provide several independent indicators of trends in the overall impact of the Rural Education Improvement project.

Similarly, the sample size and limited duration of the more qualitative data collection such as parent interviews, teacher interviews, and classroom observations, provide an indication of the impact of the project and in some cases suggest explanations for certain findings. However, time considerations required the selection of an opportunity sample and, therefore, the results are not generalizable to the entire beneficiary populations served by PRONEBI.

## **F. Organization of the Report**

The chapters following this introduction describe the findings related to each of the evaluation objectives. The final chapter presents conclusions and recommendations about the impact of the project and its relationship to long-term sustainability of bilingual education in Guatemala. Chapter II presents the findings of the evaluation team as to the administrative strength of PRONEBI. Chapter III discusses the financial status of bilingual education under the Rural Primary Education Improvement project and its relationship to current program goals. Chapter IV examines the impact and adequacy of the instructional materials developed under the project. Chapter V discusses the beneficiaries of the project. Chapter VI presents the evaluation team's conclusions about the impact of the project and offers recommendations for future activities.

## II. PRONEBI ADMINISTRATION

### A. Introduction

The purpose of this section is to examine the impact of the project on PRONEBI administration. Project impact will be examined in two ways. First, project inputs provided by the USAID and MOE to the administration of PRONEBI will be analyzed in terms of their creating administrative processes. Second, the impact of administration on the implementation of the project and its relationship to project effectiveness will be examined.

Project impact on PRONEBI administration was examined in three key areas: governance, administrative infrastructure, and management operations and control. The focus of governance is on the structured settings within which organizations settle conflicts and give authority and legitimacy to decisions. The focus of Administrative Infrastructure is the provision of physical support and information needed by managers and executives to control inputs and outputs. The analysis of Administrative Processes takes a systems approach to the examination of these operational and support processes. The relevant variables for each of these areas are summarized in Figure 1.

Figure 1. Initial Variables		
Administrative Governance	Administrative Infrastructure	Administrative Process
Structure	Materials	Communication
Rules	Physical Plant	Personnel
Decision Making	Management Systems	Operations

### B. Administrative Governance

As mentioned above, governance is the set of procedures that are used to resolve conflict within the organization under question. Appropriate administrative governance gives authority and legitimacy to decisions taken. This in turn maintains commitment to organizational ends and ensures that decisions are implemented.

<b>Figure 2. Project Impacts on Administrative Governance</b>		
Governance Areas	Impacts	
	Positive	Negative
Rules	none	none
Structure	Creation of Formal Structure	Frequent Structural Change
Decision Making	Participation	Inappropriate Consultation

### **C. Rules**

The project has had little or no direct impact on rules that govern PRONEBI. The legal basis for PRONEBI continues to be the legislation adopted before the project began. These include the guarantees for cultural preservation and bilingual education as presented in the Political Constitution of 1985 in Articles 58 and 76. They also include the governmental accord of 1984 (#1093-84) that recognizes rights of the indigenous peoples to education and the Ministerial Agreement (#997) of 1985 that establishes PRONEBI. The new Education Law, adopted in 1986, has never been put into effect by a regulation. Although a new law has been drafted, it has never signed. Currently, at the request of the Ministry, PRONEBI personnel are involved in an effort to actualize the Ministerial Agreement #997.

On this basis, it is difficult to say exactly what is the legal status of PRONEBI and what its status will be in the future. Any decisions about authority or structure that have been taken during the project may not have sound legal basis. The project has had an indirect impact on this situation by requiring that PRONEBI act as if these matters were resolved. Therefore PRONEBI does operate with de facto rules. This raises the likelihood of controversy. Also, the project has made possible the publication and distribution of Guatemalan Political Constitutions in Mayan languages. This may have an indirect impact on governance by publicizing the legal basis for PRONEBI.

### **D. Structure**

The project has affected the structure of PRONEBI administration in several ways. The pilot project begun in 1979, created a functional structure based on project objectives. Simply put, the structure of PRONEBI is based on the three major functions of PRONEBI: developing instructional materials; improving the teaching in bilingual schools and of bilingual teachers; and supporting these activities administratively. This structure has largely been maintained intact during the Rural Primary Education Improvement project.

A review of extant organization charts for the period under study reveals that the organization of PRONEBI had four levels. At the top of the PRONEBI structure was the

Director who reported to the Director of Rural Social Education Development. PRONEBI was a division of this Directorate. National and international consultants reported to the Director of PRONEBI, and the Director was advised by a Technical Administrative Council made up of chiefs of the units below.

Below the level of director, PRONEBI was divided into three major areas or sections and in turn these were divided into units. The first section, Bilingual Pre Primary and Primary was responsible for coordinating the activities of bilingual teachers in schools. Below this component were two units, supervision and schools. The second section, Development of Bilingual Curriculum, was divided into curriculum development units or teams by the area of language (Mam, Kaqchikel, K'iche', Q'eqchi'); each team had a curriculum expert, linguist, writer, and illustrator. The last section is that of administration. It is divided into three units. The first of these, finance, has two subunits, Cashier and Accounting. The second unit, Purchasing, had only one sub unit, Supplies and Warehousing. The final unit, General Services, had no sub units on the extant charts.

The organization charts do not give a complete nor accurate picture of the PRONEBI organization. For example, PRONEBI also has a training group, but it is difficult to tell what is its structural location. It was possible to determine that the unit was created in 1988 to train 800 preschool promoters. However, it does not appear on organization charts as a section, but does appear so in several Annual Operating Plans (POAs). Presently, it is a unit of the Curriculum Section, according to that section's Director. This is also true of research and evaluation which was called for in the project paper and functions as a unit within PRONEBI, but does not appear on an organization chart.

Also, the Supervision system was shut down after the teachers' strike of 1989. When the new Supervision system began in 1991, the former PRONEBI bilingual supervisors were absorbed into the regular MOE Supervision system. This led to the disappearance of the Pre Primary and Primary Section from PRONEBI because its major responsibility was operation of this system. Instead of supervisors at the regional level, PRONEBI now has bilingual coordinators. These coordinators help to administer the system at the regional and departmental levels.

At present, PRONEBI is in a transition period with respect to its structure. It is operating with an unformalized structure part of which is left from the project and part of which has been proposed in the new *Reglamento de la Ley de Educación*. Because this regulation has not been adopted (and there is considerable doubt that it ever will be), the current structure of PRONEBI is based on practice, rather than formal adoption. This proposed structure differs from the previous one in an important respect: PRONEBI will become a Directorate, rather than a program, under the General Directorate of Education. Thus PRONEBI will no longer report to the Directorate of Rural Social Educational Development which will disappear with the new *reglamento*. In addition, under this plan the PRONEBI Directorate will be divided into three Divisions: Technology; Administration, and Evaluation and Research which will have a policy setting function for a regionalized Bilingual Education program.

## **E. Decision Making**

The major impact of the project on PRONEBI decision making has been to support a formal, participatory process of decision by committee. There were no direct project inputs provided in this area, but indirect supports have been provided. These consist largely of participation by USAID personnel in the committee structure and acceptance of the process and its decision outputs.

Although the formal structure of PRONEBI is hierarchical and based on functional authority, its decision making is not. Instead it is highly consultative. Most decisions are taken in committee rather than by individuals in the capacity of their offices. This tendency may be supported by the lack of clear definition of structure outlined in the section above. PRONEBI annual and other plans reflect this. 65 percent of the documents reviewed were put together by committees or working groups. Plans tend to site groups as "responsible" for accomplishments rather than individuals.

Most major internal decisions are made by referring them to a committee. The Technical Administrative Council sets the lead in this matter. Nearly all upper management decisions are referred to them for approval irrespective of the type of decision to be made. This has the salutary effect of promoting knowledge of decisions and commitment to them.

It also has negative effects. Although they may promote acceptance (legitimacy) and be of higher quality, decisions by committee always take more time to make. Important decisions may be delayed. An example of this effect is the deliberations of this council in trying to decide what to do with teachers who rejected the bilingual education methodology. According to one respondent this took two years to decide by the Technical Administrative Committee and the matter was moot when decided. Also committee decisions may be used where inappropriate, that is in situations where quality and acceptance are not always key considerations, such as in technical areas. For example, one respondent reported that the Technical Administrative Committee has made decisions about what brand of tire to purchase for PRONEBI vehicles.

## **F. Administrative Infrastructure**

Administrative infrastructure consists of those fundamental physical and operating materials that directly support administration. These include manuals for consultation and necessary supplies. They also include the physical infrastructure of the program administered. In this category are also to be found the systems that support administration with information such as records and monitoring systems that aggregate information for administrative decision making.

### **Materials**

The impact of materials produced under the PRONEBI project on the administration of bilingual education are evident. This impact is visible in the existence of five different types of administrative manuals that were developed under the project in the areas of Organization,

Purchasing, Distribution, Transportation, and Management by Objectives. Copies of all manuals were to be found in the Director's office and one manual in particular, Organization, was available on request in three interviews with office chiefs. The Organization manual is still used as the basis for personnel requests by the Administration Office.

The manuals were developed directly with project funds. Originally, the project financed local technical assistance in the area of logistics that resulted in the design of a distribution system as outlined in the Distribution Manual. Technical assistance was later provided to the general area of administration by a specialist who worked with the administrator and unit heads. The other manuals and design of the attendant systems were developed during this period.

The manuals themselves vary in complexity and development, but all are complete. Some include a set of forms to be used in implementation of the system outlined in the manual. Others have flow charts detailing the processes to be used. The Organization Manual was originally done in 1988. This version is divided into two parts. The first is the Activities and Operations section that details the activities and has position descriptions for the position in each unit. The second part includes an Internal Control System manual that lays out the checks and steps for purchasing and distribution. The first part of this manual was later put out in 1990 under separate cover as the Organization Manual. The internal control sub systems were developed in their own manuals as outlined above. Manuals were also developed by the audit firm of Lara Y Gonzales that was contracted with project funds.

### **Physical Plant**

One direct impact of the project has been the impetus for the location of PRONEBI's Central Operations in one building, downtown in Zone 1. The 1987 Process Evaluation pointed out a number of problems with the physical plant of PRONEBI. The building in which the PRONEBI offices are housed is open air. Noise and pollution enter the building from all sides. A number of respondents believed that the pollution led to more sickness and reduced productivity and increased absenteeism.

Also, the design of the building as a commercial gallery is not suitable for the storage needs of an enterprise like PRONEBI that produces large quantities of instructional materials. The office space is not designed to have adequate storage space for these types of materials. The result is that each office in PRONEBI is filled with various types of materials whether instructional (e.g., texts, guides) or promotional (e.g., calendars, brochures). This has been the case throughout the life of the project.

Recently, the storage situation has been aggravated. Because of failure by the Ministry to pay their rent in the last year, PRONEBI occupies fewer offices and records have been consolidated. The administrative records are stored in one room in file cabinets that fill the room. They are kept under lock and key and thus are not accessible and are difficult to consult. For example, the data collected for this report were not readily available in current files and had to be compiled from the files in the storage area. Current administrative staff did not know where the required information was located and had to search for it in difficult

circumstances and consult persons that had helped move the records but that had left the employ of PRONEBI.

The layout of the building also has an impact on PRONEBI administration. Designed as an open air gallery for shops and offices, it has small spaces that are distributed on three floors with no elevator. The PRONEBI offices are scattered on all three floors. Several respondents commented that this layout retarded communication because offices from the same section were not located on the same floor, and because people began to tire of climbing stairs many times a day.

The location of the building also has an impact on administration. Some of those interviewed remarked that putting the building in Zone 1 increased the travel time for PRONEBI staff, most of whom come to Guatemala City from rural areas. This may affect the ability to recruit for some positions. However, the building does afford easy access to the MOE Management building and the BEST project management, the National Palace where the Minister's Office is located, and the Lucky Building that houses the MOE Personnel Office. In addition, the rent on the space is low in comparison to other buildings in the area.

#### **G. Management Systems**

As mentioned above, files and records are not readily accessible for administrative data. In this area, the project seems to have had little impact. Some computers have been provided to administration. Rather than supporting an administrative data base, these have been and are currently used for word processing and for preparing tables of data that are consolidated by hand for reports.

The major impact of the project in management systems has been in the development of those systems (e.g. MBO, distribution) outlined in the manuals discussed in the Materials section above. Respondents reported, however, that most of these systems were not implemented. For example, the MBO system, although designed, was never fully implemented. The purchasing and distribution system, by all accounts, functioned well especially in the latter years of the project 1989 to 1990.

The requirement of the project for the submission of financial data and plans has supported the development of rudimentary input control systems. The financial records and accounts of PRONEBI are kept in good order and vouchers from the past are meticulously filed, though as noted above, not rapidly accessible. Posteriori data on expenditures are available through these records, but the records have not been automated nor aggregated and are not reported in a systematic fashion. Control of material inputs is even less developed. Inventories are taken physically using lists of equipment. There are no further controls. Control of human inputs is monitored through the use of attendance registers kept by unit chiefs although other systems such as daily absence reports or hourly time sheets or cards have been suggested.

PRONEBI has used two major output control systems during the life of the project. They are the current systems in use today. The first of these is the preparation of

distribution lists of project materials such as desks, blackboards, and texts. No common unit of analysis is used on all reports, such as school. Instead, they are reported in various fashions such as distribution regions, departments, municipalities, and schools. This does not allow for careful tracking of outputs.

The other attempt at an output control system is the preparation and evaluation of annual plans. As part of USAID and MOE requirements, these plans have been prepared each year of the project. They lay out general activities that will be undertaken during the coming year. The objectives at which the activities aim are not quantitatively expressed nor are achievement measures suggested. The party designated as responsible for accomplishment is usually a unit rather than an individual. The formats for plans differs from year to year so they are not in a comparable form. The evaluation of these plans was originally done on a yearly basis, but in 1989 the evaluation was changed to trimestral. The evaluation of accomplishment is frequently reported by unit in percentage terms even if the objectives are not quantitative. The basis of these judgments is not clear on the evaluation documents nor are remedial actions noted. Evaluations for all years are not readily available.

<b>Figure 3. Impacts on Administrative Infrastructure</b>		
<b>Infrastructure Areas</b>	<b>Impacts</b>	
	<b>Positive</b>	<b>Negative</b>
<b>Materials</b>	Administrative Manuals Produced Organization Purchasing Distribution Transport MBO	Some Administrative Manuals not Implemented MBO Transport
<b>Physical Plant</b>	Accessibility to MOE Centralization	Working Conditions Layout
<b>Management Systems</b>	Input Monitoring	Files and Records

#### **H. Administrative Process**

Administrative processes are those sub systems that are essential to the smooth functioning of delivery systems. These processes link together the parts of the organization to get its work done. Unlike the control systems of Administrative Infrastructure that support and track actions, these sub systems are directly concerned with providing inputs (e.g., instructions, staff, decisions) for action.

## **Communication**

Project inputs have had an effect on communication within PRONEBI. The training and planning seminars financed by the project have provided opportunities for PRONEBI personnel to interact. This includes staff from the Central Office of PRONEBI as well as Regional staff and teachers. For these reasons alone, communication has been frequent during the life of the project. Changes in the supervision system have affected this frequency of communication somewhat. Because supervisors are no longer part of PRONEBI there is not a frequent link with the teachers by the PRONEBI staff. This role is now played by PRONEBI coordinators, but it remains to be seen if this will be effective.

The project has also affected PRONEBI's external communication. Expenditure of project inputs and satisfaction of project goals have required greater coordination and more frequent communication between the Ministers Office and PRONEBI by providing more opportunities for meetings. The participation of USAID staff in the meetings of the technical Administrative Council have also led to frequent communication with USAID. It is not clear if these conditions will continue under the new organization as proposed in the new regulation. External communication has been helped in another way as well. PRONEBI's ability to communicate with the general public has been supported by the creation of a Public Relations Office reporting to the Director. This office has helped prepare various public presentations including press conferences and television appearances. A clippings book was kept for several years when the project first began, and these clippings are available in the Director's Office. The efforts of this office appear to have diminished somewhat, however, with the departure of its original Administrator to the BEST Radio activity.

## **Personnel**

The PRONEBI project has produced some changes in personnel administration. The necessity of handling the number of new employees contemplated under the project, their recruitment and selection, and their contracting, stressed the PRONEBI personnel mechanism, which emerged stronger from the trial. Added to this was the problem of recruiting and contracting for national consultants to give technical assistance to the project.

The initial challenge faced by PRONEBI under the project was the selection of bilingual teachers and bilingual supervisors. PRONEBI personnel had to participate in this process to certify the language abilities of the personnel to be named by the MOE. To achieve this end PRONEBI had to develop a series of recruitment "convocations" (*convocatoria*). Proficiency tests had to be developed for this purpose.

These activities led to the creation of a list of eligible personnel for the teacher and supervisor positions. At that time, the naming of the positions was left to the MOE. At this phase, PRONEBI had to keep pressure on the MOE. All teachers were not named as scheduled, although all were named by the time the project ended.

This system has fallen into disuse. The list of Bilingual Teachers has not been updated and no more convocations have been held. Supervisors, as noted above, are no longer part of PRONEBI.

Figure 4. Central Office Grant Personnel Year of Hire by Unit					
Year	Unit				
	Administration (26)	Research (8)	Training (11)	Curriculum (17)	TOTAL (62)
1985	4 (15 %)	1 (13%)	0	0	5 (8%)
1986	3 (12%)	7 (88%)	0	0	10 (16%)
1987	0	0	0	1 (6%)	1 (2%)
1988	2 (8%)	0	0	4 (24%)	6 (10%)
1989	5 (19%)	0	0	1 (6%)	6 (10%)
1990	7 (27%)	0	2 (18%)	4 (24%)	13 (21%)
1991	5 (19%)	0	9 (82%)	7 (41%)	21 (34%)

Source: PRONEBI Payroll Records

Figure 4 was prepared using payroll records of current grant financed staff. The proxy indicator of date of hire was used rather than number of positions authorized and vacant by year. As noted in the chapter on finance, there is no central budget for the project, so figures on all staff were not available. PRONEBI does not keep records of positions in this way.

As Figure 4 indicates, yearly turnover in PRONEBI has been constant and has occurred in critical positions at crucial times. The work force was quite stable during the project's first years. However, it has experienced considerable turnover recently. A key loss was that of the Director who left the project in 1991. This position stayed vacant for nearly nine months. During this time the Director of SER served as interim Director of PRONEBI. At present, nearly all key positions are filled by new occupants and many are vacant.

About 65% of current PRONEBI grant employees have been hired in the last three project years. The effect is that most of the training given and experience developed under the project has been lost to PRONEBI. However many of the personnel still work within the MOE in other divisions. This is born out by the experience of the evaluators in preparing this report. In nearly every circumstance wherein detailed information was needed, current PRONEBI staff had to locate and consult with staff that had left in order to determine where the information might be found.

Turnover was greatest in the Training unit; 100% of the training personnel have been hired in the last two project years. Curriculum and Administration have also suffered. The former has replaced 65% and the latter 46% of personnel in the last two project years. The unit least affected by turnover has been the Research and Evaluation group. It has had stable personnel since 1986.

One key reason for this turnover was the uncertainty surrounding the end of the project in November of 1991. According to those interviewed, doubt about the sincerity and ability of MOE to absorb the positions at the current rate of pay led many PRONEBI employees to look for other MOE jobs. This is shown by the wave of hiring in the last three project years. It is interesting to note from Figure 4 that 34% of all grant financed personnel were hired in 1991. There was a considerable lag time between the end of the project and its absorption by BEST. Without any guarantees of continued employment, during this time many skilled people left the project to find other work. Currently, this problem is being repeated due to the slowness of the MOE to include Project Budget in GOG budget and to convert BEST project positions to MOE portion in contracting personnel for 1993. Most of those interviewed had not received their contracts, after three months of work.

If hiring dates are examined by type of position, the impact of turnover is even more noticeable. Nearly the entire technical and administrative staff have been turned over. The positions occupied by those persons that have lengthy tenure are clerical.

The project has had noticeable effect on the training of personnel. The training of 800 bilingual promoters was a significant achievement that has left the Central Office administration with significant materials and experience in training teachers. Respondents suggest, however, that the impact of this training has been lost due to the failure of the MOE to reclassify these people as teachers and give them teacher salaries.

There is some evidence that administrative training has been provided. Some people at the Central and Regional Offices of PRONEBI received training in the MBO system that was developed. Outside of this, no other training in administration appears to have been given. Central Office staff have not received training in clerical techniques or word processing. In addition, other specialized units such as the Public Relations office have not received training in their areas of responsibility.

### **Operations**

Project impact on the operations of PRONEBI have been largely in the area of logistics. The success of the project in strengthening PRONEBI might be judged by how well PRONEBI has been able to deliver material supports at planned times and levels. The delivery of these material inputs (project outputs) into the bilingual education system is necessary to bring about planned project effects.

Figure 5. Commodities Distributed by Year				
Year	Item			
	Targets			
	Texts	Desks	Black boards	Flip Charts
1985	363,641			
1986	9,650			
1987	8,330	14,725 *		
1988	97323	28,850	750	
1989	44,800		1,500	800
1990	256,100		800	
1991	174,300			
1992	424,427	45,500		
TOTAL	1,378,571	89,075	3,050	800
Targets	1,300,000	35,000	1,550	800

\* Two-student desks

Source: PRONEBI Warehouse Lists.  
Project Paper, Rural Primary Education Improvement  
Reprogramming of Funds

As Figure 5 shows, the production and delivery of materials by PRONEBI has been relatively successful. Attempting to reach planned targets has placed significant stress on the system and has required reprogramming of targets. Most targets have been met or exceeded, but not timed as planned. For this reason, Figure 7 includes the year 1992 that is outside the life of the project. Outputs budgeted in the project for earlier years are still being manufactured and delivered.

In addition to the materials listed in Figure 5, PRONEBI has delivered materials not originally identified in the Project Paper but in amendments. Support materials for supervisors, teachers, and coordinators have been delivered to the field. These include 784 bookcases and 784 storage chests, 155 typewriters, and 97 mimeograph machines. In addition, during 1986 and 1987, 14 vehicles and 97 motorcycles were also purchased and distributed.

Those interviewed commented that the system of purchasing, warehousing, and distribution was not sufficiently well designed or modern to handle the sort of demand that was called for in massive text book production, reception, and distribution. Records are not automated, inventories are done physically, and purchasing is a time consuming, complicated process. Control of delivered materials is even more difficult.

### III. EDUCATIONAL FINANCE

#### A. Financial Status

The Rural Primary Education Improvement Project was jointly supported by the United States Agency for International Development (USAID) and the Ministry of Education of the Government of Guatemala. The project, of some \$36.9 million and six years duration, was designed to commence in 1985. The GOG would supply \$24.9 million in Quetzales ( of which about 97% would be devoted to payment of teachers, instructors, and supervisors) with the remainder--\$12.0 million--to be provided by AID in the form of loans and grants. About 83% of this figure would be used to meet local Guatemalan project costs while the remainder--17%-- would be used to purchase vehicles, computers, technical assistance, and supplies from abroad.

When the project began, the Quetzal was held at parity with the dollar as it had been for many years. Due to devaluation, a few months after the initiation of the project, the Quetzal fell to a range of about 2.70 to 3.0 to the dollar. Further depreciation occurred in the following years until it reached about 5.0 Quetzales to the dollar in the last two years of the project (1990 and 1991).

This sharp and sudden depreciation brought about rapidly changing price levels. In general, this was not favorable to Guatemala. While the revenue budget of the GOG responded in some degree to rising domestic prices and income (in terms of Quetzales) there was a lag in tax revenues which put pressure on the government to hold down expenses. The government attempted to maintain revenues by limiting major exporters to the old one-to-one Quetzal rate and selling these foreign exchange earnings to others at the same or higher rates. At the same time, the salaries of government employees (including teachers) did not increase as rapidly as consumer prices creating pressures that had to be dealt with later.

The depreciation affected actual project costs and changed the relative prices for the project depending on whether money was in Dollars or Quetzales. As a result of the Quetzal depreciation, AID was able to more than cover its domestic Guatemalan expense under the project with fewer dollars. Thus, as time went on, the U.S. portion of the project paid for additional project costs over and above those anticipated. Just the opposite happened to the GOG, which found it more and more costly, absolutely and relatively, to meet its counterpart commitments to provide teachers and instructors to the bilingual education program.

The task of the financial analysis is to examine the experiences in the budgeting and execution of the project to see if the goals were adequately supported by the financial management efforts of AID and GOG. The program was complex, involving the hiring and placement of some 900 teachers and 800 promoters, the development and production of more than one million instructional materials, the provision of transport, and the training of personnel. The sources and nature of the funds were:

- dollar grants and loans from AID;
- Quetzal counterpart expenditures from the GOG.

The different types of funding made budgeting, disbursements, and monitoring of financial performance exceptionally difficult. The evaluation team was particularly interested in learning how these problems were coped with, what impact they had on project tasks, and what lessons might be learned from the experience.

Evidence was also sought to determine whether in the execution of the program, the financial results were related to how and when the objectives of the project were being achieved. Unless financial reporting tended to reflect with some accuracy the achievements of the bilingual program, then recording financial results would do little more than meet governmental financial requirements but would not be of assistance in monitoring project performance. The question of financial reporting is under consideration by AID and there may be progress towards reporting by activity rather than by aggregates of project components in future AID-funded projects.

The Rural Primary Education Improvement project represented virtually the only effort towards bilingual education in primary and pre-primary schools in the seven-year period commencing in 1985. It is a program aimed at exposing a significant portion of the Mayan population to a continuing educational experience facilitating entry into the country's economic and social mainstream.

The potential pitfalls of the project were great. Adequate funding is always critical to success, but of even greater importance is the training and hiring of teachers and the availability of instructional materials. Therefore a financial analysis can only seek to determine whether timely financial support has been adequate to the tasks of the project and whether financial reporting has assisted the project management.

