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PROCESS EVALUATION
OF THE
PROGRAMA NACIONAL
DE EDUCACION BILINGUE (PRONEBI)

Prepared for USAID/Guatemala and PRONEBI

by

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with the assistance of

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FINAL REPORT

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EXECUTIVE SUMMARY

I. Introduction

In February of 1987, USAID/Guatemala contracted with the Academy for Educational Development (AED) to provide an evaluation team which would assess the progress of Project No. 520-0282, the Primary Education Improvement Project (Bilingual Education). Through the mechanism of the Central American Education Field Technical Service contract, a team consisting of personnel from AED and its subcontractor, Juarez and Associates, was fielded to carry out the evaluation over approximately a two-month period. The study was a process evaluation with the objectives of: a) assessing the progress of the Project in each of its components after one year of implementation; and b) making recommendations for improvements or modifications in the Project, if necessary.

why 1 year?

II. Background

The Primary Education Improvement Project (Bilingual Education) is designed to build on the success of an earlier pilot project (520-0258) in which a prototype bilingual curriculum was developed and tested in a sample of 40 schools in four major language areas. The expanded project, which covers 400 schools with classes from preschool through fourth grade, is being implemented by the National Program of Bilingual Education (PRONEBI).

PRONEBI, which was institutionalized by government decree (No. 1093-84) in December of 1984, is financed for a five year period from 1985 to 1990 through a loan (\$10.2 million) and a grant (\$3.3 million) from the USAID and by counterpart funds from the GOG of approximately \$25 million.

III. Evaluation Design

The evaluation was carried out by two educators, each with extensive experience in Latin American rural education and in the evaluation of bilingual programs. The team was supplemented by two highly qualified Guatemalan educators who assisted in the fieldwork and analysis of textual materials in the vernacular. A multimethod approach was employed which included: the critical review of project documents; interviews with key personnel within PRONEBI, the Directorate of Rural Socio-Education, and AID; site visits to a sample of rural communities and bilingual schools; and observations of classroom activities. The strategy of triangulation, in which the investigators pursued the same topics of information through different data sources and analyzed all information from their different methodological perspectives was used to ensure the consistency of the findings. Seven PRONEBI operational areas were examined: administration; curriculum development; instructional

materials; training; supervision; research and evaluation; and technical assistance.

IV. Major Findings and Recommendations

1. ADMINISTRATION.

A. Conclusions. The evaluation examined the overall administration of PRONEBI, including the administrative unit of the organization. PRONEBI is made up of qualified, highly motivated individuals who are engaged in the tremendous task of expanding a pilot bilingual project into a national program of more than ten times the scope of the pilot. The organization is making good progress toward the goals of this five-year, rural bilingual education effort. The overall administration of the program is efficient and a number of communication and control mechanisms are being developed to increase interaction among units. The administrative unit is functioning adequately within the organization.

Despite effective administration, the multiple responsibilities in each PRONEBI operating unit caused by program expansion has stretched technical development to its limits. In addition, normal changes in direction taken by PRONEBI in its development, have created the need for additional expertise in certain areas.

what are these specific needs?

B. Recommendation. PRONEBI should focus its main efforts for the next several years on consolidating its services to the current 400 schools, rather than expanding them to additional schools. This will ensure the technical adequacy of the materials, services, and operational systems in development. Efforts to strengthen the PRONEBI infrastructure in the 600 additional schools with some bilingual teaching staff should continue as a secondary subsystem objective to prepare for a future expansion of bilingual schools.

What does this really mean?

2. CURRICULUM DEVELOPMENT.

A. Conclusions. The curriculum development unit is adequately staffed and organized but lack of detailed orientation and other non-PRONEBI-specific demands on the time of the curriculum development teams (e.g., translating the National Constitution) have led to wide variation in the pedagogical adequacy of the student texts and teacher guides developed for the different language areas.