#### **B. Prospects for Sustainability of PRONEBI**

There can be little doubt that GOG has set a firm course for the continued support of bilingual education in the pre-primary and primary levels. The policy has been articulated in the Constitution. The experience with bilingual education, although brief, is felt to have been sufficiently encouraging to justify continued support. The amount of money required to meet the recurring costs (from 1987 through 1991 all PRONEBI expenditures averaged Q. 10.8 million annually; some loan disbursements made directly by AID are not included in this figure) of the first PRONEBI program of 1985-1991 represents a very small part of an increasing amount of resources being made available for primary education in the MOE budgets of 1992 and 1993. In other words, there appears to be no policy or financial reason for not continuing the bilingual program even without assistance from AID and other outside agencies. The development and expansion of the program is, of course, being enhanced by such support. To maintain the program in the first eight hundred schools now that many capital costs have been met would not require a great fiscal sacrifice on the part of the GOG.

However, the experience of education in the GOG budget in recent years is not encouraging, according to analysts in the *Secretaria General del Consejo Nacional de Planificación Económica* (SEGEPLAN). As shown in Table 1, in real terms (allowing for price inflation) budgetary expenditures for education have diminished since the beginning of

the 1980s. There was a slight recovery between 1986 and 1989. In 1990, however, education expenditures fell to the levels of 1981 and compared to 1989, the reduction was 21%.

**Table 1. ('000 of 1958 Quetzals)  
Budgetary Expenditures for Education**

Education Budget	1989	1990	1991	1992*
Operational	73,832.5	65,506.5	66,397.1	77,371.1
Rate of growth (%)	1.6	(11.3)	1.4	16.6
Investment	4,472.4	2,015.5	1,1914.5	5,437.3
Rate of Growth (%)	26.5	(54.9)	(5.0)	184.0

Source: Dirección de Contabilidad del Estado. \*Please note that 1992 figures represent budget projections, not actual expenditures.

The level of investment expenditures in 1991 was almost the same as in 1990 but that level was still the lowest in the past ten years. One can imagine what this means in terms of the physical plant of the schools.

Expressed as a percentage of the budget and the gross domestic product (GDP), the education budget likewise showed a decline until 1991 when as a percentage of the GDP it reached a level of 1.4%. The projected figures for 1992 represent a significant increase in both percentage of the budget and investment, if actually allocated.

**Table 2.  
Participation of Education in GDP and GOG Budget**

	1989 %GDP/%BUD.	1990 %GDP/%BUD.	1991 %GDP/%BUD.	1992 %GDP/%BUD.
<b>EDUCATION</b>	2.3/15.5	1.6/14.3	1.4/16.2	1.7/14.6

Source: Dirección de Contabilidad del Estado.

In real terms, the expenditure per capita for education since 1980 fell from about Q. 9.25 to about Q. 7.6 in 1991, representing a decline of about 18 percent. Again, improvement was forecast for 1992, but it is not known if this was achieved.

According to the 1992 Report of SEGEPLAN, the percentage of GDP spent on education in other countries of the region is around 4.5%, far above current Guatemalan

levels. Further according to SEGEPLAN, investment fell from an average of 30% of education expenses in the 1980-88 period to 7% in 1990 and 1991.

The high levels of illiteracy, the low attendance in primary grades, and the high rates of repetition and absenteeism indicate a need for expenditure in this sector. These are among the problems that PRONEBI was designed to attack.

The low rate of budget expenditures for education is worth mentioning. In 1991, 46% of budget capital investment in education was expended while only 83% of budgeted operating or recurring expenses were actually expended.

It is clear that the sector has suffered when measured against the GDP and the overall Guatemalan budget. Encouraging signs have been given in the budget approved for 1992 and for the projected budget for 1993. Expressed as a percentage of GDP, the MOE education budget continues its decline to 1.28% in 1992 before recovering to 1.62% in 1993. These figures compare to 1.84% and 1.83% in 1988 and 1989.

The setting of primary education in the MOE's budget is where the Program for Bilingual Education is located. Thus, an analysis of this area should indicate to some degree the intentions of the GOG towards this program in the past and future.

The participation of primary education in the MOE's recurrent budget (presupuesto de funcionamiento) from 1988 is as follows:

**Table 3.**  
**Primary Education in MOE Budget**  
**('000 Quetzales)**

	Primary Level Budget	Total MOE Budget	Percent
1988	116.5	367.0	32
1989	127.1	419.1	30
1990	169.9	566.0	30
1991	197.1	599.7	33
1992	360.5	753.3	48
1993	560.7	1080.5	52

Source: Mid-Term Evaluation of the BEST Project, 1992

The ratio had ranged from 30% to 35% since the early 1980s. Thus far during the period of the Program for Bilingual Education there has been little relative increase in the

share of primary education in the MOE budget. Striking increases are forecast for 1992 and 1993 and should these occur one might anticipate some spill-over into the Bilingual Program. On the other hand, past experience indicates that actual expenses have not often reached budgeted levels in education.

While primary education has not shown striking growth relative to GDP (at least in terms of budgetary expenditure) and to the overall educational budget, pre-primary and primary bilingual education has shown both absolute and relative growth since 1984. Bilingual educational expenditures rose from Q.407,000 or one quarter of one percent of primary level expenditures in 1984 to over Q. 5 million in 1991 (PRONEBI estimates) or more than 7% of all primary educational expenditures.<sup>1</sup> This is a significant figure but when the reduced amount of counterpart funds expended for the project by the GOG is noted, it may be concluded that an even greater effort could have and probably should have been made.

The GOG professes to have a strong political and social commitment to the bilingual education program. However, this has not always been manifested in delivery of budgetary support for the program. PRONEBI indicated to AID (Letter of implementation #27 and 30) that counterpart of Q. 16,126,800 and Q. 16,365,130 would be allocated in the years of 1990 and 1991. The amount actually disbursed in those years by PRONEBI were Q. 7,047,926 and Q. 8,765,130 in 1990 and 1991 respectively.

About 98% of the counterpart provided by the GOG to PRONEBI was dedicated to administration, supervision, and other salaries, the bulk going to bilingual teachers, "promotores" of bilingual education, and supervision. Smaller amounts went to support a limited number of employees in the central office of PRONEBI. It is reasonable to assume that the shortfalls in the counterpart budget reflected a failure to place the required number of bilingual teachers and promoters in the project classrooms. Indeed, in August 1988, AID pointed out to PRONEBI that 195 positions were created in 1987 but were not filled. Of these, 150 were for bilingual teachers, a number MOE was obligated to furnish each program year, and the remaining 45 were for promoters, a group critical to the project. This is illustrative of the need to relate the financial budgeting and reporting to specific activities.

### **C. Budgeting Procedures**

The budgeting of a complex program such as PRONEBI is exceedingly difficult. Certainly, the first obligation of AID is to insure that all the disbursements under the project are for legitimate purposes and fully meet U.S. regulations controlling such expenditures.

However as explained earlier, dollar grant and loan funds flow in the form of Quetzales from AID to PRONEBI. Some of the loan fund and grant funds are used to reimburse PRONEBI and thus pass through PRONEBI's books while some loan disbursements

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<sup>1</sup>Owing to the difficulty in determining the Quetzal equivalent of direct AID procurement with project loan funds by year, an estimate of Q. 5 million in 1991 has been used.

are on behalf of PRONEBI and are handled directly with vendors by AID. A record of these expenditures does not pass through PRONEBI books. Thus only AID has a complete record of all loan disbursements, but only on dollars. On the other hand, PRONEBI has an incomplete record of loan disbursements. This makes it difficult to relate loan disbursements to program activities within specific time periods. Perhaps even more important is the lack of the operating budget for the GOG counterpart funds. Although virtually all of these funds are for teachers', promoters', and supervisors' salaries and benefits, there is no record relating expenditures to the actual placing of teachers and others in the bilingual program schools.

PRONEBI personnel state that the organization does not receive an indication of annual budgeted counterpart funds in advance. It does however have an annual record of expenditures of such funds. AID has received in three years (1989-1991) information on the allocation of GOG counterpart funds but it does not receive information directly on disbursement of such funds on a current basis (e.g., a quarterly basis) nor on the purpose for which the funds were disbursed. There were serious shortfalls with the counterpart expenditures versus allocations between 1989 and 1991.

Table 4 illustrates the proposed budgets under which PRONEBI has operated along with the actual expenditures under those budgets. The shortfalls have been significant but in no case more than in the expenditure of counterpart funds. Although PRONEBI administrators say they were not advised in advance of the budgetary allocation, AID was specifically advised of such allocations in 1989 to 1991. Other reports on failures to fill teaching posts on a timely basis may explain results as compared to intentions.

**Table 4.**  
**PRONEBI BUDGETS 1985-1991**  
**('000 QUETZALES)**

Years	GRANTS		LOANS		COUNTERPART		TOTAL	
	APPROVED	RESULTS	APPROVED	RESULTS	APPROVED	RESULTS	APPROVED	RESULTS
1985	516	208	2,141	355		2,822		3,385
1986	2,398	646	3,587	1,234		5,049		6,929
1987	2,870	880	4,875	3,992		6,005		10,877
1988	3,449	2,445	2,546	2,257		7,111		11,812
1989	1,006	857	3,579	3,010	11,835	5,965	16,420	9,902
1990	1,973	862	8,794	1,623	16,127	7,048	26,894	9,532
1991	2,797	1,293	7,563	2,066	16,365	8,766	26,725	12,124
<b>TOTALS</b>	<b>15,009</b>	<b>7,191</b>	<b>33,085</b>	<b>14,607</b>		<b>42,765</b>		<b>64,564</b>

**SOURCES: PRONEBI and AID**

- (1) AID LETTERS OF IMPLEMENTATION
- (2) DOES NOT CONTAIN COUNTERPART ALLOCATIONS THROUGH 1988
- (3) DOES NOT CONTAIN LOAN DISBURSEMENT MADE BY AID ON BEHALF OF PRONEBI

#### **D. Actual Expenditures**

AID with 83% of its loan and grant dollars to be spent in Guatemala on local products and services was unable even with expanded activities to spend its allocations of \$10.2 million in loan funds and \$3.3 million in grant funding. The reason was that local prices did not rise as rapidly as the value of the dollar in terms of Quetzales. About \$8.2 million of loans funds were disbursed or obligated and only \$2.7 million in grant funds were finally disbursed.

Examples of these shortfalls in reporting have been extracted from AID Letters of Implementation #19 and #63 dated August 19, 1988 and July 25, 1990 respectively. In the first letter, AID took note of PRONEBI's report that 150 bilingual teacher and 45 promoter positions had not been filled in 1989. It further noted that none of 150 teaching positions in 1988 had been created much less filled. AID urged that this situation be rectified at once and that evidence be given of compliance. It is unlikely that even a small portion of appointments would have been achieved in the four months remaining in the calendar year 1988. Therefore it may be assumed that critical teaching positions went unfilled for at least two years out of a six-year project.

Later, in July 1990, (Letter of implementation #63) very near the originally scheduled end of the project, AID noted that only 565 bilingual teachers out of a scheduled 900 were assigned to project schools. This indicates that in July 1990, near the end of the original project, there were 355 teachers missing or slightly more than were missing at the end of 1988, two years earlier.

Such shortfalls in bilingual teachers of the project schools along with probable but unnumbered shortages of promoters could and probably did have serious consequences for the achievements of project goals.

This is a critical area in the program's control. The counterpart funds and the AID project funds are serving the same project, yet there is no single management budget in AID, PRONEBI or the MOE that brings all these resources together and relates them to specific project activities aimed at providing the schools with bilingual teachers, instructional materials, staff development, books, and the many other critical activities related to the bilingual education program.

Narrative reports of what is occurring in the project are useful--indeed essential--but these reports must be supported by financial reports that say the same thing in the figures. Is the program ahead or behind schedule? Is spending ahead or behind budget? A management budget should enable monitors to detect early on what is happening to the program rather than waiting a year or more to detect deficiencies.

While AID has provided all that it hoped for less than the amount allocated in dollars to the project, the GOG appears to have fallen short of its obligation. It agreed to provide almost Q. 25 million to place 900 bilingual teachers and others in the schools and in the regions. In fact, it has made available over Q. 42 million for this purpose. In one sense, it can be said that it met its obligations. On the other hand, the obligations for which the

GOG was responsible were not expressed in fungible Quetzales. The GOG obligation was to create teaching positions and fill those positions with specific time frames. Consequently the Q. 25 million was an estimate of what persons would cost as they were employed over the six-year life of the project. The teachers, for example, were to be employed at the rate of 150 per year up to a total of 900.

While there may have been some bureaucratic lag in raising teachers' salaries after the first sharp devaluation of the Quetzal to Q. 2.70 to the dollar, there was bound to have been a continuing rise in these salaries over the six years of the program. Likewise, there was bound to be a cumulative increase in total salaries from year to year reflecting the new teachers taken on each succeeding year. With higher salaries and more teachers, there should have been an arithmetic increase in the counterpart required to support this important program. In the original project budget, this increase was phased in at the rate of Q. 500,000 a year. The GOG counterpart contribution would have risen from Q. 2,790,000 to Q. 6,423,000 some six years later for a total of Q. 24.9 million. One must believe that under actual conditions, the first year's increase would have been very substantial and that the annual increases due to higher salaries and increased number of teachers, the final amount of counterpart needed would have been much more than the Q. 42 million recorded by PRONEBI to meet the GOG's obligations.

The Mission's concern with project reporting is manifested in Letter of Implementation #59 of March 17, 1989, when it gave approval to the use of additional Quetzal funds arising from the devaluation of the Quetzal. In that same letter it requested PRONEBI to carry out certain activities to determine and document the impact of the program. These areas were qualitative and quantitative measurement of various activities in the project schools and the comparison of learning and absentee results with reference non-project schools. Finally it asked PRONEBI, "to revise its data gathering and reporting system to ensure that the information necessary to monitor the developments of all project elements is available continuously." If this has been done, the evaluation team was not apprised of the results.

Clearly, to manage this project and to ensure that all parties were meeting their obligations, AID should not have relied on PRONEBI reports which did not relate counterpart expenditures to specific quantitative activities and did not report developments with enough frequency to permit AID to notice and act upon project slippages on the part of the GOG.

AID's scrutiny and justification of its expenditure of appropriate funds under the loan and grant portions of the overall project seems to have been somewhat lax. AID seemed to accept without careful and timely scrutiny the GOG's performance, except for those occasions when serious shortfalls in the delivery of teaching and supervisory personnel to the project schools were discovered. As a result, action was taken so late that it was impossible to remedy the losses to the bilingual education project.

#### **E. Cost Recovery**

Primary education, and as part of this, bilingual education, continue to be a stated priority for the MOE. As expansion of coverage and improvement of quality increase, so will attendant costs for service delivery and regulation of these services. The MOE needs a strategy for cost recovery. Although not an issue raised in the project paper, the topic of cost recovery is also an important one for PRONEBI. The eventual absorption of all donor financed PRONEBI services or a reduction in the level of service delivery is a real choice for the MOE. A major part of PRONEBI activities is the provision of text books. This is an expensive proposition and some manner of cost recovery or subsidy must be examined. At no time during interviews and document review did this topic emerge regarding plans for PRONEBI in particular.

However, according to SEGEPLAN analysts, the MOE is developing a pilot project for community involvement, support, and subsidy for education under its decentralization efforts. The two results of this project, if successful, would be increased community governance over education and increased local financing. According to SEGEPLAN, the program will attempt to pay teachers through the community, set school days with community input, and eventually to enter into teacher selection and setting school calendars. The possibility of charging parents a small fee (*cuota*) is also being explored. A commission to study the matter was formed. A pilot project is scheduled to begin in March of 1993. The project will be mounted with PNUD financing and in cooperation with GOG municipalization efforts.

The qualitative data, collected on the impact of the project on parents as part of this evaluation, suggest that parents of children in PRONEBI schools are generally unable to pay to support educational services. However, one of the areas in which the pilot project will occur is San Marcos. This area has bilingual schools under PRONEBI. This circumstance provides an opportunity to design, as an adjunct to the decentralization efforts, a pilot project for local control and cost recovery for PRONEBI. In general, decentralization and community involvement fit well with PRONEBI's emphasis on local language and cultural preservation. Thus, the empowerment provided by the program may encourage the economic participation of parents in their children's schooling.

## IV. INSTRUCTIONAL MATERIALS

### A. Outputs

The EOPS for the Project Paper included a total distribution of 1,300,000 texts and guides over the life of the project. This figure was revised during the 1988 reprogramming exercise that was a result of additional funds available because of the devaluation of the Quetzal. The revised totals included the printing and distribution of ancillary materials such as dictionaries, grammars, and readers in the four Mayan languages. The overall EOPS were, however, a slightly lower total of 1,087,730 owing to a reduction in the second printing of materials from the 548,000 units originally envisioned to 150,000 units (PRONEBI; August, 1988).

Table 5 shows the number of materials printed each year under the Rural Education Improvement Project. As can be seen, actual outputs surpassed both the original and reprogrammed EOPS. The figures do, however, include constitutions in the four principal languages, flash cards, newsletters, and the like which were not defined in the project paper. The total number of texts, guides, and illustrated instructional materials ("cartillas") printed and distributed was 1,146,473.

A complete series of texts through fourth grade was to be developed and revised by October 1988. As a result of a variety of factors including: other demands on the time of the curriculum teams to perform such tasks as translating the national constitution into Mayan; the delay caused by winning acceptance of the new Mayan alphabet; delays in decision-making owing to a lack of a permanent director for almost nine months; and delays caused by staff turnover, PRONEBI did not meet this schedule. The texts and guides for preschool, first, and second grades for all four language groups were produced and distributed by 1986. These materials were revised and a second edition was printed by 1989 in the case of preschool and first grade, and 1992 in the case of second grade. Initial printing of third grade materials took place in 1989 while the revised edition is scheduled to be printed in 1993. Fourth grade materials are also scheduled to be printed in 1993.

**Table 5.**  
**Summary of Production of Instructional Materials**

Year	Number	Types
1985	363,641	Texts and guides, constitutions
1986	9,650	Texts and guides, pamphlets
1987	8,330	Professionalization texts, newsletters, magazine, pamphlets
1988	97,323	Texts and guides, professionalization texts, grammars, dictionaries,
1989	44,800	Texts and guides, professionalization texts, grammars, dictionaries
1990	256,100	Texts and guides, dictionaries, grammars, flash cards
1991	174,300	Texts and guides, readers
1992	424,427	Texts and guides, dictionaries, cultural books, flash cards
<b>Total</b>	<b>1,378,571</b>	

Source: PRONEBI warehouse records.

**B. Bilingual Education Model**

The Project Paper called for the development of a "transition" model of bilingual education which would assist children who were monolingual in a Mayan language to make progress in subject matter, presented in their own language, while learning Spanish. At the time of the 1987 process evaluation of the PRONEBI program, there was a general consensus among PRONEBI personnel that the model being developed was a "parallel" language model. This model supported the development of the child's maternal language and of Spanish-as-a-second language from preschool through sixth grade. The process evaluation identified a difficulty with the pedagogical adequacy of this model in that it assumed monolingualism in indigenous communities by presenting all material in maternal languages in the early grades

(Chesterfield and Seeley, 1987). As will be discussed subsequently in this section, this difficulty, which ignored the high level of bilingualism in many indigenous communities, has largely been overcome by the addition of Spanish to texts and by the development of a number of ancillary materials.

Currently, there is a general agreement in all sections of PRONEBI that the model that has been developed is a bilingual/bicultural one that emphasizes maintenance of the mother tongue and the development of maternal language literacy together with the development of Spanish speaking and writing skills. This approach is consistent with political changes within Guatemala, the long-term teacher manpower needs to further bilingual/bicultural educational objectives in Guatemala, and recent research on transitional bilingual programs for language minority children, all of which have taken place since the writing of the Project Paper.

With the democratic elections in 1984 and the peaceful transition of elected governments in 1990, there has been a greater political recognition of the pluralistic nature of Guatemalan society. The importance of bilingualism and multiculturalism in Guatemala has been written into public policy. Therefore, PRONEBI's emphasis on preparing children to function in diverse cultural situations is consistent with national political aims.

The furthering of Mayan literacy among school children will also create a pool of potential teachers to carry out the goals of bilingual education in Guatemala. Data from the process evaluation and our own findings show that a major obstacle to the delivery of bilingual education is teachers' lack of experience with written materials in their native tongue. The development of texts and ancillary literature in the Mayan languages, together with the emphasis on a biliterate school-leaving population in the PRONEBI program, will provide the human resources necessary to allow the bilingual education program to expand to the estimated 65 percent of the enrolled target population not currently served by bilingual education efforts in Guatemala.

Recent longitudinal research on bilingual children in transition programs suggests that such programs may create deficient bilinguals. Because of the lack of emphasis given to the first language among young school children entering such programs, first language speaking and writing skills do not develop beyond those commonly found in a young child. As children develop increased skill in the second language, and the peer group takes a greater influence in their life, they may eventually be able to communicate with their parents only in "baby talk" (Wong-Fillmore, 1991). Second language skills may also be impeded as children are often put into remedial classes or second language classes that focus on lower level cognitive skills. Obviously, Guatemala presents a different situation from that of language minority children in the United States, with whom most of the research has been conducted. The emphasis of the PRONEBI program on the concurrent development of higher order skills in both the first and second languages should help to avoid the possibility of such a situation occurring in Guatemala.

### **C. Incorporation of the 1987 Process Evaluation Recommendations into the Revised Texts**

Within the series of constraints mentioned in the administrative impact section of this report which include: curriculum staff turnover; delays in production resulting from adoption of the new Mayan alphabet in the texts; the lack of a PRONEBI director for an extended period of time; and the restructuring of PRONEBI functional offices, the PRONEBI curriculum development team has done an excellent job of incorporating the recommendations of the process evaluation into the revisions of texts and teachers' guides completed under the project. Spanish has been added to the texts that previously presented subject matter solely in the Mayan languages. Suggestions for exercises that teachers can use to involve students have been greatly increased and there is somewhat less reliance on teacher-centered interactions. The introductory texts in both Mayan and Spanish have been adjusted so that literacy is not assumed upon school entry. The texts, as well as ancillary materials such as dictionaries, grammars, and basic Maya vocabulary lists for monolingual teachers give attention to dialectic variation and provide useful tools to teachers who work with Mayan children but who themselves are not fully bilingual or biliterate.

The curriculum teams have been less successful in overcoming reliance on rote memorization that was found to be a difficulty with previous versions of the texts and guides. This is not unique to the PRONEBI materials but rather is a common problem found in the texts and guides of many of the curriculum materials in use in Guatemalan primary schools. This problem appears to be the result of a reliance on general curriculum objectives rather than detailed specification of grade level expectations. Although PRONEBI has developed a rudimentary scope and sequence chart ("tabla de contenidos"), it does not clearly move from basic cognitive skills to higher order thinking skills as children advance in grade level. The development of grade level expectations for cognitive, affective, and psycho-motor skills that lead to detailed scope and sequence charting will increase both the breadth and depth of the PRONEBI curriculum. Such procedures will also assure that language arts strategies employed across the different language areas will develop the same skills.

The second recommendation of the process evaluation that has not been fully realized is the need for greater specification of learning activities in the teachers guides. Although the revised guides have improved in suggesting exercises that the teachers can do to provide the students practice with certain skills, the exercises generally focus on the practice of skills in isolation (e.g., dictation, copying, recall). Guidance to the teachers on how to encourage children to construct meaning through interaction with peers, teachers, and materials is lacking in the instructional materials developed under the Rural Education Improvement Project (Bilingual Education).

The BEST project, which provides continued AID support to PRONEBI, emphasizes the transfer of the technology of thematic unit development within a whole language theoretical paradigm. This should help to improve the support given to teachers through the PRONEBI materials. The curriculum teams are currently being trained to produce thematic units which integrate different subject matter under unifying themes. The units offer teachers a variety of activities that allow students to develop skills in appropriate contextual learning situations. This approach will, however, also require detailed grade level expectations and

scope and sequence charts for each subject, if activities are to be designed that assist children to learn higher level cognitive skills.

#### **D. Gender Issues**

Given the differential impact of PRONEBI in terms of gender, especially as relates to educational quality, the texts were examined for sensitivity to gender issues. Our findings are consistent with those of the BEST midterm evaluation conducted in July and August of 1992 (Gillies, et al; 1992). Males generally appear in illustrations more often than females, when the total number of illustrations in each text are examined. With the exception of school-based illustrations, there are few examples of either males or females in non-traditional roles. It is important to remember, however, that the texts are designed principally for a rural agricultural population. As cultural relevance is very important to the PRONEBI curriculum model, a careful balance must be struck to reflect the reality of many Mayan families and at the same time suggest new future opportunities and roles to both males and females. Our own observations of interactions among students and teachers in PRONEBI classrooms suggest that instructional activities must be developed that assist teachers in providing greater learning opportunities for all children, especially girls.

#### **E. Congruence of PRONEBI Achievement Tests with Learning Objectives of the Instructional Materials.**

A sample of achievement tests including Spanish, Mathematics, and Natural Science was examined to determine their congruence with the learning objectives identified in the teachers' guides. Each of the tests was found to be generally consistent with the objectives in the teachers' guides and the lessons in the texts. All of the mathematics objectives were measured by multiple items. Seven of the eight natural science objectives were clearly tested, with the exception being Mayan cosmology. The oral and written Spanish tests together measured the six objectives identified in the teachers guides for the revised second grade texts. Thus, the PRONEBI tests appear to be valid measures for assessing progress in meeting the curricula objectives of the program.

#### **F. Teachers' Views of the Availability and Utility of Instructional Materials**

The survey of preschool and first grade teachers carried out by PRONEBI in June and July of 1992, provides an excellent indicator of the impact of the instructional materials revised under the project among teachers. A total of 126 teachers (64 preschool and 62 first grade) working in complete intensive schools in the four primary linguistic areas were surveyed. Preschool teachers had an average class size of 48 children with a range from a low of nine children to a high of 132. First grade teachers averaged 44 children with a range from 16 to 83.

When asked if they had a sufficient number of PRONEBI texts, 31 percent of the teachers responded positively and 69 percent felt that they needed additional texts. However,

upon discussing specific texts, there were no cases where all teachers had each text. As shown in Table 6, Maternal Language and Mathematics were the texts that were most generally available to the teachers. Spanish and Readiness texts were available to slightly more than half of the teachers, Social Studies and Natural Science texts were available to about 40 percent of the teachers interviewed and Citizenship and Practical Arts were in the hands of less than a fourth of the teachers. Those teachers who stated that they needed additional texts, needed them for two-thirds to seven-eighths of their students, on the average.

**Table 6.**  
**Availability of Instructional Materials**

TEXTS	Percentage with Texts	Percentage without Texts	Average Number Needed
Maternal Language	81%	19%	31
Mathematics	80%	20%	29
Spanish	52%	48%	32
Readiness	51%	49%	36
Social Studies	41%	59%	28
Natural Sciences	41%	59%	28
Citizenship	21%	79%	45
Practical Arts	15%	85%	43

Teachers' opinions of the quality of the texts were in terms of their general physical structure and appearance. These opinions were generally strongly positive. They ranged from 95 percent positive responses for the quality of the binding, relevance of illustrations, and ease of reading to 70 percent for the quality of the color.

When questioned about the utility of the instructional materials, more variation in responses was found. Over 90 percent of the teachers felt that the texts were useful, were appropriate to the needs of the students, and were important in improving their efforts. Similar percentages found the teachers' guides to be congruent with the texts and to be helpful. However, 27 percent of the teachers thought that the guides were somewhat confusing, 30 percent felt that the texts required extra work, and 46 percent and 35 percent stated that the children would learn as well without the PRONEBI texts or without any texts, respectively. Teachers' difficulties with the texts and guides appear to be largely related to a need for additional training in the use of the materials. Although 57 percent of the teachers had received some training from PRONEBI, 93 percent felt that they needed additional training and 95 percent said that they would participate in training if given the opportunity. A secondary difficulty with the texts was the use of the new Maya alphabet in the texts.

Thirty-nine percent of the teachers stated that they were opposed to the use of the new alphabet.

When teachers' responses were examined by language area, teachers across the four language groups were relatively consistent in the frequency of their responses. On only three questions were significant differences in responses found. Mam teachers were significantly less favorable about the use of the new Maya alphabet than their colleagues in other language areas. The Mam teachers' unfavorable view of the new alphabet was also responsible for the significantly greater frequency with which they disagreed with the statement that the texts were easy to read. The Mam teachers were less likely, however, to find the teachers' guides confusing than their colleagues in other language areas.

## V. IMPACT ON PRIMARY AND SECONDARY BENEFICIARIES

### A. PRONEBI Enrollments and Educational Efficiency

#### PRONEBI Enrollments

The difficulty of calculating PRONEBI enrollments as a percentage of the indigenous school-age population is a dearth of current reliable census information. The last census was undertaken in 1981 under extremely difficult circumstances, and many remote indigenous areas were not part of the sample. As a result, the enrollment data are based on approximate projections assuming a 3 percent annual growth rate in the 5-14 year old cohort of the indigenous population. These projections are based on data from INE and USIPE.

**Table 7.**  
**PRONEBI Coverage**

Year	PRONEBI Enrollments	Rural Indigenous Population: 5-14	Percent Enrolled in PRONEBI Schools
1986	86,499	563,132	15.4%
1987	93,467	580,549	16.1%
1988	90,853	597,965	15.2%
1989	75,942	615,904	12.3%
1990	95,083	634,382	15.0%
1991	96,194	653,413	14.7%

Table 7 shows that PRONEBI enrollments relative to the project indigenous cohort have fluctuated over the life of the project. This highest percentage was in 1987 with 16.1 percent, and the lowest was two years later at 12.3%. At the end of the project, the enrollment had risen to 14.7% of the 5-14 year-old indigenous population, slightly lower than the year before.

Figures on the actual number of enrolled indigenous school age children were not available for each year of the project. The only year available was 1987, when 239,249 indigenous children were enrolled in Guatemalan primary schools. Thus, in that year, PRONEBI was serving 39 percent of the available students. As this was the greatest relative coverage provided by PRONEBI over the life of the project, it can be estimated that between 30 and 35 percent of the student target population was covered in each year of the project.

## **B. Measures of PRONEBI Educational Efficiency.**

### **Introduction**

The principal concern in this section is to examine promotion, repetition, and dropout rates in order to identify trends during the years from 1986 to 1991. Ideally, data should have been collected on students who used the bilingual curriculum and a control group who did not. PRONEBI collected information only in their own schools, indicating relative increases and decreases in promotion, repetition, and dropout rates. The Unidad de Informática at the MOE, however, collected such data in schools nation-wide which were disaggregated by municipality according to whether or not a school was a formal part of PRONEBI. Unfortunately, these data are only available for 1989, 1990, and 1991.

The analytical strategy followed here is to present data from both sources, examine trends, and determine the consistency between PRONEBI's own student tracking and the MOE Computer Center data. In order to make this comparison, the MOE Unidad de Informática was asked to provide nation-wide listings by municipality of students registered, promoted, not promoted, and dropouts disaggregated by sex, urban/rural, and PRONEBI/no PRONEBI. PRONEBI, on the other hand, provided the same type of information on its students, beginning with 1986.

To facilitate the most valid comparisons possible, it was decided to use data only from schools in the four major languages from both sources. Furthermore, only municipality that have both PRONEBI and non-PRONEBI schools were selected from the MOE data, otherwise there would be no valid basis for comparison. One difficulty was that the MOE data presented dropouts as having been drawn from both promoted and students destined to repeat a grade; consequently, the sum of the three percentages exceed 100, while the PRONEBI data do not. To compensate for this discrepancy, only promotion and dropout rates are presented and discussed from the MOE information, while repetition rates have been added to the analysis of the PRONEBI figures. To facilitate interpretation, graphs have been made to show the principal trends, but the complete data tables can be found in the appendix.

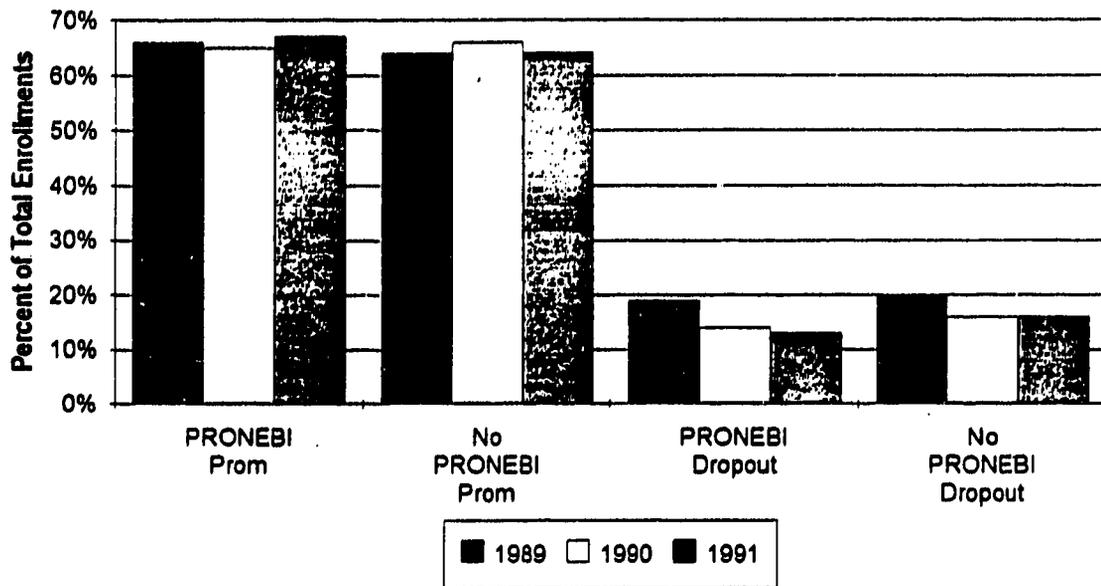
### **MOE Computer Center Data: Efficiency Trends**

Figures 6-14 show that promotion rates have generally increased from 1989 to 1991 and that there has been a marked decrease in dropout rates. In some cases, the PRONEBI promotion rates are higher than the corresponding non-PRONEBI schools in the same municipalities. It should be noted that the figures for 1990 are somewhat anomalous due to the teacher strike in 1989 and the fact that students were, at times, automatically promoted.

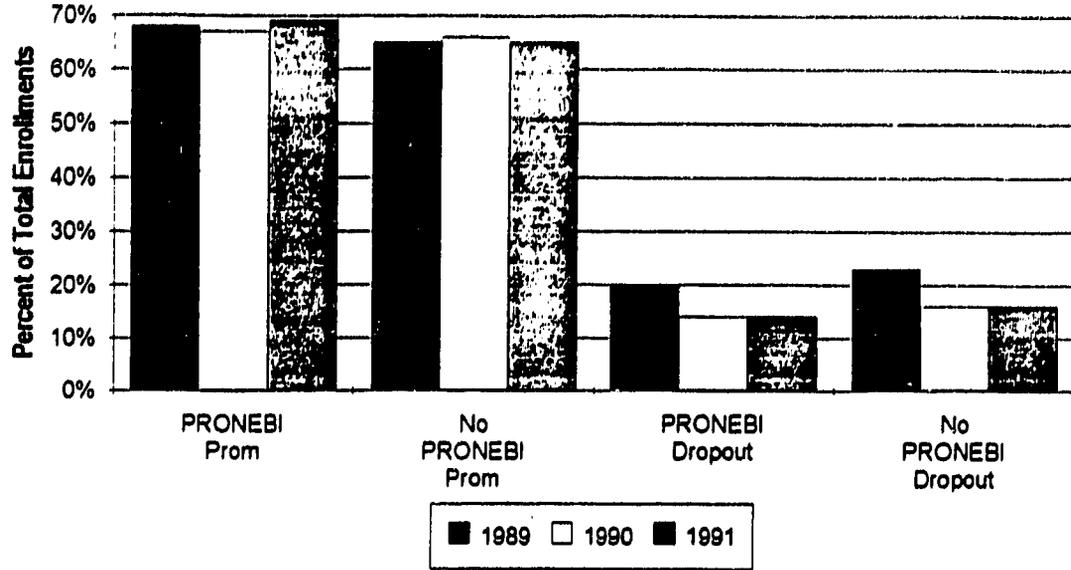
Figure 6 shows a comparison between PRONEBI and non-PRONEBI first graders, both male and female. For both 1989 and 1991, the PRONEBI promotion rates are somewhat higher than the control groups, and a step-wise decrease in the dropout rates can be noted. Rates decrease from 19 percent in 1989 to 13 in 1991, whereas the lowest rate for the comparison groups during the same years is 16 percent. Figures 7 and 8 show the disaggregation by gender, and here it is apparent that females in both the PRONEBI and the control groups lagged behind males, especially in promotion rates. It is interesting to note,

however, that the 1991, when all of the project inputs were in place, female PRONEBI dropout rate was the lowest achieved for both groups during the three year period.

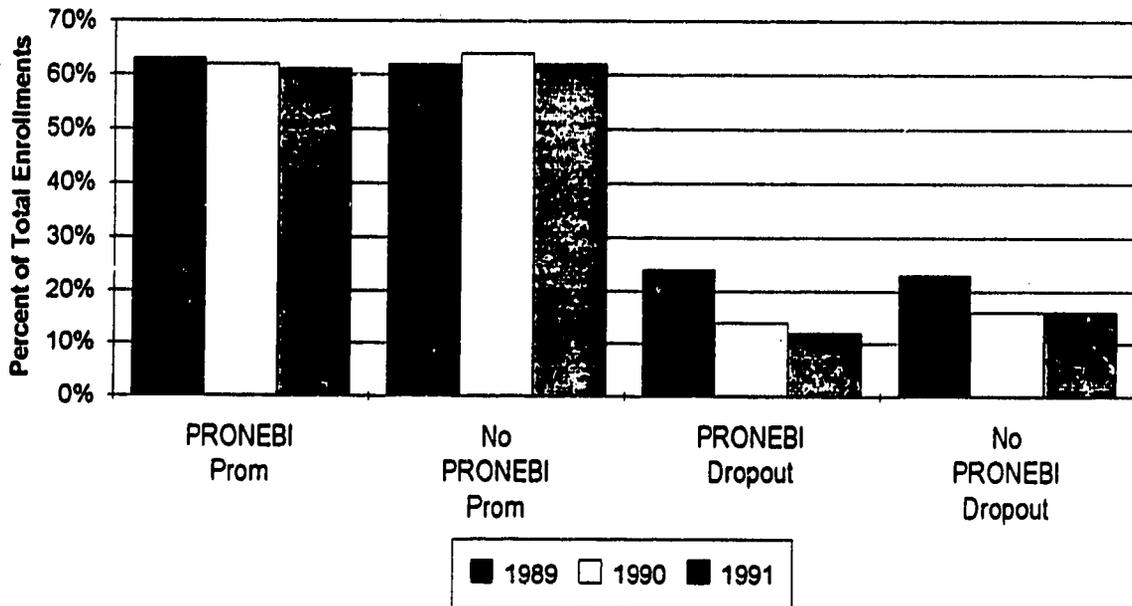
**Figure 6.**  
**First Grade: Promotion and Dropout**  
**Totals: PRONEBI vs. No PRONEBI**



**Figure 7.**  
**First Grade: Promotion and Dropout**  
**Males: PRONEBI vs. No PRONEBI**

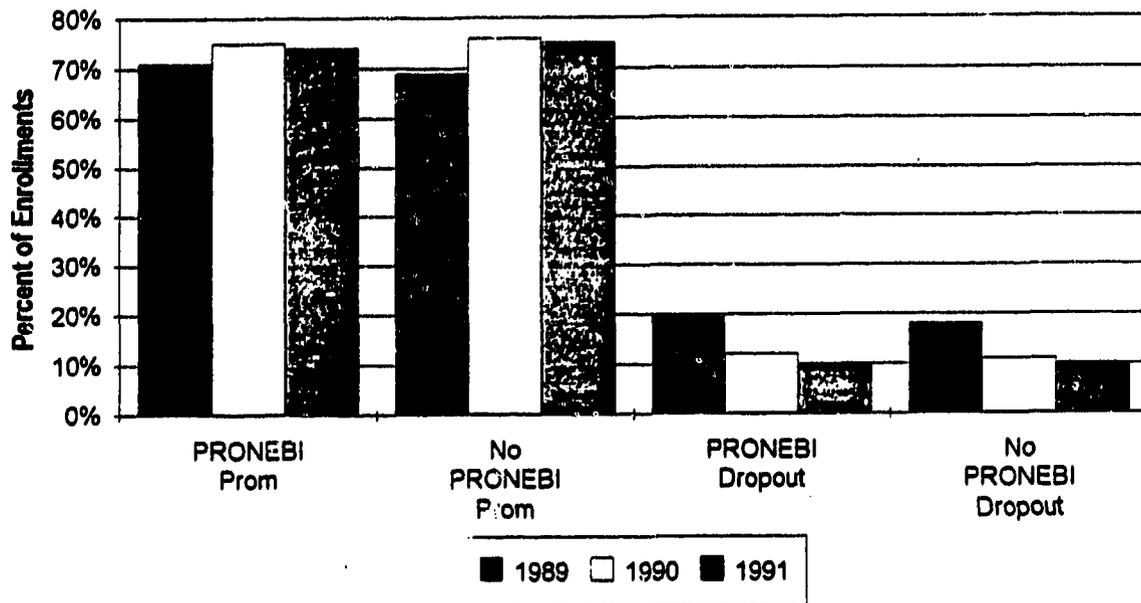


**Figure 8.**  
**First Grade: Promotion and Dropout**  
**Females: PRONEBI vs. No PRONEBI**

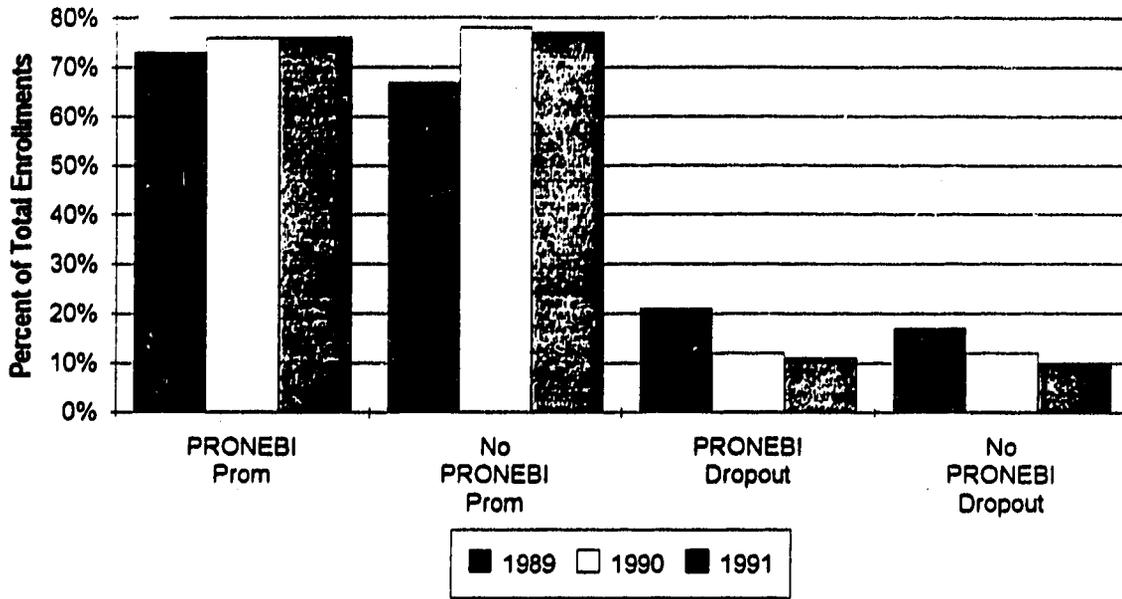


The overall second grade promotion rates for PRONEBI (Figure 9) were slightly lower than the non-PRONEBI schools, with the exception of 1989 when PRONEBI was at 71 percent and the control at 69. The PRONEBI dropout rates were the highest in 1989, but by 1991 both groups were equal at 10 percent. The gender comparisons shown in Figures 10 and 11 show that the girls' promotion rates lag behind their male counterparts in both groups, and the highest second grade promotion rates are among control school males in 1990 and 1991, 78 and 77 percent, respectively. Once again, the 9 percent female dropout rate was the lowest amongst both groups of second graders, regardless of gender.

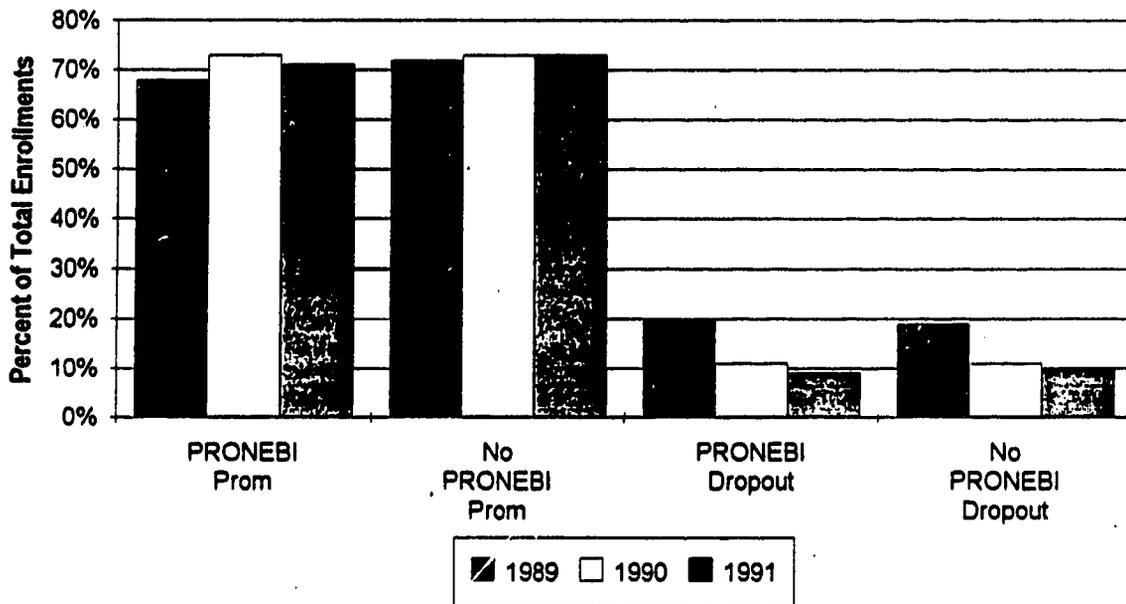
**Figure 9.**  
**Second Grade: Promotion and Dropout**  
**Totals: PRONEBI vs. No PRONEBI**



**Figure 10.**  
**Second Grade: Promotion and Dropout**  
**Males: PRONEBI vs. No PRONEBI**

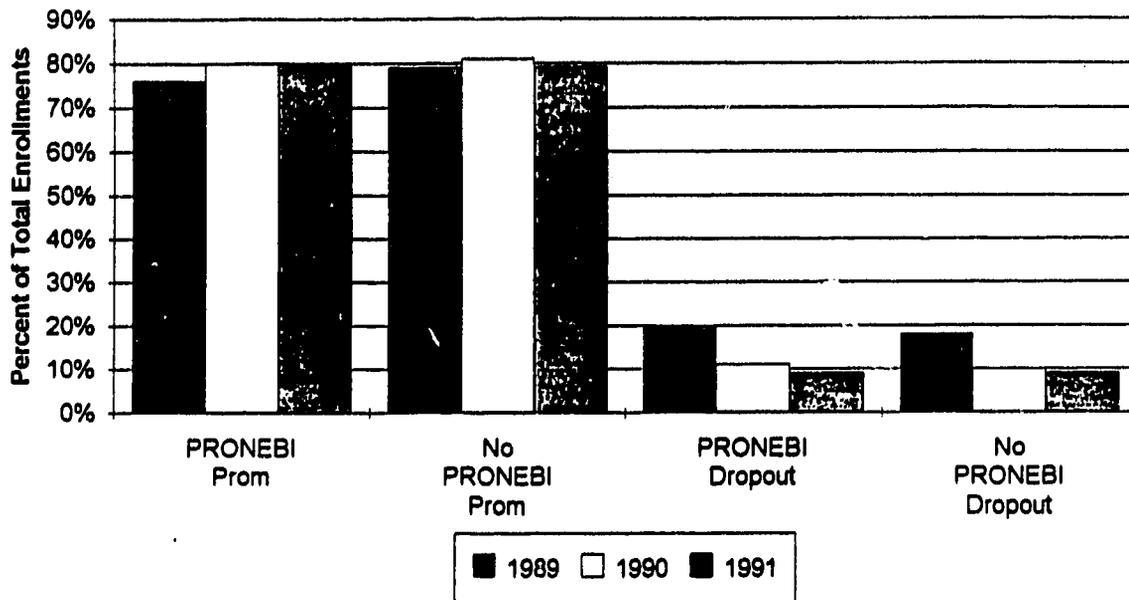


**Figure 11.**  
**Second Grade: Promotion and Dropout**  
**Females: PRONEBI vs. No PRONEBI**

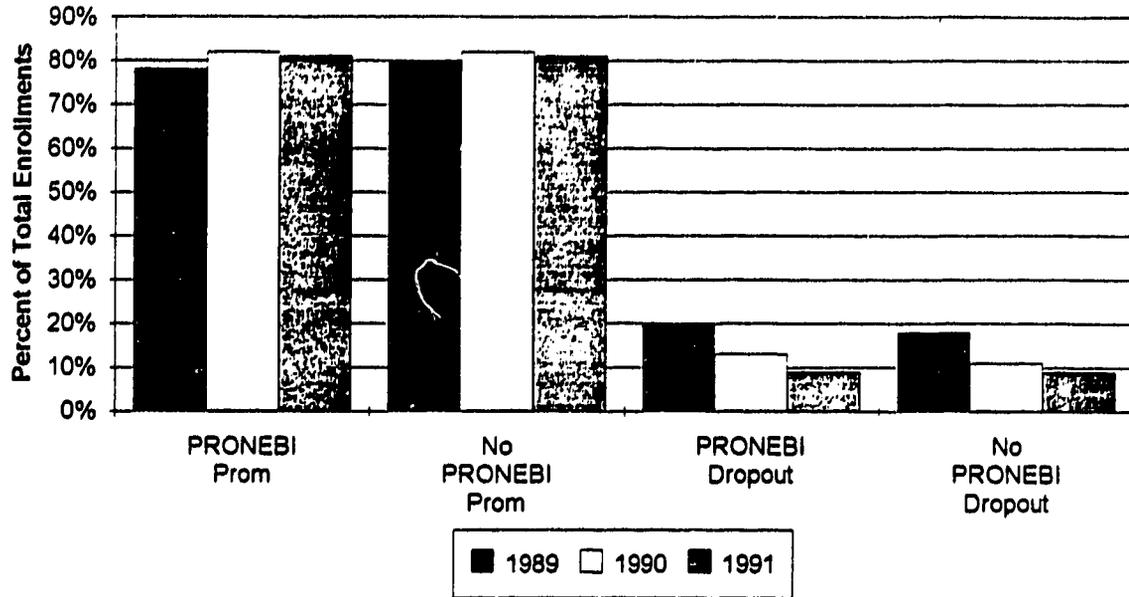


By the time students in both groups reached the third grade (Figures 12, 13, and 14), their overall promotion rates are at or very near 80 percent; the 1990 control group reached a high of 81, but both the 1990 and 1991 PRONEBI rates were 80 percent, one point higher than the 1991 control group. In general, both groups show a steady decrease in dropout rates over the three years, but the PRONEBI students started with the highest overall and male dropout rate, and by 1991 they were the same at 9 percent; the lowest was for control group girls with 8 percent.