A parallel bilingual model which encourages instruction in the native language in preschool and first grade, then dual use of Mayan and Spanish as languages of instruction in subsequent grades is the model advocated by all levels of PRONEBI. This model is pedagogically appropriate for those communities where the perceived

Need for bilingual

need is greatest--where virtually all children are entering school monolingual in a Mayan language. This model, however, is not appropriate for PRONEBI schools where children have considerable Spanish proficiency upon entering preschool or in classrooms containing children who are monolingual in Spanish.

Teachers' unfamiliarity with Mayan as a language of instruction (versus an oral language for use at home and in the community) tends to hinder program implementation. Few of the teachers have studied an Indigenous language formally, and most are not comfortably biliterate in their first language. It also appears that there is some mis-assignment of teachers to language areas. Despite the inservice training provided by PRONEBI, teachers still express insecurity in reading and writing their native language.

what can be done about this? training? grammar? technique?

Linkages with those institutions which train bilingual students to teach in rural Indigenous areas (e.g., Escuela Normal de Santa Lucia Utatlan) have not been fully developed.

how are these linkages to be accomplished?

A number of physical and logistic factors also hinder model implementation. Overcrowded classrooms, lack of rudimentary materials such as chalk and serviceable blackboards, a general dissatisfaction with PRONEBI and AID in delivering school furniture when originally promised, some dissatisfaction with the instructional materials themselves, and unavoidable interruptions in the inservice schedule, have all contributed to less than optimal use of the instructional materials at some schools. Although government programs are addressing nutritional and health deficiencies in the children, these deficiencies also continue to undermine student scholastic achievement.

(Need to have more in-service school feeding program!)

All parents interviewed said they were involved in school affairs, generally through contributions to school maintenance or attendance at school promotional activities. Parents' primary concern in sending their children to school is that the children learn to read and write (in Spanish). The basic criteria for success are seen as being able to read, sign documents and write a letter or telegram. In those communities where the program has been carefully explained, parents see the advantage of a bilingual program in aiding their children to learn Spanish.

How is program being explained to parents? what is the P.B. program?

B. Recommendations. One way to allow the current parallel language development model to be more widely responsive to the needs of communities with varying degrees of bilingualism is to provide bilingual, rather than monolingual, versions of the student texts. This could be accomplished either through developing parallel versions of the curriculum materials in Spanish for preschool and first grade or by including Spanish translations within the current textual materials.

What is being done in this regard?

Recommendations are vague. If program to be implemented, they will need to be translated into the specific steps or actions which need to be taken.

First language literacy training should be made an integral part of the inservice training for teachers. The training should emphasize exercises and activities for developing children's first language literacy but should also provide the teachers with practice in reading and writing their first language.

PRONEBI should make attempts to establish working relationships with the major preservice training institutes involved in preparing rural bilingual teachers (e.g., Santa Lucia Utatlan).

How is it going to be done? What needs to be done?

Additional study of the Personnel Department practices in assigning bilingual teachers would be helpful.

If the impact of the curriculum materials is to be accurately measured, PRONEBI must know the degree to which the bilingual curriculum is actually implemented, and under what conditions. Efforts should be made to provide program classrooms with the minimum enabling physical conditions.

A comprehensive communications plan for informing communities about the bilingual education program should be developed and implemented. This plan should incorporate the felt needs of parents, such as their desire that school prepare the children to write a letter, into the informational campaign.

Who is to do this? How should it be accomplished?

3. TEXTUAL MATERIALS.

A. Conclusions. The instructional materials accurately reflect the national primary education objectives and, with the exception of the Mayan language texts, are consistent across the four language areas. The attractive texts appear to be culturally and linguistically appropriate for the areas in which they were developed. Dialect differences, however, are substantial in some of the expanded geographical areas in which PRONEBI is working and as yet little attempt has been made to provide teachers with approaches for dealing with such differences.

Are the teachers going to understand the materials?

What can be done about the problem of dialect differences?