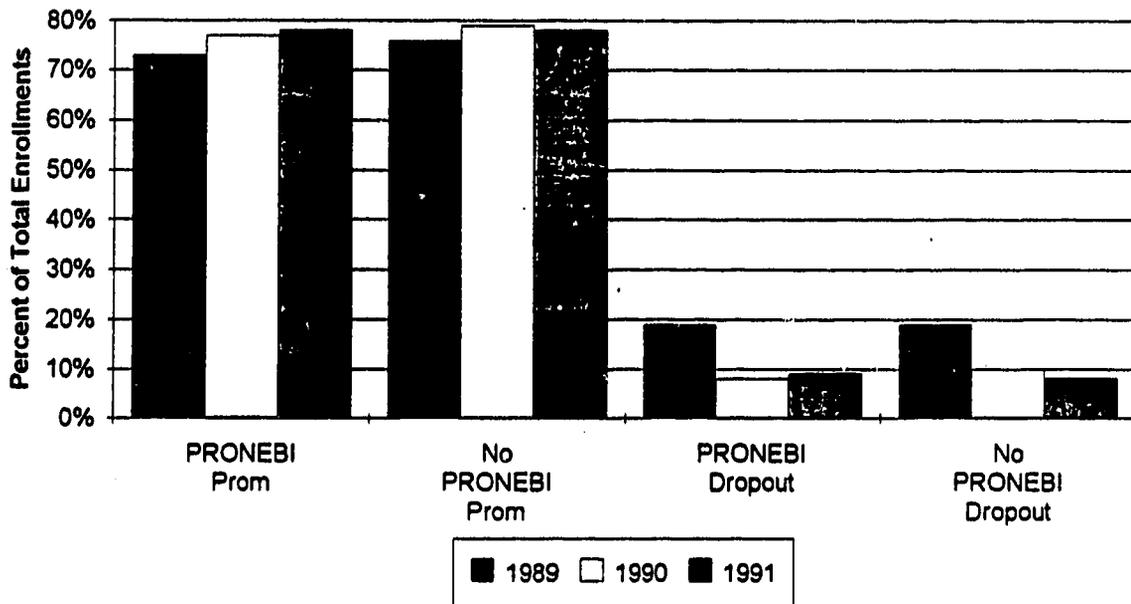
**Figure 12.**  
**Third Grade: Promotion and Dropout**  
**Totals: PRONEBI vs. No PRONEBI**



**Figure 13.**  
**Third Grade Promotion and Dropout**  
**Males: PRONEBI vs. No PRONEBI**



**Figure 14.**  
**Third Grade: Promotion and Dropout**  
**Females: PRONEBI vs. No PRONEBI**



In summary, these independently collected data clearly show that PRONEBI promotion and dropout rates are comparable and, at times, surpass non-PRONEBI schools. Generally, female promotion rates lag behind boys, but the girls have shown steady decreases in dropout rates.

#### **PRONEBI Data: Efficiency Trends**

PRONEBI's teachers and supervisors have collected enrollment, promotion, repetition, and dropout data since 1986; no data were collected in 1989 due to the teacher strike and the discharge of the supervisors. Since the information covers five years, the best display method is to use line graphs with simultaneous plots of promotion, repetition, and dropout rates per year for each grade. This allows for a comparison of trends for these indicators across preprimary and all six grades between 1986 and 1991; a summary figure representing averages for all grades can be found in the executive summary. Promotion, repetition and dropout rates will be discussed individually in terms of general trends across grades and years.

An examination of Figures 15 to 21 shows that promotion rates were the lowest for first graders in 1986, rose to 61 percent in 1987 and 1988, and then to 82 in 1991. This general trend holds for all grades, except that the initial promotion rate in 1986 was higher for each successive grade: 66 for second, 70 for third, 76 for fourth, 81 for fifth, and 91 percent for sixth. Every single grade, including preschool, showed an increase over the six year period, but the total increase was less with each successive grade because of the higher starting rate in 1986. The promotion rates in 1991 also increased in magnitude from first to sixth, indicating that the longer children remain in school the more likely they are to be promoted. The pattern from first through sixth was 82, 85, 87, 90, 91, and 97 percent, respectively. The preschool rates showed the same pattern, except that the 1986 promotion rate of 65 percent was higher than first grade, but by 1991 they were the same at 82 percent. The overall promotion rate for all six grades and preschool increased by 27 percent over the life of the project.

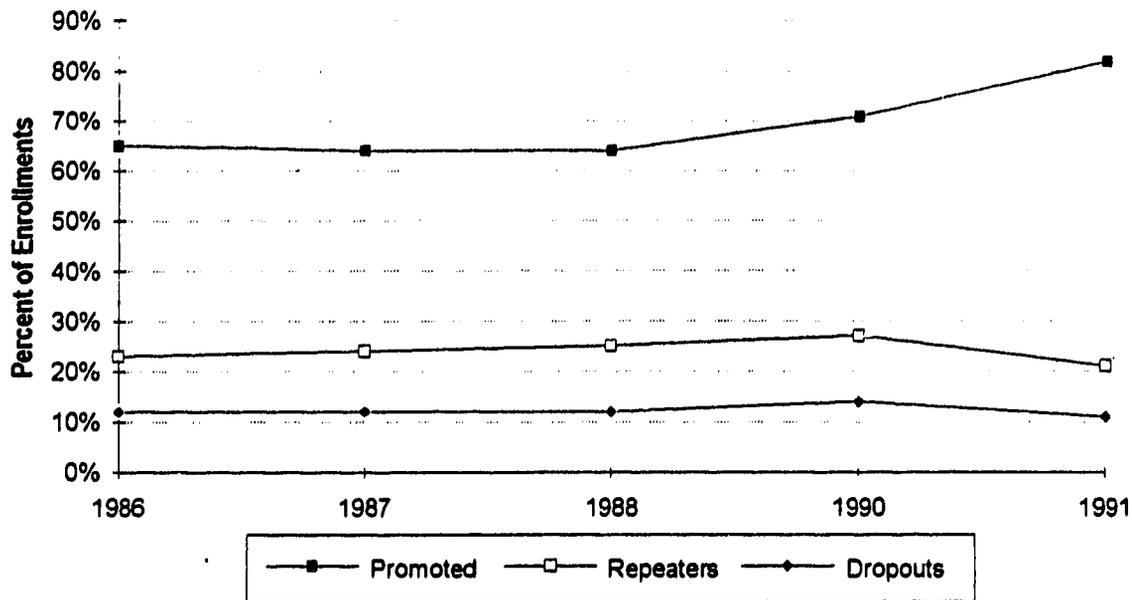
Repetition rates were the inverse of those described for promotion, except that their order of magnitude are more notable. The first grade rate was 31 percent, followed by 25, 20, 15, and 12 for second through fifth grade, respectively; but then the rate plummeted to only 2 percent for sixth grade. As can be clearly seen in Figures 15 to 21, each successive grade began with a lower repetition rate which was then improved upon in every single grade, including preschool, over the six year life of the project.

The pattern of change for dropout rates was very similar to the repetition rates; preprimary and first grade were the highest in 1986, except for a 14 percent preprimary rate in 1990. By 1991, the rates for all grades except fifth were lower but only by 10 percent or less. The largest change was for sixth grade which went from 6 to 2 percent over the six years. The average decrease in the dropout rates for all grades and preprimary was 10 percent.

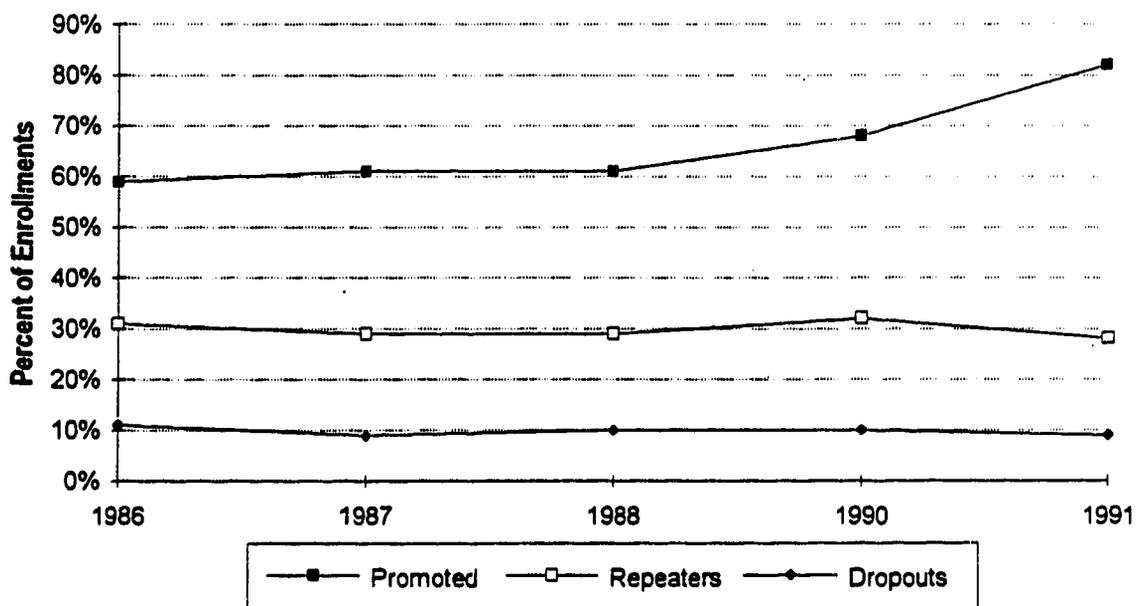
The first year that PRONEBI disaggregated enrollment, promotion, repetition, and dropout data by gender was in 1991. The first two bars in Figure 22 show promotion by

gender, and with the exception of preschool females, females in every grade were behind males in promotions. The largest difference was 8 percent in the fifth grade, and the smallest was 1 percent for first graders. The second two bars show repetition, and here females repeated more than males in every grade, including preschool. With the exception of preschool, female dropout rates were significantly higher than their male counterparts, although the rates for both were extremely low, 2 and 3 percent, by the time they reached the sixth grade.

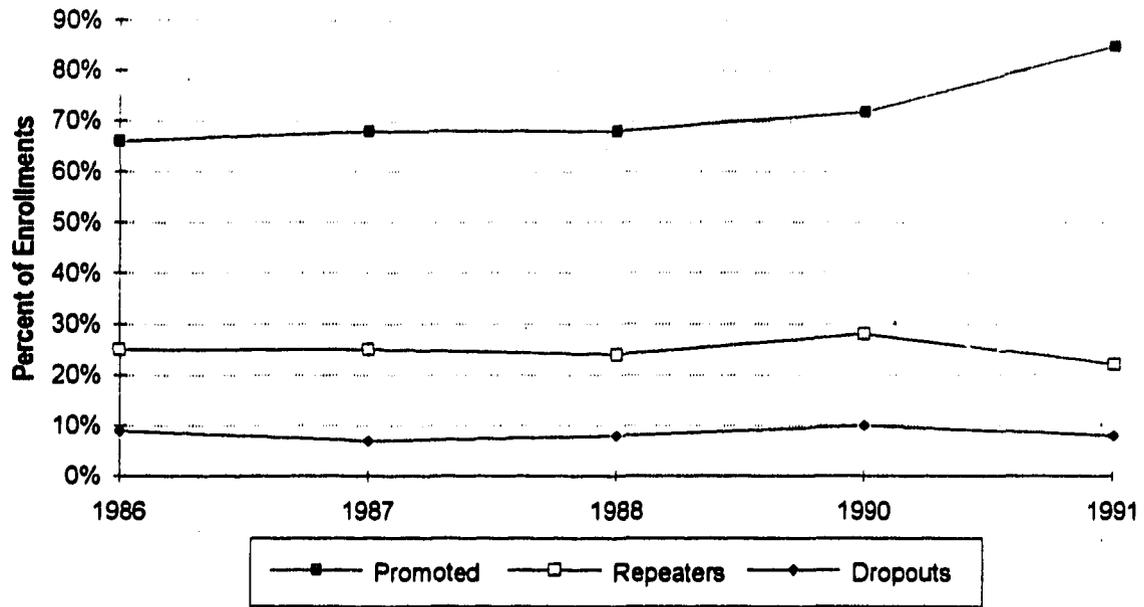
**Figure 15.**  
**PRONEBI: Pre primary**  
**Promotion, Repetition and Dropout**



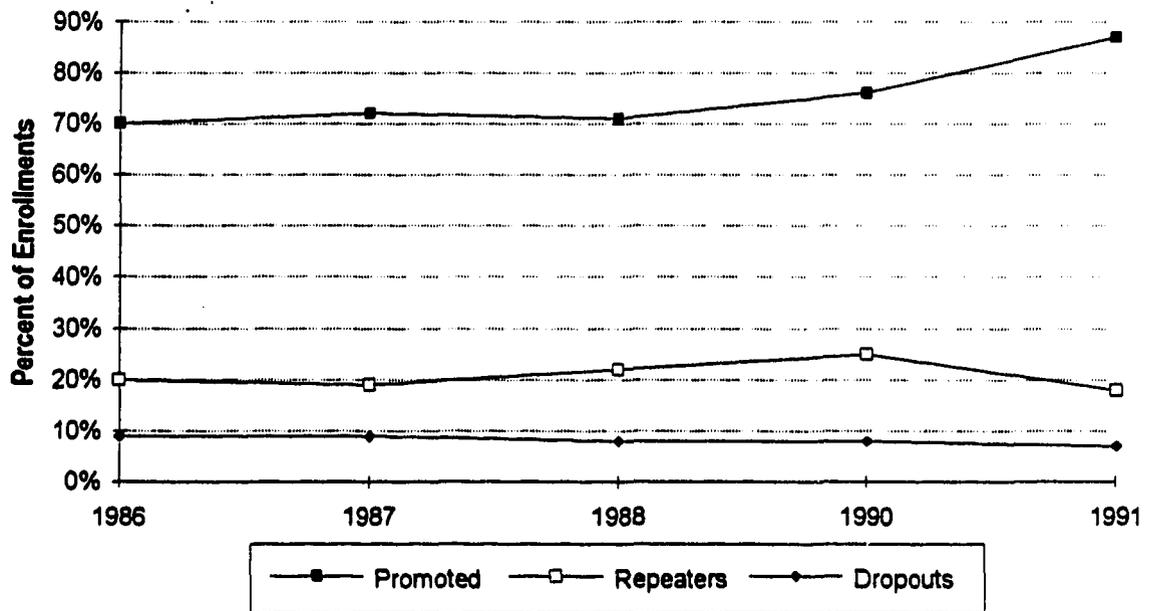
**Figure 16.**  
**PRONEBI: First Grade**  
**Promotion, Repetition and Dropout**



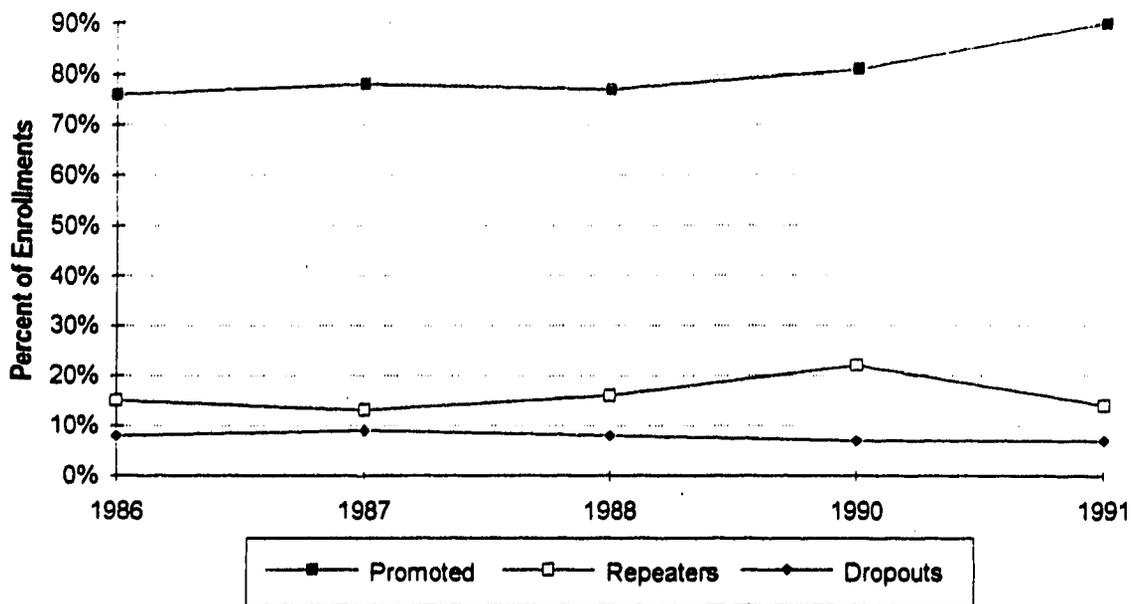
**Figure 17.**  
**PRONEBI: Second Grade**  
**Promotion, Repetition and Dropout**



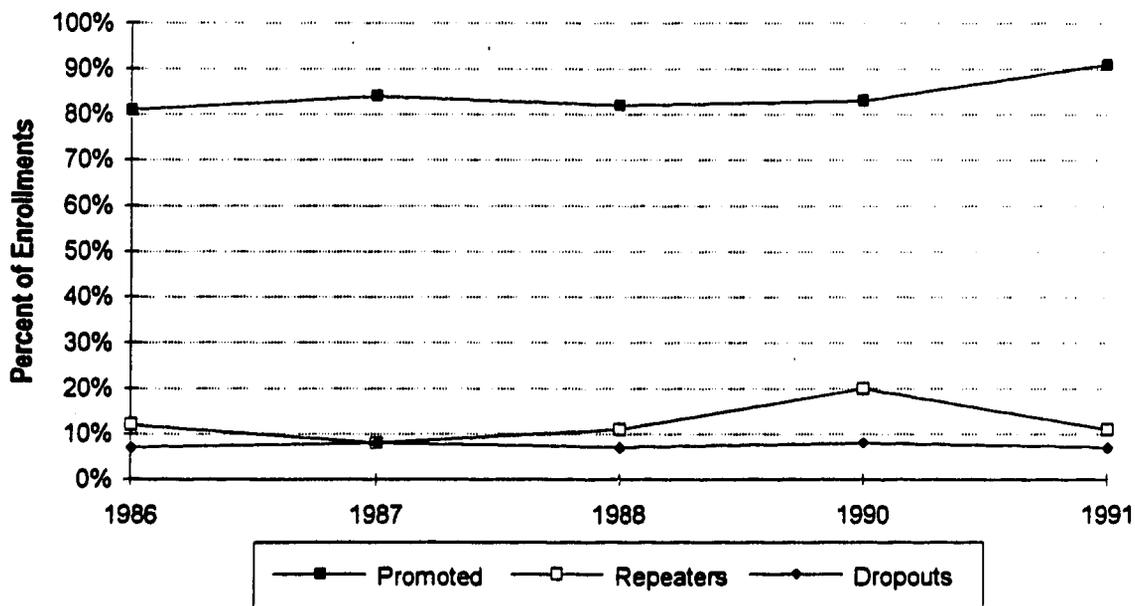
**Figure 18.**  
**PRONEBI: Third Grade**  
**Promotion, Repetition and Dropout**



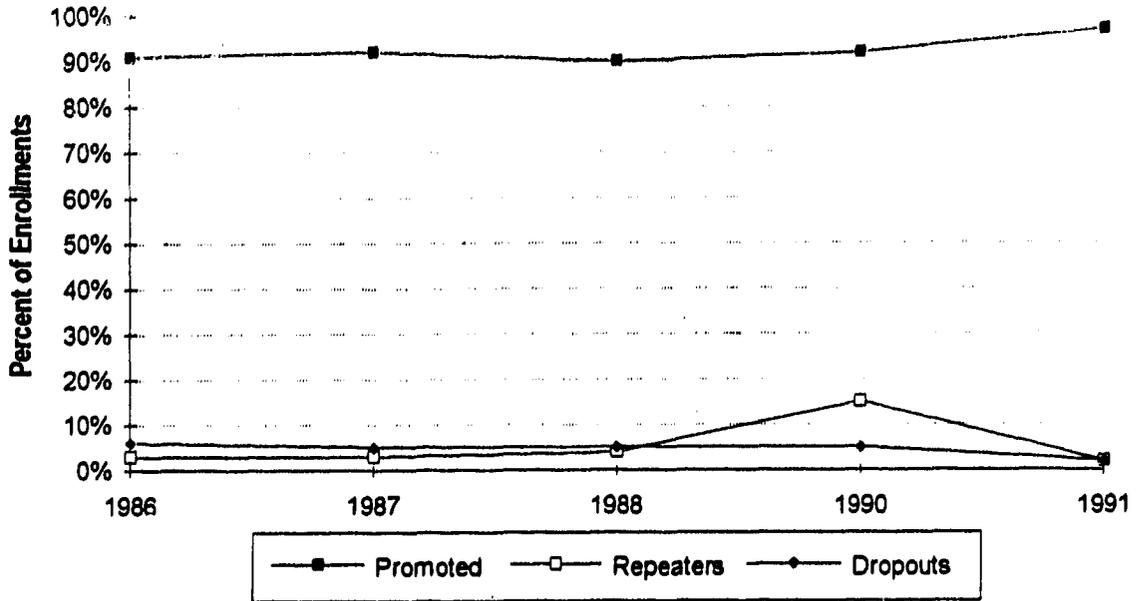
**Figure 19.**  
**PRONEBI: Fourth Grade**  
**Promotion, Repetition and Dropout**



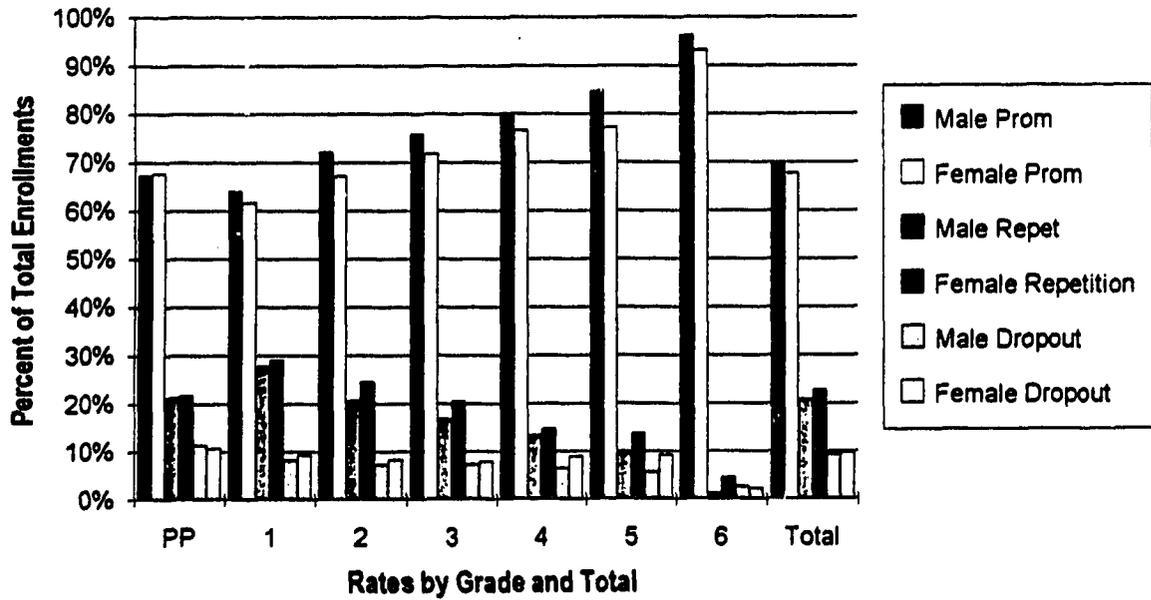
**Figure 20.**  
**PRONEBI: Fifth Grade**  
**Promotion, Repetition and Dropout**



**Figure 21.**  
**PRONEBI: Sixth Grade**  
**Promotion, Repetition and Dropout**



**Figure 22.**  
**PRONEBI: Gender Differences in 1991**  
**Promotion, Repetition and Dropout**



## **C. Quality: PRONEBI Testing Achievements**

### **Introduction**

Educational achievement testing needs to be quite rigorous in terms of test design, test administration, school and student sampling procedures, data entry, analysis, and the appropriate interpretation of results. There are many schools of thought on how testing should be carried out and this is usually related to the perceived purpose of the testing. PRONEBI began testing in 1986 clearly wanting to show that students using a bilingual curriculum and taught by trained teachers would have higher scores than a comparable control group. Over the life of the project, PRONEBI has developed a wide variety of tests to measure achievement in oral Spanish and Mayan, written Spanish and Mayan, Math, Science, and practical arts for each of the four major language groups. The number and kinds of test administered over the life of the project have varied extensively, as have the number of language groups and the size of the samples.

Complete tests in every subject mentioned above were not given every year, and many covered only one or two language groups. For the purposes of this evaluation, the largest and most complete data sets covering all four linguistic groups have been chosen to compare relative achievement between PRONEBI and control groups. In 1986, only math scores have been examined; in 1987 math and oral and written Spanish; in 1988, oral Spanish and Mayan; in 1989, oral Spanish and Math; in 1990 math; and in 1991, oral Spanish and practical arts.

Another source of test scores was from a subset of achievement tests administered by the BEST Project testing activity to over 18,000 first, second and third graders nation-wide. Ostensibly, the purpose of these tests was to measure the effectiveness of the SIMAC curriculum in order to improve SIMAC teacher training efforts. A substantial part of the sample, however, consisted of PRONEBI schools and schools using other non-SIMAC curricula. The complete raw data sets were obtained and test data from PRONEBI schools and schools using non-SIMAC curricular were placed in a smaller data file for a comparative analysis; the new data set consisted of 2705 cases in the departments of Chimaltenango, Sololá, Totonicapán, Huehuetenango, and Alta Verapaz.

One problem of unknown dimensions is that the tests used were designed to measure achievement by students who have used an especially designed curriculum. These tests relate to the bilingual education program only in terms of general learning objectives, and even at this level there is not a perfect correlation. Despite this difficulty, the evaluation team decided that a completely independent measure could provide some insights into the relative achievement of PRONEBI versus non-PRONEBI students in grades one to three. The subject areas covered included Spanish, Math, and the environment. The tests were administered during August and July of 1992.

Both the PRONEBI and BEST data were analyzed in a similar manner. Comparisons of means were done using independent sample t-tests with a Levene's test for equality of variances. The mean scores on the tests were then tabulated and notations were made as to whether or not the means were significantly different. The means were disaggregated to determine if there were any significant differences between language groups and gender. In

addition, t-tests were done to explore the possibility of gender difference within both PRONEBI and comparison groups as well as between groups. The results have been tabulated and are discussed below.

### **The PRONEBI Testing Results: 1986-1991**

Over the six-year period covered by the selective testing administration, overall PRONEBI children outperform comparison children on seven of eight measures where significant differences are found. As can be seen in Table 8, the math scores in 1987, although one percentage point higher for the PRONEBI students, was not significantly different from the control group; the math tests in 1990 resulted in the same score for both groups. Only, the oral Spanish test in 1988 had the control group score significantly higher, 59 versus 62 percent, than the experimental group.

When disaggregated by gender, PRONEBI males were favored on seven of the eight tests where significant differences were found. Similarly, PRONEBI females outscored the comparison group girls on all six measures where significant difference were found. The overall significant difference in the 1986 math tests was due to the males scoring high, and the difference in the girls' scores was not significant. Although the overall math scores in 1987 were not significantly different, the PRONEBI girls scored significantly higher than the control girls by a score of 37 versus 33 percent. On the written Spanish test in 1987 (Est3) the overall difference was significant, but this was not the case for the males in the two groups; a seven point gain by girls accounted for the gains made by the PRONEBI group over the control. The opposite was the case for the oral Spanish test in 1991; the five percent male gain over the control resulted in a significant difference in favor of PRONEBI.

An examination of the scores for individual language groups indicates that in 1986 the overall gain by PRONEBI was due to the high scores made by Mam and K'iche' students, while the scores of the other two were not significantly different. Although the PRONEBI students as a group scored the highest on written Spanish in 1987 and oral Spanish in 1988, the difference for the Q'eqchi' students was not significant, and the same was the case for the Mam speakers on the 1988 oral maya test. Even though the overall scores were not significantly different on the 1990 math test, the scores for Mam and K'iche' students were significantly higher.

The right hand section of Table 8 labeled Pilot and Control is designed to show gender differences within each group, regardless of whether or not the overall scores are significantly different between the two groups. For the PRONEBI or pilot students, there were six significantly different pairs; five out of the six were in favor of boys while the girls scored higher on the 1987 oral Spanish test. For the control group, seven out of the eleven tests were significantly different in favor of males. In no case did girls score higher.

In summary, the internal testing procedures designed by PRONEBI have been able to track the progress of students as the bilingual curriculum was developed. Although many more tests were administered, the ones described above allowed for comparisons across all four language groups.

**Table 8.**  
**PRONEBI Test Scores: 1986-1991**

Test Type Year	Total			Males			Females			Kaqchikel			Q'eqchi'			Mam			K'iche'			Pilot			Control		
	pil	con	S	pil	con	S	pil	con	S	pil	con	S	pil	con	S	pil	con	S	pil	con	S	M	F	S	M	F	S
Math 1986	34	30	s	36	31	s	32	29	n	34	32	n	31	30	n	32	25	s	37	33	s	36	32	s	31	29	n
Math 1987	37	36	n	38	37	n	37	33	s	39	37	n	34	33	n	32	31	n	43	42	n	38	37	n	37	33	s
Est3 1987	42	39	s	42	40	n	43	38	s	48	42	s	40	39	n	38	36	s	42	38	s	42	43	n	40	36	s
Esp3 1987	35	35	n	34	35	n	36	34	n	37	37	n	33	38	s	31	29	n	37	37	n	34	36	s	35	34	n
Oesp 1988	59	62	s	61	63	s	60	60	n	61	63	s	49	51	n	59	64	s	68	65	s	61	58	s	63	60	s
Omaya 1988	77	74	s	77	74	s	78	73	s	74	66	s	82	78	s	75	76	n	76	74	s	77	78	n	74	73	n
Oesp 1989	33	30	s	33	32	n	32	29	s	no data			25	nd		35	31	s	33	30	s	33	32	n	32	29	s
Math 1989	72	69	s	74	70	s	70	68	s	74	66	s	79	82	s	68	65	s	72	69	s	74	70	s	70	68	s
Math 1990	67	67	n	70	70	n	65	65	n	65	65	n	67	66	n	62	67	s	73	69	s	70	65	s	69	65	s
Oesp 1991	86	82	s	88	83	s	83	81	n	88	90	n	80	83	n	83	79	s	89	79	s	88	83	s	83	81	n
Habil 1991	58	51	s	58	52	s	56	48	s	52	45	s	72	70	n	52	39	s	65	56	s	58	56	n	52	48	s

Table 8 legend:

- pil = pilot school
- con = control school
- S = Statistical significance of test score differences
- n = no statistical significance
- s = statistical significance

### The BEST 1991 Achievement Tests Results

The results of the tests given by the BEST Project testing unit at SIMAC are presented in Table 9. The top section shows that the overall scores achieved by a total of 2,705 students distributed across five departments in the following way: Chimaltenango 266, Sololá 342, Totonicapán 635, Huehuetenango 1,145, and Alta Verapaz 317. These samples are sufficiently large to make valid comparisons across all five departments and to a limited extent within each department. The table is organized to show overall scores per grade for PRONEBI and schools using other curricula. Next male and female difference have been tabulated, followed by urban versus rural differences, and then gender differences within each group, regardless of the significance of scores between groups.

The first of the six sections in Table 9 shows the overall test scores by grade. The scores for students using other curricula are significantly higher for first and third grade; the second grade difference is not significant. Also, males, females, urban, and rural students in the other curriculum groups all scored significantly higher than their PRONEBI counterparts. Furthermore, males within each group tended to score higher than females in the same groups. Exceptions can be seen among second and third grade others.

At first sight it would appear that those using other curricula have outscored PRONEBI students in two out of three grade levels. However, an examination of the departmental scores

presents a different picture. Essentially, PRONEBI students in Alta Verapaz and Sololá have outscored the others in both first and second grades. For the third grade there were no comparative data for third graders in Sololá, but in Chimaltenango the PRONEBI students outscored the comparison group. Furthermore, the PRONEBI students in Totonicapán had scores that were less than half those of the control groups, resulting in a very strong influence on the overall scores. The differences between the PRONEBI and control groups in Huehuetenango, although significantly lower, was much less. PRONEBI students in Huehuetenango and Totonicapán scored significantly lower than the others in all three grades, and in Chimaltenango the corresponding scores were lower in grades one and three; there were no comparative data for grade two.

An examination of gender differences shows that for the most part, boys outscored girls in both groups. Notable exceptions are for second grade PRONEBI girls in the overall sample, PRONEBI second grade girls in Huehuetenango, and control group third grade girls in Alta Verapaz and Chimaltenango. In other words, the predominant trend is for boys to outscore girls in both groups.

**Table 9.**  
**National Test Results**  
**A Comparison Between PRONEBI and Other Schools**

	First Grade			Second Grade			Third Grade		
	PRONEBI	Other	s	PRONEBI	Other	s	PRONEBI	Other	s
Combined: AV, Chimaltenango, Huehuetenango, Sololá, and Totonicapán									
Overall Scores	42	52	s	40	43	n	50	63	s
Males	44	57	s	39	43	n	52	62	s
Females	40	50	s	43	43	n	43	65	s
Rural	48	59	s	37	44	s	51	64	s
Urban	40	44	s	43	41	n	50	59	s
PRONEBI Masc	44			39			52		
PRONEBI Fem	40		s	43		s	48		s
Otro Masc		57			43			62	
Otro Fem		50	s		43	n		65	n
Alta Verapaz									
Overall Scores	61	43	s	49	34	s	n.d.		
Males	63	64	n	45	36	s	n.d.		
Females	57	42	s	56	31	s	n.d.		
Rural	61	62	n	n.d.			n.d.		
Urban	n.d.								
PRONEBI Masc	63			46			n.d.		
PRONEBI Fem	55		n	56		n			
Otro Masc		64			36			24	
Otro Fem		42	s		31	n		38	s
Chimaltenango									
Overall Scores	28	30	n	n.d.			32	59	s
Males	31	31	n	n.d.			32	57	s
Females	26	28	n	n.d.			32	63	s
Rural	n.d.			n.d.			32	59	s
Urban	21	30	s	n.d.			n.d.		
PRONEBI Masc	31			32			n.d.		
PRONEBI Fem	26		n	32		n	n.d.		
Otro Masc		31			32			58	
Otro Fem		28	n		32	n		63	s
Huehuetenango									
Overall Scores	42	63	s	47	51	s	51	60	s
Males	43	66	s	43	52	s	54	60	n
Females	41	61	s	51	51	n	48	59	s
Rural	48	61	s	76	52	s	n.d.		
Urban	41	66	s	43	51	s	n.d.		
PRONEBI Masc	43			43			54		
PRONEBI Fem	41		n	51		s	48		s
Otro Masc		66			52			60	
Otro Fem		61	n		51	n		59	n
Sololá									
Overall Scores	67	39	s	29	17	s	75	23	s
Males	65	38	s	27	16	s	78	23	s
Females	70	41	s	30	17	s	72	23	s
Rural	57	39	s	29	17	s	68	23	s
Urban	n.d.			n.d.			n.d.		
PRONEBI Masc	65			27			78		
PRONEBI Fem	70		n	30		n	72		n
Otro Masc		39			16			23	
Otro Fem		41	n		17			23	n
Totonicapán									
Overall Scores	24	74	s	26	59	s	39	86	s
Males	25	76	s	30	59	s	30	87	s
Females	22	70	s	18	59	s	39	86	s
Rural	15	74	s	26	59	s	n.d.		
Urban	n.d.			n.d.					
PRONEBI Masc	25			30			38		
PRONEBI Fem	22		n	18		s	39		n
Otro Masc		76			59			87	
Otro Fem		70	n		58	n		86	n

### Classroom Observation

The evaluation team made classroom observations encompassing the entire school day in six schools for a total of seven classrooms: five PRONEBI and two non-PRONEBI schools. The purpose was to observe teaching methods, student involvement, differential treatment of boys and girls, and the total amount of instructional time. The following table describes the pertinent characteristics of the sample and shows the total instructional time in each classroom.

**Table 10.**  
**Schools Visited: Complete School-day Observations**

School	Dept	Grade	PRONEBI	Language	Instructional Time
A	A.V.	PP	yes	Q'eqchi'	1:55
B	A.V.	pp-3	no	Spanish	2:00
C	A.V.	pp	no	Spanish	2:33
D	A.V.	pp	yes	Poqomchi	2:21
E	Chim.	PP	yes	Kaqchikel	2:25
F	K'iche'	pp	yes	K'iche'	2:46
G	K'iche'	1,3	yes	K'iche'	3:02

All six classes observed in five PRONEBI schools used some Mayan language instruction and PRONEBI texts, with the exception of the Poqomchi school where the teacher had made his own posters and flip-charts. Teaching styles varied considerably, but all the teachers relied primarily on having the students copy material from the blackboard or books, answer questions posed by the teacher, go to the blackboard to write in answers to math problems, or stand in front of the class to answer questions. All the teachers were observed to interact much more with boys than girls, especially when students had to stand in front of the class. When working in small groups the teachers showed somewhat less of a bias toward boys.

As can be seen in the above table, the longest instructional times were observed in the PRONEBI schools. Although the sample is very small, the mean amount of time spent on instructional activities appears to be higher in PRONEBI classrooms, and the students are more involved in classroom activities.

Approximately sixteen hours of classroom observation data were collected as part of the study. While the sample is far too small to be generalizable, the consistency of the results suggest several patterns that may help to explain the findings related to educational quality presented earlier. Observations showed that both PRONEBI and non-PRONEBI classrooms were largely teacher-centered. In only one classroom in the sample were any student-initiated interactions observed, and in that classroom such interactions made up only five percent of all

interactions between teacher and students. Thus, Table 11 , which presents summary data on the observed interactions, includes only teacher-initiated interactions.

Consistent with a teacher-centered approach, the principal activity in each of the observed classrooms was a large group in which the teacher lectured, drilled, and occasionally called children to the blackboard to individually solve problems or assigned seatwork to be carried out by the students and monitored their progress. As shown in Table , in each classroom, teacher-initiated interactions with the group made up at least 55 percent of the total interactions and in five of the seven classrooms, such interactions accounted for 65 percent to 77 percent of all interactions. The predominance of large group activity may be an artifact of the number of preschool classrooms included in the sample. It is reasonable to assume that with children entering school for the first time, teachers would feel obliged to direct much of the classroom activity. However, an examination of the two classrooms that were not exclusively dedicated to preschool children shows patterns similar to those of the preschool settings. The same trends toward large group teacher-initiated activities were found in both PRONEBI and non-PRONEBI classrooms.

When teachers did interact with individual children, there was a tendency to favor boys over girls. In six of the seven cases observed, a greater percentage of individual interactions initiated by the teacher took place with boys. The nature of the interaction also tended to differ for boys and girls. Teachers were more likely to provide coaching and feedback to boys than to girls. The following example, taken from the observations, illustrates these tendencies.

It is oral Mayan class and the teacher is having children of each row repeat the sounds for vowels. The teacher goes to the last row and has the students repeat both lines of the vowels as the previous rows have done.

**9:00 am** She then says a couple of phrases in Quiche then in Spanish, "Ahora un niño va a leer". T points to a boy who comes up and reads the two sets of vowels in Spanish. T "muy bién". She then points to another boy with the pointer and when he comes up T gives him the pointer and he reads the letters. T again says "Muy bién" and another boy runs up as the boy in front goes to his seat. The T gives him the pointer and the boy reads the letters. As he returns to his seat, the T says "Daniel, séntese bién" She then says "Quién más?" Another boy comes up and the T hands him the pointer. He points to the letters and reads, then hands the pointer back without the teacher who says "bién". T walks to the second row and hands the pointer to a boy saying "Tomasito". The boy goes up and reads the letters. T "Muy bién, un aplauso" The children clap T continues, calling "Daniel" and the boy comes up and reads. As he returns to his seat, T calls on another boy by saying "Va a pasar, José". The boy comes up and reads the letters, after which the T says "Más fuerte". She appears to repeat in Quiche when the boy doesn't respond to the Spanish. The boy then repeats louder to which the T says "Un aplauso" and the kids clap. T says "Vamos a cantar Pio Pio". Which she repeats twice then leads the kids in "song

**9:05 am** T picks up some flash cards with the vowels on them and shows it to the 3rd girl in the second row. The girl reads 3 letters then the T turns to a boy and shows him the card. The boy reads the letters and the T says "Muy bién." She then shows the card to two more boys saying "Muy bién" to each after they read. T goes to another girl who reads then the teacher turns to another girl without providing feedback.

Again the nature of the interactions with boys and girls were similar in both PRONEBI and non-PRONEBI schools. As shown in the episode above, in each case boys were provided positive reinforcement whereas girls' responses received no feedback of any kind. If confirmed by wider studies, the greater practice, coaching and feedback provided to boys may help explain the superior results of males on the tests discussed earlier in this section.

As might be expected, there was greater use of native language in the interactions observed in PRONEBI schools. In four of the five PRONEBI schools, interactions in Mayan accounted for 24 percent to 54 percent of all interactions. The fifth PRONEBI school exhibited a pattern similar to that of the non-PRONEBI schools. Interactions in Mayan accounted for

only 9 percent of the interactions in this school and 10 percent of the interactions in each non-PRONEBI school.

Materials were also used to a greater extent in the PRONEBI schools. Materials were observed in use in four of the five PRONEBI classrooms. No materials besides the blackboard and chalk were observed in the fifth PRONEBI school or in the two non-PRONEBI schools. The sequence that follows illustrates the ways in which PRONEBI teachers made use of instructional materials:

- 11:30 am** It is mathematics class. The teacher has two blocks of wood -- one thick and one thin. She says six phrases in Mayan (apparently talking about the qualities of the blocks), then says "La tabla es delgada" which she repeats 5 times. The teacher then says "Xax, delgada" twice and the children repeat after her. She says "Otra vez" then leads the children in two more repetitions of the two words. The teacher then begins working her way down each row and drilling each child on the two words. After completing two rows of children, she raises the thicker block and says "La tabla es gruesa - Pim".
- 11:35 am** She gives a four-phrase explanation in Spanish that makes comparisons between the two blocks then points to the desktop and says "La mesa es también gruesa". She then adds two phrases in Mayan and hands the thicker block to the boy at the head of the third row. She models the phrase "La tabla es gruesa" then the child holding the block repeats the phrase. The teacher repeats this procedure with six children, then picks up the math book and after asking the children "cómo se llama este libro?", she shows them pictures of "libro grueso" and "libro delgado" in the book and continues the drill. **11:40 am**

#### **D. Project Impact on Teachers**

##### **Teacher Training**

The data in Table 12 were collected by the PRONEBI research and evaluation unit from PRONEBI schools. The project paper called for a total of 900 bilingual teacher positions to be created by the MOE during the life of the project. These teachers were to have been assigned at the rate of about 150 each year. Although the MOE has claimed in communications to USAID that these positions have been created and filled, data collected by PRONEBI at PRONEBI schools does not support this.

Table 12. Project Impacts on Teachers at 406 PRONEBI Schools by Language Group								
Language Group	Named to Bilingual Positions		Teachers Language		Trained by Project		Not Trained by Project	
	yes	no	bilingual	mono	bilingual	mono	bilingual	mono
Q'eqchi	182	164	305	50	289	33	16	17
Kaqchikel	56	63	72	28	67	11	5	17
K'iche'	155	234	255	121	212	55	43	66
Mam	141	132	169	104	162	31	5	73
<b>Totals</b>	<b>534</b>	<b>583</b>	<b>801</b>	<b>303</b>	<b>730</b>	<b>130</b>	<b>71</b>	<b>173</b>

Source: *Informe del Estudio Realizado en las 400 Escuelas Completas del PRONEBI, 1991*

It is clear from the data that the MOE has fallen short of this goal by 366 appointments or 40 percent. Even if the requisite number of positions were created by the MOE, they have not been filled. The K'iche' and Q'eqchi' language groups suffered most from the Ministry's failure to reach this target. About 50 percent of the teachers in the other two groups were named to bilingual positions, but only about 40 percent for the K'iche' and Q'eqchi'.

The project has had success in getting more bilingual teachers into schools in PRONEBI areas. The language group affected most was the Q'eqchi' with 86 percent of teachers in its PRONEBI schools being bilingual. The group with the lowest percentage were the Mam with only about 62 percent of bilingual teachers. K'iche' and Kaqchikel each had 68 and 72 percent bilingual teachers respectively. Overall, 73 percent of the teachers in PRONEBI schools are bilingual.

One of the most important targets for the project was its teacher training goal. Training in textbook use, bilingual methodology, and other subjects are essential, if project materials are to be used correctly and effective bilingual education is to go on at the classroom level. The project goal was to train 900 bilingual teachers. Eight hundred and sixty teachers were trained by the project, but some training was misdelivered. As Table 12 makes clear, of the 860 teachers trained only 730 of them were bilingual teachers. Accordingly this goal was 81 percent accomplished by delivering in-service training to 730 bilingual teachers. However, the project did cover 91 percent of eligible participants. With respect to coverage, there is little difference among language groups in the delivery of the training to the correct target population (i.e., bilingual teachers). Training coverage ranged from 83 percent (K'iche') to 97 percent (Mam).

The project also had other training impacts. The project provided higher education for 33 *orientadores* who completed their *licenciaturas*. These people formed the core of the PRONEBI supervision system. The impact of this investment to PRONEBI has been somewhat diminished during the life of the project as the PRONEBI supervision system was merged with the national one. However, a large percentage of the supervisors remain in MOE positions.

In addition, the project provided professionalization training (through the 6th grade) for the original corps of 900 *promotores*. This goal of this training was to convert this committed group of uncertified educators to certified teachers (*profesores*). However, although the training was provided and the group successfully completed the program in 1991, they have not been reclassified as teachers by the MOE. Consequently, this investment is in danger of being lost. Although upgrading the skills of this group is a positive impact of the project, interview data indicate that the frustration and demotivation that has occurred due to the Ministry's slowness to reclassify those who have completed the program, may turn it into a negative one.

Other data found at the PRONEBI training unit indicate that training has been broadly delivered and financed during the life of the project, although the target groups, and the content of seminars and courses of study are not always clear from the records. According to these records, in service training delivered included training 400 Directors of Complete

Bilingual Schools, and short term scholarships for 140 personnel. At the university level, 50 technical courses and 15 *licenciaturas* were provided in Bilingual School Administration, along with 27 *licenciaturas* in various disciplines, and 10 Masters degrees and 5 doctorates.

### **Teacher Interviews**

A total of 45 teachers were interviewed using the open-ended protocol described in the methodology section of this report. This section presents the most important findings from a preliminary content analysis of responses. The large number of varied answers were reduced to more basic and uniform categories for the purpose of tabular display and frequency counts. A complete response matrix is found in Appendix C.

### **Teacher Profile**

Thirty male and 15 female teachers made up the sample. Fifteen of the teachers were working in PRONEBI schools serving Mam-speaking children and a similar number of teachers worked in K'iche' area schools. PRONEBI schools in the Q'eqchi' and Kaqchikel areas were represented by nine and six teachers, respectively. Their average age was 36, with an average of 13 years as educators and an average of six years in the same schools. All but one claimed to be fluent speakers of a Mayan language. In other words, the sample consisted of a mature group with extensive classroom experience and knowledge of the cultural and linguistic environment in which they taught.

### **Instructional Delivery**

The teachers were generally favorable to the PRONEBI program at the classroom level. All of the teachers stated that they used Mayan in the classroom. Estimates of the time spent using Mayan depended on the grade level taught and ranged from four hours, or the total school day, in some classrooms to the hour of instruction devoted to Mayan language in others. Two-thirds of the teachers said that they used the PRONEBI texts and guides as their principal teaching tools. Nine teachers, or 20 percent of the sample, stated that they used the materials in conjunction with other materials or had adjusted the PRONEBI materials to local needs, whereas six teachers did not have the materials or did not use those they had because of insufficient supply. Forty of the 45 teachers had received training from PRONEBI and 37 of these felt that the training had been worthwhile.

Despite their positive response about instructional delivery, the majority of the teachers (35 of 45) felt that there were administrative problems with the bilingual education program. The lack of communication between administrators and teachers, the need for additional teacher training, the lack of sufficient funding, the lack of Mayan-speaking teachers, and the rejection of the program by some local communities were mentioned as problems within the program.

When asked what should be done to improve bilingual education, teachers said that greater regionalization was important, more training was needed, the texts needed to be reorganized, and more didactic materials should be supplied. Some mentioned the necessity to motivate and explain the purpose of bilingual education to community residents in order to

gain more support, and some said that the results of bilingual education should be shown to community leaders and residents. Other suggestions included shortening the lessons, improving the quality of the lessons, and the need to make the lessons and the texts more relevant to the everyday life of the students.

## **E. PRONEBI: Impact on Parents**

### **Introduction**

Parental beliefs, attitudes and economic circumstances are critical as to whether or not children are enrolled in school and eventually complete their primary education. Parents have very definite expectations about the role children should play in the household and what the perceived benefits are if children enroll in school. The purpose of this section is to determine what impact, if any, bilingual education has had on parents. The data used to shed light on these issues come from the 1987 PRONEBI process evaluation, a survey of parental views on the opportunity cost of education performed in 1988, focus groups held with parents in Alta Verapaz and Chimaltenango during the summer of 1992, and a recent survey performed by PRONEBI of parents in Q'eqchi' and Kaqchikel speaking areas. The opportunity cost survey reveals general attitudes toward education, the focus groups focuses more on the value of bilingual education, and the PRONEBI survey asked questions specifically relating to bilingual education. These findings will be presented moving from general attitudes to more specific views about PRONEBI and the value of bilingual education.

### **The Process Evaluation**

The process evaluation found that the 34 PRONEBI parents interviewed were generally favorable toward education and toward the use of Spanish and Mayan in the instructional process. The most important skills to be learned in school were felt to be reading and writing in Spanish (Chesterfield and Seelye; 1987).

### **The Opportunity Cost Survey**

The opportunity cost study included a sample of communities with PRONEBI schools. Although a majority of all respondents (73 percent) concurred with the need for native language use in the classroom, PRONEBI parents in small communities were generally the most positive toward dual language instruction. Respondents, however, criticized curriculum content in all schools 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 conversational skills in the early grades rather than repetitive reading and writing exercises (Richards; 1988).

One of the most important findings was that few parents perceived the benefits of education and felt they had a very slim chance of getting a job based on their educational achievement, claiming that agricultural work and domestic occupations do not require a primary school education. Furthermore, one-fifth 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.

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 educations for all Guatemalans.

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 the comparative size of household living 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.

Parents, therefore, find themselves in the middle ground between a legal requirement to send their children to a school which they feel provide 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.

In summary, the opportunity cost study can be seen as a baseline of generally negative views toward primary education. However, most respondents wanted their children to learn relevant Spanish language skills and were not adverse to bilingual instruction to reach this objective. The goal of educational projects such as PRONEBI would be to change these attitudes in ways that can be observed with both qualitative and quantitative methods to demonstrate a valid connection between project activities and a positive impact on parents.

#### **Parent Focus Groups in Alta Verapaz and Chimaltenango**

When asked about the utility of getting an education, the most common response was that children should learn how to read and write. Most of the parents also said that it was extremely important for their children to speak Spanish in order to confront problems outside their communities, and some parents went further by saying that literacy and a good knowledge of Spanish would prevent them from being taken advantage of, especially when it came to legal contracts, business transactions, and land tenure disputes. Others said that literate children can help their parents and prevent them from having serious problems with

outsiders. Some parents said it was very important to speak Spanish well in order to be taken seriously, meaning that those who spoke broken Spanish would be subject to ridicule or be ignored. Others went on to say that an education was important for the future, was necessary for getting a good job, and that children who were educated would also make sure that their children went to school.

The most frequent response to the question about why children are sent to school was that parents send their children to learn how to read, write, speak Spanish, and to learn manual trades, e.g. sewing, cooking, woodworking, etc. Some parents said that there were many things that they themselves do not know, and they do not want their children to have the same handicaps. A minority of parents said that they do not send their children to school because the school is not very good, the teacher is often absent, and that the children do not learn anything; it is a waste of their children's time when they could be doing useful work or be out earning some money. A few parents said that in the past the teachers were better trained and could teach better than they do today, and some also said that the expense of sending children to school was not worth it because they were not taught very well.

An overwhelming majority of parents said that both sexes should learn the same things. A few said boys should learn more about things that would help them work in agriculture and that girls should learn about subjects that would be useful in the household.

There was a virtual consensus that first graders should learn to read, write and speak Spanish. Some parents expressed a real concern over the fact that their children were not learning these skills fast enough. Very few mentioned that the child was not doing the work or did not want to learn, but instead the more prevalent view was that the children were not adequately taught.

Most parents felt that it is very important for their children to finish primary school and, if possible, continue on to secondary school and beyond. However, the vast majority said that financial limitations prevented them from keeping their children in school beyond the sixth grade, and many said they could not afford to have their children finish their primary education but have had to take them out of school.

Parents generally felt that when a girl finishes grammar school, she should be able to continue her studies and learn some professional skills, e.g. accounting, teaching, etc. Again, many said that money was the principal obstacle but having finished grammar school puts girls in a better position to work in the household and to find employment outside the home. Many parents kept emphasizing that if a girl finished sixth grade, she should, whenever possible, try to go on. In other words, completing primary school was not seen as an end but as an opportunity for continued education. A number of parents said there should be special scholarships for girls who had finished grammar school and wanted to keep going to school. A few parents said that many girls simply did not want to finish but would rather get married and raise a family.

No parents mentioned any particular problems in getting children to do their household chores while in school. Some said that their children would have to do some work in the home before school and after coming home, especially during the time when boys need to

help their fathers with agricultural work. Regarding girls, the general consensus was that their chore schedule could be adjusted to the time she spent in school and that going to school was important. No one said anything about keeping children home because they had to work.

About half the parents felt that children needed to finish grammar school in order to speak and write Spanish well, and that anything less would leave them with incomplete knowledge and skills. A couple respondents said that four years was enough and that those who left after two years did so because they were not able to learn any Spanish.

It was generally felt that children needed time to study at home in order to make sure that they were promoted and that parents did not lose the monetary investment they have made. Some said it was the children who did nothing at home who were the ones who most often repeated grades or simply dropped out of school. One parent said that teachers should let students take books home, so they could practice reading and that way they would learn a lot faster.

When asked to discuss why so many children repeat grades, there was an even split between those who said children had to repeat grades because the child simply could not learn fast enough, and those who said that repetition was the result of poor teachers doing an inadequate job. A number of parents also said that when the child loses so does the parent because of the expenses incurred for books, supplies, transportation, and fees, etc. A few parents also pointed out that children were not promoted because they did not have enough to eat and that they could not learn when they are hungry.

Concerning bilingual education, two thirds of the parents felt that it was best to teach in both languages and that this was the best and quickest way to learn how to read, write and speak in Spanish. If the child had problems understanding something, the teacher could explain in the native language. The rest of the parents felt that the classes should only be taught in Spanish because children speak their native language exclusively at home and with their friends and classmates. A few parents went on to say that speaking only Spanish in school would facilitate more rapid learning to speak, read and write Spanish.

Almost all the parents said they never talked with the teacher or only did so very infrequently. Some said they simply did not have the time, while a few others said they did not want to criticize how the teachers were doing their job; if parents came to the school, it would be seen by the teachers as checking up on them. Most expressed the feeling that if called in for a meeting by the teacher, they would most certainly come. The problem, they said, was that the teachers never or hardly ever asked to talk with them. A number of group participants said that many parents simply do not care about the education of their children and whether or not they go to school on a regular basis, or even enroll.

Parents from three communities said there was no parents' committee, two said it did exist but that the meetings were very infrequent, and that some years there had been no meetings at all. One group of parents pointed out that when the teacher simply asked the children to tell their parent to come to a meeting, they would not go because this was not the proper way to be notified of a meeting; if formal notes were sent, they would surely attend.

Overall, the groups felt that girls do want to go to school as much as boys but with some reservations and qualifications. They said that some girls, especially when they get older, just want to learn how to read and write, and after that they prefer to stay home and help their parents. The members of one group felt that many girls want to go to school by age five, but their parents will not let them go until they are at least 6 or 7, or even older. A sizable number of parents indicated that many young girls are afraid to go to school because the teacher uses physical punishment; this view was discussed in three of the groups. Parents in another group said that girls often do not go to school because they are sick much of the time; there was no mention of any particular disease(s).

In one group, most felt that under the age of 6 and after 10 was the most problematic time for girls to attend school on a regular basis. Very young children just want to play and children older than 10 must help their parents with household chores, marketing, and take care of younger siblings. Another group felt that older girls feel ashamed being in school and do not want to stay. Another group felt the same way by saying that girls between the ages of 10 and 15 do not want to stay in school but want to work. One respondent insisted that thanks to MOE girls could go to school at any age to learn both Spanish and Q'eqchi; another said that it was not good to have older girls in the same class with younger ones because they would hit the little ones.

There was a fairly general consensus among all the groups that by the time girls were 13 to 14 years old, they wanted to leave because they want to work with their mothers in the field and in the home where they can learn to cook and do other useful things. Many mentioned that older girls, especially those in the lower grades, feel very ashamed and want very badly to leave; most want to work and make some money for their families. Some also said that by the time girls reach 13, they want to get married or stay home and help their mothers. One group of parents felt that many girls are taken out of school after the age of ten because they are simply not learning very much. Otherwise, most of the responses revolved around the need to work, help in the home, and to get married and have children; the most common age range mentioned was 12 to 15.

When asked about the possibility of starting pre-primary at age five, many felt that this was much too early for girls to begin school because they would be mistreated by the teacher and the other children. Other groups felt that girls under six were afraid to go to school, and besides that, most schools would not admit children under the age of six. One group felt exactly the opposite; it was better to send younger girls because they were not ashamed of anything and at this age they would learn more faster than their older classmates. A member of this group said that she sent her four year old daughter to audit pre-primary, but as it turned out, she participated, passed all the requirements, and was promoted. As far as this group was concerned, this was proof enough that children can and should enroll in school at an earlier age.

Most felt that both sexes have the same educational necessities and rights, and when it comes time to go out and look for work, both sexes must know how to read and write; those who cannot will be at a disadvantage. A few members of another group felt it was better for a boy to study because the girl will eventually get married, but the rest countered by saying that both should have equal opportunities to study.

In response to the last question about what is needed in the school to make parents more interested in sending their children, most of the groups overwhelmingly agreed that they needed good responsible teachers and adequate supplies, and that under such conditions children will be more content and learn more rapidly. Furthermore, it is very important that teachers come to school on time, give fewer holidays, and that they maintain better discipline in the classroom. Parents also expressed the need for scholarships because many could not pay any of the educational expenses for supplies, fees, etc. Others expressed the need for electricity and secondary schools, so their children could continue their education without having to go to another community far away. Yet others said they would like the school to have sewing machines and typewriters for children to learn some useful skills in addition to reading and writing, skills that can generate an income. Others mentioned the need for better athletic facilities such as a basketball court because the soccer field is only used by the boys, and girls would very much like to play basketball.

#### **PRONEBI: 1992 Parent Survey In Kaqchikel and Q'eqchi' Language Areas**

This survey was administered to 1,025 households by the PRONEBI Evaluation and Investigation Unit. The field work was done during November and December 1992 and the data were being analyzed at the time of this evaluation. Only the data from two linguistic areas had been entered, and a copy of the data were obtained by the evaluation team for independent analysis. The interviews were done exclusively in communities with complete bilingual schools, and no control interviews were done in communities with no bilingual schools. The following is a summary of the most germane findings.

When asked whether or not they knew if there was a bilingual school in their community, three-quarters responded positively, and an equal number said that the teacher could speak the local mayan language. Over 90 percent of the parents felt that bilingual education was beneficial for their children, and about 80 percent claimed to personally know the bilingual teacher. However, only half the parents said they conversed with the teacher in a Mayan language.

Some 94 percent of the parents felt that bilingual education gives improved opportunities for the development of the indigenous population, and there was a near unanimous positive agreement that children should learn how to read and write in both Spanish and mayan languages. When asked about their feelings of satisfaction about the work being done by the bilingual teacher or promoter, 86 percent were satisfied, and there was virtually unanimous agreement that what children learn in the bilingual school is useful.

Again, a large majority (86 percent) of the parents said they preferred having a bilingual teacher for their children, and the same number felt that bilingual education provides better opportunities for their children. But a surprising 36 percent of the respondents felt that the classes should only be given in Spanish; in contrast, 88 percent felt that bilingual education should be used in other primary grades, as well.

When asked to choose between a bilingual and Spanish only school if the community had both, 80 percent said they would send their children to the bilingual school. When asked

if they were in agreement with the school teaching a skill or a trade, nearly 100 percent said yes, and 96 percent said they had decided to help their children complete primary school.

Almost 80 percent of the parents felt that parents support the education of boys more than girls, but when asked if they would like to see their daughters complete primary school, 95 percent said they would; 92 percent said they would provide support.

If the PRONEBI data are viewed as the most current attitudes of parents toward bilingual education, there appears to be a trend in the direction of increasingly positive views of instruction in two languages. However, one of parents primary concerns is that their children gain Spanish language skills. Another important theme reflected in all of the studies of parent attitudes is the need for relevancy of instruction to the daily life of the community.

## **VI. CONCLUSIONS AND RECOMMENDATIONS**

### **A. Administration Strengthening**

#### **Administrative Governance**

##### **Conclusion**

The project gave PRONEBI a position of political leadership. This has been largely lost. PRONEBI's governance structure lost considerable power over the life of the project. Though it has been successful in producing legal support for bilingual education, most notably the Constitutional Amendment of 1985, it has not been as successful in gaining power and authority in the MOE bureaucracy. This is evidenced by the loss of its supervision system and its continued difficulties with the personnel office of the MOE (e.g. reclassification, contracting). The impact of this is a demoralization of what was a reputedly well motivated staff, evidenced by the turnover it has experienced at both the Central and Regional level.

PRONEBI administration needs improved leadership and more sophisticated political tactics. The organization needs to more effectively make their case in the MOE. USAID can help by engaging in policy dialog with MOE about guaranteeing a PRONEBI presence at the Regional level. This policy dialog should include the development of MIS support for a control system for bilingual education positions. These positions were PRONEBI's original source of political clout.

PRONEBI's structure has been unstable during the life of the project. This early instability was due to reorganization, and reprogramming of funds that is to be expected in a new project. Political instability has also been a factor. PRONEBI lost its supervision system in 1989 and has not yet been incorporated structurally into the Regionalization program. This has led to a vague, ill defined, and still changing system of coordinators at the Regional level.

This transition is continuing today. Presently, a complete structure has been developed for the PRONEBI regional offices and its integration into the Ministry under the General Directorate of Education. However, this structure has been included in the new Reglamento de la Ley de Educación as part of the new MOE legal structure. It is unlikely that this regulation will pass, because there is a general consensus that it is riddled with unconstitutional provisions. It also has been unsigned for over a year and this fact may raise a challenge on the grounds that it has expired. So once again PRONEBI's structure is in doubt.

#### **Recommendations**

PRONEBI should be given assistance in organizational design and development. PRONEBI must have a workable structure that does not change frequently, but that can absorb and withstand change. The organizational design assistance will aid PRONEBI and the General Directorate of Education to design a working structure that suits PRONEBI's mission, objectives, and needs and that is flexible enough to be adapted as changes occur in MOE. Organizational development would help set up a formal feedback system that would help to support the structure. It would also reduce internal conflict when change is necessary and increase commitment to the structure.

### **Conclusion**

PRONEBI governance is highly consultative. This type of decision making increases commitment, but it costs time in decision making. However, many of those interviewed commented that all decisions were taken in committee. Those decisions that are routine need to be routinized in order to gain efficiency and the benefits that hierarchy and specialization can bring.

### **Recommendations**

PRONEBI top leadership needs training in decision making if any structure is to work. They need to be able to differentiate between those decisions that may be taken in groups (i.e., with a commitment or a quality requirement) and those that must be taken individually (i.e., well defined problems or time constraints). This type of training should be part of a general leadership and administration course.

### **Administrative Infrastructure**

#### **Conclusion**

With the exception of one, the systems and manuals that were developed under the aegis of the project are not being used. These manuals represent wasted costs in solving the problems that PRONEBI has and still faces in operating effectively and efficiently. Most of what is in the manuals is of sufficient quality to at least provide a basis for administrative procedures, but they may not be appropriate to changes in PRONEBI administrative structure.

#### **Recommendations**

The extant manuals should be reviewed by a management expert for the suitability of the process, procedures, and forms that they contain. Recommendations for implementing whole systems or using parts of the systems and manuals should be developed by the expert together with PRONEBI administrative personnel. The investment that the administrative tools constitute should not be wasted.

On the basis of the Organization Manual, an updated and revised manual should be prepared after any reorganization. This manual should include new job descriptions for

PRONEBI personnel. It should be prepared using word processing support and updated annually. Training will need to be provided in the use of new systems.

### **Conclusion**

PRONEBI's present physical plant is not conducive to efficient work. The impacts of this situation are felt in absenteeism, reduced effectiveness, and inefficient communication. Yet, it is well located and reasonably priced. PRONEBI cannot afford to give up the building because of this.

### **Recommendations**

PRONEBI should develop some stop gap measures to improve the situation for the moment. Air purifiers may help eliminate the health effects of a building open to pollution. The problem of climbing stairs and shouting down stairwells can be solved by installing an inexpensive intercom system in the management offices. Simple devices (if used) like white boards can be used to track personnel so that they can be easily located. The possibility of redesigning the distribution of offices and personnel should be explored using expert (architectural) help. In addition, it is recommended that the use of floor space be designed, and that if necessary new furniture be purchased to take advantage of design options.

In the long run, PRONEBI should be involved in the planning of the new MOE office to be financed by the World Bank. Certain decisions in this regard will need to be made. For example, it is not clear that PRONEBI administration and the technical offices need to be in the same building, but this needs to be settled ahead of time. If PRONEBI is not involved in this process, it will lose out in the allocation of space. In order to preempt this eventuality, PRONEBI should form a space allocation group to participate in the building planning and to steer the implementation of the measures discussed in the paragraph above. This group should work with all PRONEBI personnel, but would submit proposals to the Director for approval.

### **Conclusion**

PRONEBI does not have any centralized control of its business, but rather compiles ad hoc reports as they are required by the various institutions to which it responds. It does not have a central budget that controls and accounts for all funds whether grants, loans, or national funds. Because material items are tracked according to the type of purchase, there are not common units of analysis. This means that the project cannot compare its accomplishments over time. Because of the different funding sources, expenditures are disjointed and difficult to track. Costs and outputs can only be estimated and then not without great effort. Nothing is automated. Though PRONEBI looks to be an effective program, almost nothing can be said about whether it is cost effective because it is so difficult to get information relating inputs to outputs.

### **Recommendation**

PRONEBI needs to develop an automated centralized budget. This could be done simply by using a spreadsheet template, or by purchasing off the shelf software. This would allow speedy answers to the questions of how much was spent, when, and for what? These questions cannot be answered easily now. This would provide timely reports and effective control of inputs into PRONEBI's operation.

If this is done, then outputs (e.g., books, desks,) can also be tracked using simple automated mechanisms like spreadsheets. PRONEBI must have assistance in designing this system, and some training in it once it is designed, but equipment needs should not be costly. By combining this type of information (inputs and outputs) in a report format, PRONEBI can track its own cost effectiveness over time. This will lead to more efficient management.

### **Conclusion**

PRONEBI has no formal management planning and evaluation process besides meetings. The annual plans do not set measurable objectives for individual employees. The evaluations of these plans do not remedy this lack nor specify other actions. The plans have inconsistent formats. Managers are not required to set specific feasible objectives for their employees, nor are they required to provide individual feedback on how well they are doing. This lack of procedure does not allow for the determination of employee training needs, the recognition of employee achievement, or the development of employees. Both goal accomplishment and motivation suffer.

### **Recommendations**

A simple, bottom up, planning process should be developed in PRONEBI. This process would include the setting of measurable objectives for units and the means for determining their accomplishment. This process would take advantage of the in place consultative structure. Simple forms and examples of well filled out forms should be provided as part of a package. The evaluation, feedback, and correction procedures to be used should also be part of this proposed system. Although planning might still take place only once a year, evaluation of the plans should be done more frequently. The evaluations themselves should be discussed with units several times a year. Training in this system should be provided.

With a sound basis for unit objectives and their evaluation, a capacity should be developed in PRONEBI to set objectives for individual employees. Managers should be given the skills to set objectives with employees, give them feed back, and to help them with their development. Simple systems like a One Minute Manager or a scaled down MBO system might be used. Without individual objectives, there is no individual responsibility.

### **Administrative Process**

### **Conclusion**

Due to turnover, most PRONEBI positions are not occupied by trained and experienced people. Nearly all investments made in personnel in the past have been lost. In this area, PRONEBI is nearly starting from the beginning.

### **Recommendations**

After any reorganization, a training needs assessment of PRONEBI personnel should be conducted and a training plan developed. This would include skills training for clerical personnel, technical training for technical personnel, and management training for new administrators. This would be in addition to any training in new systems as suggested previously.

The contracting process must be improved. Time limits should be set for the turn around time on contracts, and these should be strictly followed. Plans for absorption of contract personnel by MOE must be developed immediately and should be closely monitored by SAID.

### **Conclusion**

PRONEBI is not able to take delivery, distribute, and account for massive quantities of commodities. Its system for receiving and inventory is manual and outdated. It has little capacity for controlling delivery. If PRONEBI will continue to distribute large quantities of commodities under regionalization, systems must be improved.

### **Recommendations**

The receiving system needs to be redesigned as does the inventory system. PRONEBI will need help automating a redesigned system and tying it to the other systems outlined above. New storage options need to be found at both the Central and local levels. Massive text distribution should not be contemplated until this is done. The present system is ad hoc and only functions well when pressure is put on or when it is given assistance by donor agencies in procurement and by vendors in warehousing and distribution.

### **Conclusion**

PRONEBI does not have well designed and defined administrative systems at the central level. It does not appear to be able to quickly and accurately respond to inquiries with information at hand. Structure, function, roles, policies, and procedures are either ad hoc or informal. At the same time, its local structures (regional, departmental) are not well defined and lines of communication between the two levels are fuzzy. The weaknesses in administrative governance, infrastructure, and process discussed in the administrative analysis will result in the same sort of loose administration at the lower levels. Nothing is gained from the decentralization of a weak system, but a weaker system.

### **Recommendations**

The PRONEBI central structure and that of the local levels should be defined and strengthened as should the links between them. Functions for the coordinators at the local level need to be defined and their duties and responsibilities and lines of communication need to be clarified. Technical assistance and training must be provided to make the decentralization process work. Also, commodities should be provided to support communication. For example, fax machines might be used to link offices at the different levels.

Above all, the decentralization process should go slowly. It is recommended that any proposed local administrative structures be piloted, tested, and evaluated before large scale decentralization takes place. Appropriate technical assistance must be provided for this process. Administrative training should also be provided for personnel such as the coordinators at the local levels.

## **B. Financial Analysis**

### **Financial Support**

### **Conclusions**

Available statistics do not indicate that significant changes took place in the relative amount of expenditures or investment in primary education in Guatemala during the decade of the 1980s. The share of education in the GOG budget and the GDP of Guatemala did not vary significantly and tended to remain at relatively low levels compared with other countries in Central America. A different trend, however, is found in the introduction in 1985 of pre-primary and primary bilingual programs in some 400 schools through the second grade and on a partial basis in another 400. Best estimates indicate that expenditures for this program (PRONEBI) rose from virtually nothing in 1984 to over 7 percent of all primary education expenditures in 1991.

The program was a difficult one for the GOG to introduce due to the economic and financial turmoil of the 1980s highlighted by the precipitous depreciation of the Quetzal. Nonetheless, the program can be said to have taken root in the budgeting process of the MOE and has become an accepted part of the educational scene.

### **Recommendation**

AID and MOE should continue to provide financial support to the bilingual education program in order to build on the gains obtained under the project. A plan should be developed whereby MOE gradually absorbs the operating and personnel costs currently financed by AID.

## **Budgeting Procedures**

### **Conclusions**

The detailed six year budget that accompanied the project paper did not relate to specific project activities but rather to various project components. The expenditures were broken down into annual totals but these were otherwise not related to specific project accomplishments. After the Quetzal devaluation in 1985 no new long run budget was devised even though it was evident the original project budget would no longer serve any useful purpose. Thereafter, only annual budgets of AID provided funds were prepared. No annual budget was created for GOG counterpart funds which originally were to represent 67 percent of the project's financial resources.

There was no financial performance budget by which AID could measure progress toward project goals on a current basis. There was little if any narrative reporting which indicated how the bilingual project was doing. While AID with its own reporting and expenditure controls could insure it was not overspending, it could not render reasonable accurate judgments on the progress of the project as a whole. Specifically, AID could not determine at any given time whether the GOG was keeping up with its projected obligations.

### **Recommendations**

When financial support for a single project such as PRONEM comes from two diverse sources, special care must be taken to relate the flow of financial resources to the project to the attainment of specific activity results. If one party to such an agreement fails to meet its obligations, the whole project may be affected in ways that cannot later be remedied or compensated for.

The PRONEBI project is a classic example of the type of project that would have benefited from control by a management budget. Such a budget would have related the expenditure of project funds--from whatever source-- to the achievement of project goals within specific time frames (e.g., quarterly or semi-annually). Such budgeting would have enabled AID or the GOG to detect shortfalls in the delivery of resources to the project in a timely fashion.

The management budget should focus on those activities that utilize the greatest amount of project resources. This budget may differ from the budgets required by governments to control and record the expenditure of these funds, but it serves a different purpose--namely, what progress is being made towards project objectives.

Written reports on progress of the project activities are likewise desirable. Such reports should be consistent with the progress shown in financial reporting or should explain the shortfalls or successes of the project.

When changes in the national financial system, such as the devaluation of the Quetzal, occur revised long-run budgets must be developed. One year budgets do not in themselves

tell a monitor where the program is. Such budgets offer the chance to make "course corrections" and to indicate exactly where the program is in relation to final objectives.

### **Cost Recovery**

### **Conclusion**

Sustainability through cost recovery mechanisms was not envisioned in the design of the project. Recurrent costs of the PRONEBI program, however, make consideration of alternative financing an important issue for PRONEBI. The educational decentralization project which is being implemented on a pilot basis in at least one of PRONEBI's main language areas offers an opportunity to examine the effects of local control of education among the PRONEBI target populations.

### **Recommendation**

MOE and AID should work with PRONEBI to include PRONEBI schools in the educational decentralization project. A monitoring system should be set up to evaluate the effects of local control of schools on cost recovery among the PRONEBI target populations.

## **C. Instructional Materials**

### **Revision of Texts and Guides**

### **Conclusions**

The PRONEBI texts, guides, and ancillary instructional materials developed under the project are valuable instructional tools, which in their revised form are appropriate for children in communities with different levels of bilingualism. In order to maximize the effectiveness of the texts, greater specification of grade level expectations that lead from basic cognitive skills to higher order thinking skills is needed.

Greater specification of activities that teachers can use to encourage children to construct meaning through interaction with materials, peers and adults is also needed. The thematic unit approach, within a whole language theoretical paradigm, that is being developed by the curriculum team with technical assistance from the BEST project, is a mechanism that can be used to develop such activities.

### **Recommendations**

Emphasis should not be placed on further revisions of the texts and teachers' guides. Rather, short-term technical assistance in the form of a curriculum specialist should be sought to complement the expertise of the BEST project bilingual education specialists. This individual should assist the curriculum teams to develop detailed grade-level expectations and accompanying scope and sequence charts for each subject.

Once such specifications are developed, the curriculum team should analyze the texts to determine how they can best be used to foster the identified skills. Culturally appropriate thematic units, already in development, should be continued in order to provide teachers with a variety of activities that can be used to allow children to develop language and other subject matter skills within an interactive context.

## **PRONEBI Bilingual Model**

### **Conclusion**

PRONEBI has developed an appropriate model that is bilingual/bicultural and emphasizes maintenance of the mother tongue and the development of maternal language literacy together with the development of Spanish speaking and writing skills. This approach is consistent with current Guatemalan public policy which supports the country's multiculturalism. It also will meet the long-term teacher manpower needs to further bilingual/bicultural educational objectives in Guatemala, and is consistent with recent research on transitional bilingual programs for language minority children that suggests that such programs may develop deficient bilinguals.

### **Recommendation**

PRONEBI should develop monitoring mechanisms that would focus on the career choices of sixth grade graduates of the program. This would allow a determination of bilingual/biliterate students opting for the primary teaching profession and the potential of the system for meeting the need for trained bilingual teachers as the program expands.

## **Teacher Training in Use of the Instructional Materials**

### **Conclusions**

The majority of teachers in the PRONEBI program tend to view the texts and guides positively. Teachers generally relate difficulties with the materials to a lack of sufficient training with the materials. Even those teachers who have received training feel that additional training is needed to use the instructional materials effectively.

The importance of creating activities that allow children to develop language skills and learn subject matter in appropriate contexts, mentioned previously, will require training that helps teachers to use the instructional materials to provide a variety of learning opportunities to students. This training must acquaint teachers with grade-level expectations and strategies for creating learning opportunities that develop higher level skills among students.

### **Recommendation**

Training built around activities related to thematic units should be provided to teachers. In developing a training design, the PRONEBI training unit should examine

successful training models such as that of the Nueva Escuela Unitaria for its relevance to bilingual education delivery.

#### **D. Impact on Primary and Secondary Beneficiaries**

##### **Student Impact: Efficiency**

##### **Conclusions**

PRONEBI served a significant proportion of the target population of indigenous rural children, identified in the project paper. Over the life of the project, between 15 and 16 percent of the primary school aged universe of indigenous children and 30 to 35 percent of indigenous students enrolled in primary school have been served by the project.

Both the best available national comparisons and PRONEBI's own data show that the Rural Primary Education Efficiency project had a positive impact on educational efficiency among the target population. PRONEBI's promotion and dropout rates are roughly equal to the rates of non-PRONEBI schools in the same rural municipalities. However, within the PRONEBI schools there is a steady improvement on all indicators at all grade levels over the life of the project. The available data also suggest that the bilingual education program has had an impact on keeping girls in school. Although PRONEBI female promotion rates are generally lower, their dropout rates have shown impressive decreases.

##### **Recommendations**

The positive trends in keeping girls in school, combined with the general lag in girls' promotion and repetition rates, when compared to males, suggest that increased emphasis should be given to girls' academic achievement. PRONEBI should coordinate closely with the Girls in Development (GID) program of the BEST project to develop strategies to encourage teachers to promote the academic performance of girls.

If PRONEBI continues to collect enrollment, promotion, repetition, and dropout data, their activities should be coordinated with the MOE Computer Center in order to have data on both PRONEBI and comparable non-PRONEBI groups in every area where PRONEBI operates. Another possibility would be for PRONEBI to rely completely on MOE Computer Center for such data. This would eliminate all possibilities of bias, while at the same time providing comparison groups to monitor PRONEBI's relative efficiency.

##### **Student Impact: Quality**

##### **Conclusions**

The Rural Primary Education Improvement project has had a substantial impact on educational quality. When compared to an appropriate control group, PRONEBI students consistently outscore non-PRONEBI students on a variety of achievement measures. Both

girls and boys in PRONEBI schools generally outperform their gender counterparts in comparison schools. Boys in both groups, however, tend to do better than girls on most measures.

The generally better performance of PRONEBI students on the available measures of Spanish, especially in the last few years of the project, suggest that there is no "price to be paid" for participation in a bilingual education program. Rather, the overall results support the argument for learning subject matter in one's mother tongue while acquiring second language proficiency.

The results of the achievement tests administered by PRONEBI clearly show very significant learning gains by PRONEBI students in comparison to the control groups. The problem, however, is that the test design and administration over the life of the project has not been consistent. In other words, there are no comparable data on math, Spanish, and Mayan achievement scores for every year of the project to facilitate bona fide trend analyses.

The data analysis performed by PRONEBI's Computer Center has been primarily limited to descriptive statistics. The principal source of this limitation is that most of the data sets have been kept in discrete SPSS systems files. Discrete files do not allow for combining data from experimental and control groups to facilitate the use of more sophisticated inferential statistical procedures. Such procedures would include Oneway, ANOVA, paired and independent t-tests, and multiple regression.

Greater variation was found in the national achievement test comparisons. This may be a result of the test properties and administration procedures. The tests developed for the BEST project were done for the express purpose of identifying achievement related to specific parts of the sequenced SIMAC curriculum. The questions were phrased in terms of the content of this curriculum and likely placed students with no exposure at a very definite disadvantage in terms of achievement levels. Furthermore, it appears that the manner in which the tests were administered differed from school to school as well as between grade levels. For example, the questions were read to first graders while in the second and third grade the students read the questions themselves. This pattern may have varied considerably, as well. In view of such limitations, it is quite astounding that the PRONEBI students did so well, overall. It is even more surprising that they outscored the others by a very wide margin in Alta Verapaz and Sololá.

### **Recommendations**

As with educational efficiency, the lag of girls when compared to boys requires that PRONEBI, and Guatemalan primary education in general, make a concentrated effort to assure that instructional materials and teacher training provide teachers with the tools and attitudes to help them make successful academic progress in school. As mentioned previously, PRONEBI should investigate the possibility of using the Girls in Development program as a resource in such efforts.

The staff of PRONEBI's Computer Center should be increased, and the current director should receive additional training in statistical analysis and the use of updated statistical

software. For example, the Center is currently using a version of SPSSPC+ dating back to 1986, running on XT type personal computers with very limited RAM and slow hard disks.

The software should be updated to run SPSS under Windows on machines with at least a 386 33 mhz pc with 16 MB of RAM. A temporary solution would be for the Computer Center to share the more updated computer hardware being used by the Sociolinguistic Mapping Unit located at PRONEBI.

The entire staff, including both qualitative and quantitative, should receive additional training in test design, administration, analytical procedures, and interpretation. Such training is crucial for the institutionalization of skills necessary for the implementation of appropriate testing and observational skills.

The PRONEBI research staff should also receive training in the integration of qualitative and quantitative methods to enable the proper integration of these methodologies.

### **Teacher Impact**

#### **Conclusions**

The impact of teacher training is difficult to measure due to poor training records kept by PRONEBI. Like other record keeping systems at PRONEBI, the teacher training records are inadequate. From these records it is difficult to tell what the content has been of particular courses of higher study and who has received what sort of in-service training. Follow up of training is not pursued.

Project provided teacher training has reached its coverage goals, but is not sufficient. Given the expressed need by teachers for more training, it is clear that training has not met needs. In addition, the training given needs to cover more teachers and to be better refined. It needs to be better designed to support the use of the texts and to take community support into account.

Unfulfilled counterpart commitment reduced project impact on teaching. MOE's commitment to create bilingual positions and name bilingual teachers to them has not been completely fulfilled. Positions were not created in a timely fashion, and when created, they have not been filled at the planned time. This means that assumptions about the sequencing of project interventions have not held true. Project effects are based on assumptions about a sequence of events. For example a specified number of fully bilingual and trained teachers are to use materials developed by the project. If this sequence occurs it will provide an expected level of coverage for the target population. If materials or teachers are not available at the correct time the impact of the one input provided is reduced.

### **Recommendations**

PRONEBI should be given assistance to design a training data base and follow up system. Careful records of training need to be kept on an individual basis to determine what personnel have what skills. Those trained need to be followed up in the system to see what is useful over time. Follow up can also provide a support system that will allow training participants to share ideas and solve problems together.

Training targets should be increased, and first training methodology should be piloted before large-scale training is undertaken. Training should include how to use low cost materials in the community in bilingual education. Parents should be invited to training sessions, and, if possible, some sessions should be held at night or in the afternoons when parents might attend. The successes of bilingual education can be used in the training to publicize the program with parents and in communities.

MOE should study ways to fulfill its hiring commitments for bilingual teachers. If more resources are provided to PRONEBI in the future, they should be staged and should only be provided after MOE commitments are met. The provision of agreed upon positions for bilingual teachers should be confirmed independently from the reports of the MOE Personnel Office, through the use of systematic sampling techniques.

### **Parent Impact**

### **Conclusions**

Depending on the source of data and the methods of data collection, a wide variation of responses regarding bilingual education can be collected. The focus groups in Alta Verapaz and Chimaltenango indicate that parents want their children to learn how to speak, read, and write Spanish as rapidly as possible. When learning does not meet their expectation they will for the most part blame the educational system and on occasion their children. Bilingual education is generally viewed favorably if it helps meet these goals.

Since both the efficiency and quality data show very definite gains for students in bilingual schools, parents' goals are, in part, being met. For example, promotion rates are up and repetition and dropout rates have decreased. Furthermore, students in PRONEBI schools have shown gains in Spanish, as well as math. In other words, parents may not be aware of many of the verified benefits provided by bilingual education.

The PRONEBI survey done in communities with bilingual schools shows extremely positive attitudes toward bilingual education, but the design of the study and the wording of the questions may have introduced a certain amount of bias. Furthermore, no parents in communities without bilingual schools were interviewed.

Clearly, bilingual education has had a positive impact on parents in many communities, but at present, there is no way to estimate the magnitude or extent of this impact. The available data suggest a considerable amount of variation from community to community and between language groups. There are also differences among teachers and their relative pedagogical skills, and the wide variation in teacher-parent involvement and

frequency of communication have also affected the impact of bilingual education on indigenous parents.

### **Recommendations**

PRONEBI should explore mechanisms to disseminate the benefits of bilingual education to parents. In other words, PRONEBI should capitalize on their considerable accomplishments in terms of student achievement. But in order to do this, more must be known about current levels of parental knowledge and attitudes, to facilitate the design of an appropriate strategy to inform and educate about the benefits of bilingual education.

As a logical next step, PRONEBI should carry out more extensive studies to determine the relative impact of bilingual education on parents. The most economical methodology would be to do structured open-ended qualitative interviews with parents in a carefully selected sample to include both PRONEBI and non-PRONEBI communities in all four major language groups. In addition to individual interviews, an appropriate number of focus groups should be done in carefully selected communities. These data could then be used to design a publicity campaign using a combination of mass media and interpersonal channels of communication to inform parents of how bilingual education is meeting their expectations.

In order to complete the research described above, the personnel in the Evaluation and Investigation Unit should receive additional training in qualitative ethnographic methods as well as survey design. Special emphasis should be placed on training in the use of appropriate sampling methodologies.

Whenever possible, PRONEBI should be in contact with other research institutions or projects in order to explore the possibility of including questions on bilingual education. For example, research being done by the IEQ Project could provide valuable data on parental attitudes and knowledge about bilingual education.

**APPENDIX A:**

**DOCUMENTS CONSULTED**

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**APPENDIX B:**

**PERSONS INTERVIEWED**

## **Persons Interviewed**

Francisco Leonardo Hernández Castillo, Director EORM, Agua Tibia  
Gerardo Cándido Miranda Pérez, Profesor  
Hilda Rodelina Lopez Maidonado de Bravo, Profesora de Grado  
Marjorie Davila, Contadora, PRONEBI  
José Chojolán, Contador, PRONEBI  
Mario Matias Contador Auxiliar, PRONEBI  
Licda. Martha Lilia Ovando, Jefe Administrativo Financiero, PRONEBI  
Licda. Ernestina Reyes, Directora, PRONEBI  
Francisco Ortiz, Coordinador de Capacitación, PRONEBI  
Lic. Arnulfo Rodas, SEGEPLAN  
Licda. Hilda de Girón, Coordinadora, Proyecto Banco Mundial  
Licda. Mitzi Longo, Directora, Oficina de Personal, MOE  
Lic. Darío Reyes, Director Regional, Region 5, MOE  
Lic. Julio Diaz, OH&E/USAID/G  
Licda. Miriam Castañeda, OH&E/USAID/G  
Lic Gloria Cordón, OH&E/USAID/G  
Dr. Susan Clay, OH&E/USAID/G  
Rosa Simón Chutá, Jefe de Evaluación, PRONEBI  
Lucrecia de Maltez, Encargado de Personal, PRONEBI  
Justo Magzul Coyote, Curriculista, PRONEBI  
Arnoldo Chub Icó, Curriculista, PRONEBI  
Lic. Domingo Pérez, Jefe de Curriculum, PRONEBI  
Lic. Bayardo Mejía, Consultor, PRONEBI  
Lic. Ernesto Morales Sam, Administrador (Anterior), PRONEBI  
Lic. Hector Elfu Cifuentes, Director (Anterior), PRONEBI  
Lic. Manual Salazar, Director General de Educación, MOE  
Licda. Evelyn de Segura, Coordinadora, Proyecto BEST, MOE  
Licda. Justa de Monney, Administradora, Proyecto BEST, MOE  
Licda. Sylvia Márquez, Analista MOE, Dirección Técnica Presupuestaria  
Felix Zarazúa Patzán, Director, Dirección de de Educación Socio Educativo Rural, PRONEBI

**APPENDIX C:**  
**TEACHER INTERVIEW DATA**

Question	Mam	K'iche'	Q'eqchi'	K'aqchikel
1. Gender	<ol style="list-style-type: none"> <li>1. Masculine (13)</li> <li>2. Feminine (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Masculine (11)</li> <li>2. Feminine (4)</li> </ol>	<ol style="list-style-type: none"> <li>1. Masculine (5)</li> <li>2. Feminine (4)</li> </ol>	<ol style="list-style-type: none"> <li>1. Masculine (1)</li> <li>2. Feminine (5)</li> </ol>
6. Education	<ol style="list-style-type: none"> <li>1. Bilingual (4)</li> <li>2. Primary (4)</li> <li>3. MEDREBI (1)</li> <li>4. MEPU (4)</li> <li>5. PEM (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Urban Primary (8)</li> <li>2. Preprimary (6)</li> <li>3. Rural Primary (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Pre-primary bilingual (3)</li> <li>2. Pre-Primary (3)</li> <li>3. No information (2)</li> <li>4. Segunda Enseñanza (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Pre-primary (2)</li> <li>2. Primary (1)</li> <li>3. Bilingual (1)</li> </ol>
12. During the school day how much time is spent teaching in a mayan language?	<ol style="list-style-type: none"> <li>1. 1 hour (7)</li> <li>2. 2 hours (1)</li> <li>3. 3 hours (5)</li> <li>4. Indefinite (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. 1 hour (8)</li> <li>2. 2 hours (3)</li> <li>3. Constantly (2)</li> <li>4. Indefinite (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. None (1)</li> <li>2. 1 hour (3)</li> <li>3. 2.5 hours (2)</li> <li>4. 3 hours (1)</li> <li>5. 4 hours (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. 1 hour (5)</li> <li>2. 4 hour (1)</li> </ol>
14. How are the bilingual guides and texts used?	<ol style="list-style-type: none"> <li>1. Teaching material (7)</li> <li>2. Used with other material or consulted (5)</li> <li>3. Are no texts or small insufficient supply. (2)</li> <li>4. For teaching language, lecture, and writing (3)</li> <li>5. Grafically and orally (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Teaching material and guide (5)</li> <li>2. Adapt to region (1)</li> <li>3. Do not have (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not use (1)</li> <li>2. Follow the directions and use the lessons and materials in the class (3)</li> <li>3. To plan the days classes and as a guide (5)</li> </ol>	<ol style="list-style-type: none"> <li>1. Used as planning classes and guiding classroom (3)</li> <li>2. Follow directions and use lessons and materials in the classroom (2)</li> <li>3. Use as auxiliary guide (1)</li> </ol>
15. Do the text books and bilingual books meet the needs of the students? Do the students like the books?	<ol style="list-style-type: none"> <li>1. Problems with and/or students dislike due to dialectical differences (4)</li> <li>2. Meets only partial needs (6)</li> <li>3. Meets needs (6)</li> <li>4. No do not meet needs (1)</li> <li>5. Students like books (5)</li> </ol>	<ol style="list-style-type: none"> <li>1. Dialect difficulties (4)</li> <li>2. Meet Needs (10)</li> <li>3. Meets partial Needs (3)</li> <li>4. No does not meet needs (1)</li> <li>5. Students like books (6)</li> <li>6. Students do not like books (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (5)</li> <li>2. No (2)</li> <li>3. Do not use (1)</li> <li>4. Kids enjoy because it corresponds to to their region (1)</li> <li>5. Kids like (2)</li> <li>6. Some of the material is not regionalized (1)</li> <li>7. The methods need to be improved or changed because it does not correspond to the grade (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (5)</li> <li>2. No, referring to the old material still used because there are not enough of the new edition (1)</li> <li>3. They are good based on their presentation and content (5)</li> </ol>

**Table 11.**  
**Summary of Classroom Interaction Data**

School	Group				Boys				Girls			
	SP	NL	NV	Total	Sp	NL	NV	Total	Sp	NL	NV	Total
<b>PRONEBI</b>												
AV-PP	23%	27%	8%	58%	12%	8%	0	19%	19%	4%	0	23%
AV-PP	14%	45%	14%	73%	0	14%	5%	18%	0	5%	5%	9%
Chim-PP	46%	19%	4%	69%	15%	4%	0	19%	8%	4%	0	12%
K'iche'-1&3	23%	9%	46%	77%	14%	0	3%	17%	6%	0	0	6%
K'iche'-PP	33%	20%	2%	55%	24%	2%	3%	28%	11%	2%	3%	17%
<b>Non-PRONEBI</b>												
AV-PP-3	40%	5%	20%	65%	10%	5%	5%	20%	10%	0	5%	15%
AV-PP	40%	10%	20%	70%	17%	0	0	17%	7%	0	3%	10%

Legend: Sp = Spanish; NL = Native Language; NV = Non Verbal

Question	Mam	K'iche'	Q'eqchi'	Kaqchikel
16. In terms of utility how do you consider the Pronebi guides: good, adequate, or bad? The text books: good, adequate, or bad? Do the texts arrive on time to be used in the classroom? Yes or No.	<ol style="list-style-type: none"> <li>1. Guides are good (7)</li> <li>2. Guides are adequate (4)</li> <li>3. Sometimes good or bad (1)</li> <li>4. Texts are good (5)</li> <li>5. Texts are adequate (6)</li> <li>6. Arrive on time (1)</li> <li>7. Arrive late (3)</li> <li>8. Need more texts (4)</li> <li>9. Need revision (3)</li> <li>10. Problems with dialect or region (4)</li> </ol>	<ol style="list-style-type: none"> <li>1. Guides are good (11)</li> <li>2. Guides are adequate (3)</li> <li>3. Texts are good (10)</li> <li>4. Texts are adequate (4)</li> <li>5. Arrived on time (4)</li> <li>6. Arrived late (8)</li> <li>7. Need more (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good texts and books (6)</li> <li>2. Adequate (1)</li> <li>3. Arrive on time (6)</li> <li>4. Arrived late (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good books and texts (5)</li> <li>2. Adequate (1)</li> <li>3. Arrive late (2)</li> <li>4. Arrive on time (1)</li> </ol>
17. In terms of utility how do you consider the training material of Pronebi? Good, adequate, or bad?	<ol style="list-style-type: none"> <li>1. Good (9)</li> <li>2. Adequate (5)</li> <li>3. Bad (1)</li> <li>4. Needs to be more consistent, constant, adapting (5)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good (10)</li> <li>2. Adequate (3)</li> <li>3. Bad (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good (8)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good (4)</li> <li>2. Did not receive any kind of training from Pronebi (2)</li> </ol>
18. Did Pronebi train you in how to use the material? Yes or no.	<ol style="list-style-type: none"> <li>1. Yes (15)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (14)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (8)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (3)</li> <li>2. No (2)</li> <li>3. Partly (1)</li> <li>4. Did not receive any training (1)</li> </ol>
19. Do you think that the use of the mayan language in the texts is good, adequate, or bad?	<ol style="list-style-type: none"> <li>1. Good (10)</li> <li>2. Adequate (4)</li> <li>3. Alphabet and dialect complaints (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good (13)</li> <li>2. Adequate (1)</li> <li>3. Dialect (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good (7)</li> <li>2. Adequate (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Good (5)</li> <li>2. Adequate (1)</li> </ol>

Question	Mam	K'iche'	Q'eqchi'	Kaqchikel
<p>20. Do you believe that the bilingual education program has problems? In your opinion what are they?</p>	<ol style="list-style-type: none"> <li>1. Yes (13)</li> <li>2. Rejection by teachers (mono and bi), parents and community (5)</li> <li>3. Administrative problems (organization, hiring, methods) (5)</li> <li>4. Lack of mayan speakers, specific dialects, (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (13)</li> <li>2. No (2)</li> <li>3. Administrative problems (organization..)(2)</li> <li>4. Lack of mayan speakers as teachers (3)</li> <li>5. Lack of communication between administration /supervisors and schools / teachers (5)</li> <li>6. Teachers, communities oppose (4)</li> <li>7. Lack training (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes there is a problem (4)</li> <li>2. No (3), not a problem but then gave some responses (2)</li> <li>3. Lack adequate material that corresponds to the correct age (1)</li> <li>4. Lack material (quantity) (1)</li> <li>5. Problems with content of Pronebi guides (1)</li> <li>6. Lack of training (1)</li> <li>7. Lack of teachers who speak mayan language (1)</li> <li>8. Lack of sufficient funds (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (3)</li> <li>2. No (3)</li> <li>3. Texts are only in mayan language, not spanish too (1)</li> <li>4. Lack of support from mayan teachers (3)</li> <li>5. Lack of support from parents and community (2)</li> </ol>
<p>21. What would you do to improve bilingual education?</p>	<ol style="list-style-type: none"> <li>1. More training (3)</li> <li>2. Reorganize program (3)</li> <li>3. Regionalize the program and materials (5)</li> <li>4. Improve community participation (2)</li> <li>5. More material (1)</li> <li>6. Use old alphabet (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. More training (4)</li> <li>2. Good and enough materials (4)</li> <li>3. Hire trained and qualified people (3)</li> <li>4. Place more emphasis and importance on program (2)</li> <li>5. Raise community awareness (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Get the parents informed and involved (1)</li> <li>2. Continue the program but develop it further (1)</li> <li>3. Enforce the attendance of the kids (2)</li> <li>4. Change the texts (2)</li> <li>5. Need more money and material (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Keep the bilingual education program (1)</li> <li>2. Needed for the future (1)</li> <li>3. Change the classes (1)</li> <li>4. Emphasize teaching spanish (1)</li> <li>5. Educate and get community support (2)</li> <li>6. Use all available materials to educate about life (1)</li> </ol>
<p>22. What type of support does bilingual education receive from this community?</p>	<ol style="list-style-type: none"> <li>1. Teaching material, school supplies (6)</li> <li>2. Moral, intellectual, approval (4)</li> <li>3. Suggestions with guidance (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Teaching material, school supplies, furniture (9)</li> <li>2. None (4)</li> <li>3. Training (1)</li> <li>4. Moral (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. None (3)</li> <li>2. Didactic materials, furniture, posters, texts (3)</li> <li>3. Parents enforce attendance (2)</li> <li>4. Pre-primary for monolingual (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. None (5)</li> <li>2. Texts, guides, desks (1)</li> </ol>
<p>23. In your opinion who needs to be educated more, boys or girls? Why?</p>	<ol style="list-style-type: none"> <li>1. Both (12)</li> <li>2. Males (1)</li> <li>3. Equal rights (9)</li> <li>4. Equal ability (4)</li> <li>5. Need education (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (12)</li> <li>2. Girls (1)</li> <li>3. Equal rights (4)</li> <li>4. Equal ability (2)</li> <li>5. Need education (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (9)</li> <li>2. Both have equal rights (4)</li> <li>3. Need the education (2)</li> <li>4. Will help the family (1)</li> <li>5. In order to better themselves (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (6)</li> <li>2. Both have equal rights (4)</li> <li>3. Need the education because they have responsibilities (2)</li> <li>4. Parents believe the boy needs more because the girl will marry (1)</li> </ol>

Question	Mam	K'iche'	Q'eqchi'	Kaqchikel
24. Who drops out of school more frequently, boys or girls? Why?	<ol style="list-style-type: none"> <li>1. Girls (8)</li> <li>2. Girls need to work in house (3)</li> <li>3. Girls lack family support (4)</li> <li>4. Boys (3)</li> <li>5. Boys need to work (3)</li> <li>6. Both (2)</li> <li>7. Both need to work (2)</li> <li>8. Depends on family (1)</li> <li>9. Does not occur (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Girls (6)</li> <li>2. Girls need to work in house (4)</li> <li>3. Lack family support (2)</li> <li>4. Girls marry young (2)</li> <li>5. Boys (2)</li> <li>6. Boys need to work (4)</li> <li>7. Both (2)</li> <li>8. Need to work (2)</li> <li>9. Does not occur (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (2)</li> <li>2. Girls (5)</li> <li>3. Boys (1)</li> <li>4. Girl either has to go out and work or work at home (5)</li> <li>5. Girls do not want to study (1)</li> <li>6. Boys have to go to work (1)</li> <li>7. Does not occur (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (3)</li> <li>2. Girls (2)</li> <li>3. Boys (1)</li> <li>4. Both have to work (3)</li> <li>5. Girls have to work (2)</li> <li>6. Boys have to work (1)</li> <li>7. Because of sickness (1)</li> </ol>
25. Who fails more, boys or girls? Why?	<ol style="list-style-type: none"> <li>1. Girls (5)</li> <li>2. Equal (7)</li> <li>3. Lack family support, not considered important (4)</li> <li>4. Need to work (3)</li> <li>5. Depends on the situation (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Girls (5)</li> <li>2. Both (8)</li> <li>3. Boys (1)</li> <li>4. Absenteeism (4)</li> <li>5. Need to work (2)</li> <li>6. Lack familial support (2)</li> <li>7. Malnourished (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (4)</li> <li>2. Boys (2)</li> <li>3. Girls (3)</li> <li>4. Girls lack of interest (2)</li> <li>5. Males need to work (2)</li> <li>6. Girls lack family support so no desire (1)</li> <li>7. Girls need to work (1)</li> <li>8. Age and embarrassed (1)</li> <li>9. Economic reasons (1)</li> <li>10. Malnourished (1)</li> <li>11. Migration (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Both (6)</li> <li>2. Because of their age they are embarrassed (1)</li> <li>3. In order to work (2)</li> <li>4. The parents fault (2)</li> <li>5. Result of a deficiency (1)</li> </ol>
26. How have the parents reacted in relation to the education of their daughters?	<ol style="list-style-type: none"> <li>1. Positive response and support the education (4)</li> <li>2. No importance given or no response (3)</li> <li>3. They will grow, marry, leave so no importance (2)</li> <li>4. Need to work (1)</li> <li>5. Some parents are equal with both sexes (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Positive and attempt to support (4)</li> <li>2. Negative and do not give importance (3)</li> <li>3. More importance given to males (2)</li> <li>4. Enough to read/write (2)</li> <li>5. Depends on situation (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Negative response (4)</li> <li>2. Positive response (2)</li> <li>3. Parents want the girls to work (3)</li> <li>4. Do not want them to attend school (1)</li> <li>5. Believe they have equal rights (1)</li> <li>6. Depends on the family (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Negative response (2)</li> <li>2. Positive response (1)</li> <li>3. Response is improving (1)</li> <li>4. Attendance is up to 50% (1)</li> <li>5. No support (1)</li> </ol>

Question	Mam	K'iche'	Q'eqchi'	Kaqchikel
<p>27. In your opinion, what do the parents think about the importance of educating the girl in comparison with the boy? Ask details.</p>	<ol style="list-style-type: none"> <li>1. Equal, particularly if parents realize the importance of education (5)</li> <li>2. Boys more important (3)</li> <li>3. Girls not important (3)</li> <li>4. Girl is important (2)</li> <li>5. Girl will grow, marry, leave (2)</li> <li>6. Girl lacking ability (2)</li> <li>7. Girls has ability (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Boys more important and need education (7)</li> <li>2. Boys need to work and need education (2)</li> <li>3. Girls do not need education (2)</li> <li>4. Girls need education (3)</li> <li>5. Positive, parents know the benefits and support (3)</li> <li>6. Girls grow, marry, leave (2)</li> <li>7. Girls read and write is enough (2)</li> <li>8. More important is the skill (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Positive response (2)</li> <li>2. Negative response (7)</li> <li>3. Needs to work (4)</li> <li>4. It is enough if she can read and write (1)</li> <li>5. She has a right to better herself (1)</li> <li>6. Boy is important because needs for work (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Depends on the family (1)</li> <li>2. Girls are not important (4)</li> <li>3. Boys are important (3)</li> <li>4. Girls will get married (5)</li> </ol>
<p>28. Do you think the girls would benefit by starting school at 6 years of age? Ask details</p>	<ol style="list-style-type: none"> <li>1. Yes (14)</li> <li>2. Depends, some not so well nourished (1)</li> <li>3. Will know how to read and write young (2)</li> <li>4. Start early, finish early at a good age (4)</li> <li>5. Will be farther along in their education when they leave to work (3)</li> <li>6. Spark and maintain interest (4)</li> <li>7. Less will be held back (1)</li> <li>8. Have the ability (1)</li> <li>9. Parents will not agree (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (13)</li> <li>2. Good age to start and learn (9)</li> <li>3. Older have a more difficult time (3)</li> <li>4. Depends on family (1)</li> <li>5. Girls develop faster than boys (1)</li> <li>6. Better to start younger (1)</li> <li>7. Younger is to young (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (9)</li> <li>2. At this age they are more likely to learn, pass and continue their education (3)</li> <li>3. It is a good age because the older she is more problems (3)</li> <li>4. Less responsibility at this age (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (6)</li> <li>2. Easier to learn, pass and continue (3)</li> <li>3. A good age, younger the better older more problems (3)</li> </ol>

Question	Mam	K'iche'	Q'eqchi'	Kaqchikel
29. What didactic material do you need in order to improve your teaching?	<ol style="list-style-type: none"> <li>1. Teaching material and supplies (9)</li> <li>2. Books, texts, regionalized (6)</li> <li>3. Posters (4)</li> <li>4. Pens, pencils, crayons, markers (2)</li> <li>5. Games (2)</li> <li>6. More colors and illustrations in the texts and other materials (2)</li> <li>7. Training (4)</li> <li>8. More teachers (1)</li> <li>9. Safe place to store, more room (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Books and texts (5)</li> <li>2. Teaching materials and supplies (6)</li> <li>3. New guides (1)</li> <li>4. Crayons, colored chalk, markers, pens, pencils (9)</li> <li>5. Training (7)</li> <li>6. Furniture (4)</li> <li>7. Posters (2)</li> <li>8. Games (2)</li> <li>9. Skills material (2)</li> <li>10. Cleaning, hygiene supplies (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. School supplies (7)</li> <li>2. Texts (3)</li> <li>3. Furniture (2)</li> <li>4. New methods and interest (1)</li> <li>5. Games (1)</li> <li>6. Cleaning material (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. School supplies (4)</li> <li>2. Furniture (2)</li> <li>3. Pronebi training (1)</li> <li>4. Text (1)</li> <li>5. New methods and evaluation (1)</li> <li>6. Cooking materials (1)</li> <li>7. Hygienic supplies (1)</li> <li>8. Bathroom (1)</li> <li>9. Cassettes and player (1)</li> </ol>
30. Do you speak with the parents? Ask details. Why yes or why no? What about the other teachers? How frequently do you meet?	<ol style="list-style-type: none"> <li>1. Yes (15)</li> <li>2. Talk about kid in general or no reason given (6)</li> <li>3. Talk about kid grades, scholastically (4)</li> <li>4. Talk about kid problems, tardiness, absenteeism (6)</li> <li>5. To maintain confidence, support and interest of parents (2)</li> <li>6. Other teachers meet (2)</li> <li>7. Constantly meet (2)</li> <li>8. Bimonthly (1)</li> <li>9. Every 3 weeks (1)</li> <li>10. When necessary/frequently /when have opportunity (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (14)</li> <li>2. Other teachers meet (12)</li> <li>3. General information about the school, kid (4)</li> <li>4. Problems with kid (1)</li> <li>5. Meet monthly (3)</li> <li>6. Meet 3 times a year (3)</li> <li>7. Meet 4 times a year (3)</li> <li>8. Meet 5 times a year (2)</li> <li>9. Meet bimonthly (1)</li> <li>10. Try to meet regularly (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (9)</li> <li>2. About the kid and community in general (2)</li> <li>3. Problems with kids grades, absenteeism, education in general (6)</li> <li>5. Every 15 days (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes (6)</li> <li>2. Problems with kids behavior, grades, absent, in general (5)</li> </ol>
31. What is the process followed by teachers trying to apply for a position in the Ministry of Education?	<ol style="list-style-type: none"> <li>1. Go through the school or Ministry of Education process (4)</li> <li>2. Political manoeuvres (5)</li> <li>3. Apply (4)</li> <li>4. Talk to parents and meetings then apply (3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Politics/connections (1)</li> <li>2. Go to the supervisor then subregional then regional (13)</li> </ol>	<ol style="list-style-type: none"> <li>1. Go to and apply either through supervisors or directly to regional (4)</li> <li>2. Take classes, exam, apply according to rules to authority (2)</li> <li>3. Do not know (2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Apply to regional (2)</li> <li>2. Take recommendations to the mayor then directly to Ministry (1)</li> <li>3. Now the route is political (1)</li> <li>4. Talk to Social Education (1)</li> <li>5. Does not know (1)</li> </ol>

Question	Mam	K'iche'	Q'eqchi'	Kaqchikel
32. How long does it take to receive a response from the Ministry of Education?	<ol style="list-style-type: none"> <li>1. Depends on applicant and connections or situation (9)</li> <li>2. Official route is long time (2)</li> <li>3. With connections or preference pretty soon (3)</li> <li>4. 1-2 years</li> <li>5. 6 months</li> </ol>	<ol style="list-style-type: none"> <li>1. Depends (6)</li> <li>2. Depends on connections (2)</li> <li>3. Does not know (4)</li> <li>4. Years (1)</li> <li>5. About 1 year (1)</li> <li>6. 2 years (1)</li> <li>7. More than one month (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. 3 months (1)</li> <li>2. 4 months (1)</li> <li>3. 2 years (1)</li> <li>4. 3 years (1)</li> <li>5. Long time (1)</li> <li>6. Depends (1)</li> <li>7. No time (1)</li> <li>8. Does not know (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months (1)</li> <li>2. 1 year, may depend on the grade received on exam (2)</li> <li>3. Depends on politics (1)</li> <li>4. Has not applied for anything (1)</li> </ol>
33. Do you have any comments about what we discussed during the interview?	<ol style="list-style-type: none"> <li>1. Look to improve in strategies, politics, texts, teachers, training (4)</li> <li>2. Focus on relations which exist between indigenous and non-indigenous, economic situation (1)</li> <li>3. Take seriously everything discussed (1)</li> <li>4. This expresses the interest of the authorities for the problems of the program (1)</li> <li>5. Continue program (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Continue and give priority to bilingual education (3)</li> <li>2. Need to improve or lack (6)</li> <li>3. Improve quality of and need communication between the authorities, Pronebi and the school (10)</li> </ol>	<ol style="list-style-type: none"> <li>1. Do regular interviews and evaluations (5)</li> <li>2. Hire on ability and not politics (1)</li> <li>3. Ministry of Education does not care (1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Radio changes and advice (2)</li> <li>2. Need retraining (1)</li> <li>3. Send the results of this study (1)</li> <li>4. Information about homevisits (1)</li> </ol>

**USAID/Guatemala**

**Rural Primary Education Improvement Project (PRONEBI)**

**Scope of Work: Final Evaluation**

**I. Introduction**

The following scope of work is for the final evaluation of the Rural Primary Education Improvement Project (520-0282). The project was authorized on October 17, 1984, for a five year period ending in October 1990. It was designed to provide relevant bilingual education to the indigenous children of the Guatemalan Highlands and to create a permanent capability within the Ministry of Education to deliver that education. The U.S. contribution was to be \$10.2 million in loan and \$3.3 million in grant funds while the Government of Guatemala contribution was to be \$25 million, for an expected life of project total of \$38.5 million. Because of a devaluation of the quetzal, a surplus of \$3.7 million in local currency was generated three years into the project. These funds were reprogrammed to extend the life of project through November 30, 1991 for grant funds and an additional year extension through September 30, 1992 for the loan agreement.

**II. Background**

The Rural Primary Education Improvement Project was designed to provide relevant bilingual education to the indigenous children of the Guatemalan Highlands and to create a permanent capability within the Ministry of Education to deliver that education. The project was designed to build on the success of an experimental bilingual education project which was funded by AID between 1980-1984. This project developed prototype bilingual materials and tested the effect of the materials in a model in which the language of instruction was gradually shifted from the indigenous language to Spanish over a four year period. The results of that project, in which the academic achievement, drop-out rates, retention, and failure of indigenous children in 40 pilot schools were compared to a similar group of children in comparison schools, led to the institutionalization of PRONEBI by Government of Guatemala decree and the development of the Rural Primary Education Project.

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At the time the Improvement of Rural Primary Education Project was designed in 1984, 42 percent of Guatemala's population were members of Mayan indigenous groups that speak 22 different languages. These groups make up the bulk of the rural population engaged in subsistence agriculture. They have traditionally been ill-served by the educational system as only 40 percent of those of school age were estimated to be in school when the project began, and of those 50 percent drop out by the end of first grade.

The project incorporated a phased implementation plan for the design, production, and distribution of textbooks as well as for the placement and training of teachers. It is implemented by the National Program of Bilingual Education (PRONEBI), which is under the direction of the Directorate of Rural Socio-Education (Socio-Educativo Rural), which is responsible for all rural primary education in the country. The Project consists of six components:

1. Administration and Supervision, was to help finance the creation of a permanent implementation unit within the Ministry of Education. This unit of the National Bilingual Education Program was to be responsible for the administration of bilingual education throughout the country;
2. Curriculum Development was responsible for developing bilingual texts and instructional materials that are consistent with the national curriculum but reflecting the indigenous culture. These materials are to serve children in preschool through fourth grade;
3. The third component finances the printing of the bilingual texts and teachers' guides as well as the purchase of desks, blackboards, and other equipment for rural schools. This component was to be carried out in close cooperation with a World Bank project which financed the production of the texts;
4. A fourth component consisted of three training activities. These were upgrading of bilingual preschool teachers ("promotores"), in-service training for teachers in the use of the new bilingual materials, and university training for supervisors and central office personnel;
5. The fifth component was the establishment of a research and evaluation component within PRONEBI to monitor the progress of the bilingual program on student achievement;
6. The final component was to provide long-term technical assistance in the areas of bilingual primary school curriculum development, anthropology/linguistics, research and evaluation, training, field supervision, and project administration. Both national and international professionals supplied long-term technical assistance. This component also funded scholarships for long-term overseas training of key technical staff.

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During the course of the project, a number of documents have been produced which track the progress of the project toward its goals. These include: annual operations plans; a 1987 process evaluation of the project; the 1988 expansion plan, developed as part of the Guatemala Primary Education Sub-sector Assessment of that year; and PRONEBI's longitudinal statistical studies of the effects of the project as well as occasional studies by the evaluation unit.

### **III. Purpose and Objectives**

The primary purpose of this evaluation is to assess the success of the project both in meeting outcomes projected in the logical framework and in its impact on indigenous children and their families. A secondary purpose is to produce recommendations that will contribute to the probability that continued investment in bilingual education as a component of the Basic Education Strengthening (BEST) Project (520-0374) will have a sustained and positive impact on the Guatemalan primary education system.

There are four objectives for the evaluation:

- A. To determine the impact of the project in creating a sustainable infrastructure for the delivery of relevant bilingual education within the Ministry of Education.
- B. To measure the impact of the project on secondary beneficiaries such as program staff, teachers, and the families of participating children.
- C. To determine the number of direct beneficiaries (students) served by the project and the educational benefits accrued in terms of achievement, grade level completed, and lower drop-out and repetition rates.
- D. To assess the potential success of continued expansion of the bilingual education program.

### **IV. Statement of Work**

The evaluation is designed to answer three sets of related questions and to make recommendations based on the findings in regard to these questions. The rationale and questions are as follows:

- A. Is there evidence that the project has created a permanent capacity within the Ministry of Education to provide bilingual education?

**Rationale.** Improvement in quality and ultimately efficiency at the classroom level is dependent on sound administrative structures that ensure logistical support to local schools. The project paper discussed the creation of a permanent capacity within the Ministry of Education to deliver bilingual education. This includes adequate physical facilities, trained staff, and a well developed set of administrative procedures. It also includes integration of bilingual education into long-term Ministry planning and budgeting processes.

1. To what extent has agreement been reached on the definition and objectives of bilingual education by key actors in its development and implementation?
  2. What has been the impact of the project on developing a trained corps of permanent administrative staff sufficient to coordinate and expand bilingual services? (e.g. accounting and budgeting, personnel, materials design, training, procurement, research).
  3. To what extent has an adequate central and regional infrastructure been developed for bilingual education?
  4. To what extent has the administration and delivery of bilingual education been integrated into long-term Ministry budgeting and planning processes?
  5. What has been the contribution of technical assistance to increased administrative capacity?
  6. What has been the impact of other international donor investment in bilingual education?
  7. To what extent does the administrative capacity of PRONEBI and the organization's position within the MOE allow for the expansion of services contemplated under the BEST project?
- B. Is there evidence that the project has had an impact on bilingual education service delivery?

**Rationale.** In addition to an adequate administrative structure, the provision of relevant education to linguistic minority students requires an adequate technical delivery system that will provide children with the inputs to take advantage of schooling opportunities. Thus, the adequacy of materials and teacher's abilities to use them must be assessed together with the relationship of these inputs to student outcomes.

1. To what extent have bilingual teachers been provided to PRONEBI schools?

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2. Is there a relationship between the training provided to teachers and student outcomes?
  3. What has been the impact of the PRONEBI supervision system on teachers' performance?
  4. Is there a relationship between availability/use of PRONEBI instructional materials and furniture and student outcomes?
  5. To what extent has research and evaluation been used to improve service delivery (e.g. develop or revise materials, revision of supervision or in-service training procedures).
  6. To what extent have the recommendations of the 1987 process evaluation been incorporated into the delivery of services?
- C. What has been the impact of the project in terms of student outcomes (e.g. achievement, repetition, drop-out) and community participation in education?

**Rationale.** The relevancy of a bilingual education program depends on the creation of learning situations that offer children a fair chance to make normal progress from grade to grade thereby completing primary education in the prescribed number of years as well as on the extent to which they can make use of their learning experiences in their daily lives. Thus, it is important to measure the value placed on bilingual education in local communities as well as the impact on numbers of children served and changes in achievement, repetition, and drop-out rates.

1. What is the impact of the project in terms of numbers of children served, teachers trained, furniture and materials delivered?
2. Is there evidence for improved educational quality in terms of academic achievement as a result of the project? (Overall and by gender)
3. Is there evidence for improved efficiency in terms of lower rates of repetition and drop-outs as a result of the project? (Overall and by gender)
4. Is there a relationship between inputs in the form of teacher training and/or instructional materials and improved achievement or lower repetition and drop-out rates? (Overall and by gender)
5. What has been the impact of the project on communities in terms of knowledge, perceptions, and acceptance of bilingual education? (Overall and by gender)
6. To what extent is Spanish instruction in PRONEBI schools comparable to the instruction in non-PRONEBI schools?

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7. To what extent is the bilingual curriculum in keeping with state-of-the art knowledge and standards in bilingual curriculum?
8. By what criteria have curriculum revision decisions been made and to what extent are these in keeping with the objectives of the Project?
9. Is there a relationship between national socio-economic trends (e.g. per capita income, calorie consumption, per capita expenditures on primary education) and academic achievement or rates of repetition and drop-out for bilingual education?
10. What, if any, have been the constraints to the realization of the outcomes envisioned by the project?

#### **V. Composition of the evaluation team and methodological approach**

The evaluation will be conducted over a four-week period by a multi-disciplinary five-person team. A variety of evaluation techniques will be used. These will include: analysis of existing documentation, correspondence and studies related to the project; in-depth interviews with individuals involved in the implementation of the project (USAID Mission, PRONEBI, Ministry of Education, as well as teachers, trainers, students, and local community members) using both individual interview and group interview techniques; observations in classrooms focusing on the interaction of individual children of different characteristics (e.g., gender, level of bilingualism) with project inputs, and review and analysis of statistical information available in USIPE, Centro de Computo, INE, and the research and evaluation division of PRONEBI.

The evaluation team will be composed of an education administration specialist/chief of party, an anthropologist, a statistician, an education finance specialist, and an instructional materials specialist. Their responsibilities and requirements are as follows:

##### **1. Education Administration Specialist (COP).**

Responsible for coordinating the activities of the evaluation team. He/she will develop the final design of the evaluation, oversee the development of evaluation instruments, integrate the findings of different team members and coordinate the preparation of the final reports. He/she will also be responsible for determining the effectiveness of management procedures and institutional capacity building carried out under the project and the degree to which PRONEBI has been integrated into the central and regional management structure of the Ministry of Education.

Assess the staffing adequacy of PRONEBI in both central and regional offices in terms of whether the staff assigned to each component are sufficient in number, committed to bilingual education goals and technically prepared to carry out their assignments.

Assess the adequacy of lines of communication, management tools (e.g. job descriptions, operations manuals), and management and control procedures related to accounting, procurement, delivery and tracking of end product use of commodities supplied through the project.

Analyze the rate and nature of staff turnover and its impact on project administration.

Determine the impact of technical assistance on strengthening individual and organizational management capacity of PRONEBI.

Review Ministry of Education organizational and staffing documents and conduct interviews with Ministry planners to determine the congruence of PRONEBI management structure with that of the Ministry in general and the viability of any proposed changes in the organizational structure of PRONEBI.

Determine the adequacy of the physical infrastructure of PRONEBI for carrying out administrative and technical responsibilities.

Assess the congruence of PRONEBI's administrative structure with the national regionalization program for education in terms of staffing, lines of communication, tracking and monitoring and identify possible duplication of services.

Conduct individual and group interviews among Ministry administrators, managers, and technicians at both the central and regional level to determine the impact of the project in terms of their attitudes toward bilingual education and perceptions of PRONEBI's role within the Ministry.

Assess the impact (positive and negative) of project management procedures on the implementation of individual project activities.

Determine the adequacy of PRONEBI staffing to carry out the proposed expansion of services to take place under the Basic Education Strengthening Project.

Requirements. At least five years of experience in the evaluation of education projects in developing countries, experience in managing large multi-disciplinary teams, experience in the administration of education or training projects in Latin America, competence in Spanish (FSI 3), ability to conceptualize and write clearly and concisely, MA or Ph.D degree in education administration, planning or similar field.

## 2. Educational Anthropologist

Responsible for assessing presence, use and impact of PRONEBI education services at the individual student and classroom level and for determining the knowledge of, acceptance of and participation in bilingual education by teachers and local community members.

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Review all available qualitative and quantitative studies on PRONEBI populations and schools; choose a meaningful sample of schools/communities for intensive study.

Conduct classroom observations and focused observations of individual children in a sample of classrooms using the PRONEBI methodology and classrooms without the bilingual education program to determine the use of the materials and their impact on children of different genders and language proficiency in terms of time on task, nature of verbal and nonverbal interactions with teachers and peers, and instructional delivery techniques.

Conduct interviews with local administrators to assess their knowledge and acceptance of the bilingual education program as well as the congruence of their activities with those of PRONEBI.

Conduct focus groups with a sample of teachers, students, and community members in communities where bilingual education has been implemented and where it has not to assess knowledge, acceptance of and participation in the innovative methodologies.

Examine community attitudes and perceptions of the value of preschool education in communities with such programs and communities without preschool teachers.

Summarize the findings using matrices and other graphic display that are readily interpretable by non-specialists and draw conclusions about the implementation of the bilingual education program and its impact based on these findings.

Requirements. Advanced degree in Anthropology or Sociology, experience with classroom observation techniques such as checklists and systematic focused observations of individual children, experience with community ethnography and focus group techniques, extensive experience with Guatemalan indigenous populations, experience in evaluation of educational programs, and competency in Spanish (FSI 3).

### 3. Statistician.

Responsible for examining the adequacy of project statistical procedures and databases as well as for assessing the project impact.

Review all project statistical documents and PRONEBI databases to assess the adequacy of statistical indicators and impact measures.

Meet with PRONEBI evaluation division, Centro de Computo, INE and USIPE to gather necessary statistical data on bilingual education indicators and national socio-economic indicators.

Determine the success of the project in reaching numerical targets in terms of students served, teachers trained, furniture, instructional materials and other commodities delivered.

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Conduct time series analyses to determine the appropriateness of projected targets in relation to changes in socio-economic indicators over the life of the project.

Conduct time series analyses with PRONEBI schools to determine if the retention rate in first grade improved subsequent to preschool promoters completing in-service training provided through the project.

Conduct time series analysis with PRONEBI schools to determine the impact of teacher training and instructional materials on grade level achievement and repetition rates.

Assess the adequacy of the research and evaluation component of PRONEBI to meet the statistical needs of the planned expansion of the program.

**Requirements.** An advanced degree in educational statistics or quantitative evaluation, experience with manipulating large statistical databases, direct experience with at least one educational program in Latin America, competency in Spanish (FSI 3).

#### **4. Education Finance Specialist.**

Responsible for assessing the progress made toward sustainability of project activities after project completion. Specific activities will include:

Review of GOG and MOE annual and five year plans and budgets to determine steps taken to ensure financing for bilingual education and consistency of the plans with targets set in the project agreement.

Meet with representatives of the Ministry of Finance, SEGEPLAN, and USIPE to assess long and short-term strategies for financial support of PRONEBI activities.

Assess the viability for plans to incorporate the management unit and the operations of PRONEBI into MOE budgeting processes.

Examine the regionalization process and the planned long-term financial support for regionalization in general and for bilingual education activities in particular within the regionalization program.

Assess the viability of alternative financing mechanisms for PRONEBI activities such as cost recovery for instructional materials, private sector contributions, reallocations from other education areas, or other international donor financing to support bilingual education activities.

**Requirements.** Advanced degree in educational financing and at least five years experience in working with the financing of large education projects, experience with USAID education projects and associated finance issues, competence in Spanish (FSI 3).

## **5. Instructional Materials Specialist.**

Responsible for determining the appropriateness of revisions made in instructional materials as a result of the 1987 process evaluation and determining the adequacy of the technical capabilities for conducting proposed expansion activities.

Review 1987 evaluation and project materials to determine progress in carrying out recommendations for curriculum revisions.

Assess the success of the project in meeting timelines for the development, delivery and preparation of teachers in the use of instructional materials.

Review national curriculum objectives and documentation on instructional delivery and interview appropriate MOE personnel to determine the impact of PRONEBI materials within the Guatemalan primary education program.

Analyze all instructional materials produced by PRONEBI to date for appropriateness of scope, sequencing, format and the like through different primary grade levels. Review plans for revisions under the BEST project to determine appropriateness.

Review any teachers materials developed to accompany PRONEBI materials and interview a sample of teachers who have used such guides to determine ease of use and attitudes toward the materials.

Review PRONEBI achievement test development effort for consistency with curriculum objectives and appropriateness for bilingual population.

Requirements. Advanced degree in bilingual curriculum and instruction, experience with the evaluation of primary education instructional materials in Latin America, experience with achievement testing, and competency (FSI 3) in Spanish.

## **VI. Reporting Requirements**

### **A. Oral Reports**

The Chief of Party will provide weekly briefings in English to the COTR and other interested individuals in the Mission.

Team members will give oral reports to the Mission prior to their departure from Guatemala.

The Chief of Party and remaining team members will give final briefings on the overall results of the evaluation to the Mission in English and to PRONEBI personnel in Spanish, at least three days prior to departure from Guatemala in the fourth week.

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### B. Written Products

The Chief of Party will be responsible for submitting a detailed work plan and timeline within three days after arrival in Guatemala

The Chief of Party is also responsible for submitting 10 copies in English of the draft final evaluation and 5 copies in Spanish of the draft Executive Summary to the Mission by the end of the fourth week. He/she will submit 10 copies of the final evaluation report in English and 10 copies of the report in Spanish not later than four weeks after the Mission has furnished the contractor with its comments on the draft report.

The reports will contain the following:

1. A Basic Project Identification Data Sheet (to be provided by the Mission);
2. An Executive Summary (no more than five pages, single spaced). this should be a self-contained document summarizing only material covered in the body of the report;
3. A Table of Contents;
4. Body of the Report including: a one-page summary of the methodology, the findings of the evaluation, conclusions and recommendations, lessons learned, and comments on the development impact of the Rural Primary Education Improvement project;
5. Appendices should contain the scope of work, list of persons contacted, instruments, and statistical tables and graphs.

### VII. Level of Effort

Chief of Party/Administration Specialist	5 weeks (4 in Guatemala)
Anthropologist	4 weeks in Guatemala
Statistician	3 weeks in Guatemala
Finance Specialist	2 weeks in Guatemala
Instructional Materials Specialist	2 weeks in Guatemala
<b>TOTAL</b>	<b>16 weeks</b>

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