There are two critical weaknesses in the instructional materials. First, teachers interviewed generally found the texts too difficult for their students and felt the guides did not offer sufficiently detailed information to aid them in efficiently using the texts. Second, while there is wide variation in the pedagogical adequacy of the teachers guides and student texts, a number of consistent problems exist in varying degrees across all of them. These are: a reliance on teacher-centered learning; an overwhelming emphasis on rote learning; lack of consistency with child

Are they really relevant? Is it really essential for children, for example, to know Roman numerals?

Maybe we need to look at programmed teaching / programmed learning materials being used in Philippines, Indonesia, Malaya, etc.

development principles and a corresponding premature assumption of literacy; few creative classroom activities; failure to indicate adequately how student texts are to be used; lack of integration with previous Guatemalan curricular innovations; and lack of attention to the language needs of the broad speech communities. Many of these deficiencies exist also in the national curriculum guides upon which the bilingual curriculum was based.

What will AID do about this very basic and very demanding curriculum?

B. Recommendations. Teacher guides must be revised to suggest more creative activities, provide detailed lesson plans to accompany the suggested activities, offer activities that involve students directly and personally, and provide more varied activities. As such revisions would be very cost effective, as opposed to extensive revisions of the texts, or expanded inservice training, this should be a high priority.

Who has the resources to do this?

Varied techniques to turn what is currently perceived to be the problem of dialect differences into opportunities for student learning need to be incorporated into the teacher guides in all subject areas.

The Mayan language texts should be revised so that they are sequenced to take into greater consideration the cognitive, social and linguistic development of young children.

Technical assistance should be sought in the revision of the teacher's guides to make teaching methods more applicable to the target student populations, and to make more explicit the bilingual approach being followed by PRONEBI. This assistance could be either national or international but requires experience with Guatemalan rural schooling, child development, and the production of creative pedagogical materials.

What is AID doing about this?

PRONEBI and AID should consider a short-term observation tour abroad to an organization specializing in the development of early childhood bilingual curriculum materials for the curriculum development teams. The broader perspective on the curriculum development process gained by such a tour would aid in making appropriate revisions in the texts.

Is AID considering this?

4. TRAINING.

A. Conclusions. The professionalization program for bilingual promoters is well organized and implemented, although cramped housing for the training unit and lack of equipment hinder optimum efficiency. Despite logistic difficulties, promoters are attending

classes and demonstrating active participation in the professionalization program.

The inservice training program for bilingual teachers is well organized and well attended by teachers who are generally positive about the experience. The training has been largely successful in winning the teachers' acceptance of the philosophy and goals of PRONEBI.

PRONEBI relies on inservice training sessions to overcome deficiencies in the teacher guides and texts. As the trainers themselves lack experience teaching with rural primary school texts however, the training activities seldom deal with the specifics of how to use the instructional materials in the rural classroom.

Need to know more about the specifics of training

The university courses for supervisors and coordinators are well organized, offer topics related theoretically to bilingual education program implementation, and are taught by well-known Guatemalan scholars. The professors, however, appear to have little experience with the practical aspects of applying their disciplines to the implementation of a bilingual program. The academic achievement of the students in the two university programs varies a great deal. Nearly all of the students in the degree program are successfully completing their course work, whereas a third of those in the short course in administration for supervisors are encountering difficulties.

A number of factors have contributed to the academic problems of the supervisors. These include workload and time demands, lack of sufficient interest or preparation for university studies, unfamiliarity with the goals of PRONEBI, and a lack of relevance of course content to the direct implementation of the PRONEBI program.

B. Recommendations. Further training in Mayan language literacy and the use of the texts and teacher guides in rural schools should be provided to PRONEBI teachers. To be effective, however, the teacher trainers need a short course on how to use the PRONEBI texts in the rural classrooms. This course should be given by an experienced bilingual educator, who is very familiar with Guatemalan rural schooling.

We need to provide training for trainers.

quality of trainers!

All individuals involved in training. PRONEBI teachers, supervisors, and in-house personnel should have field experience in the PRONEBI schools. Where feasible, such experience might consist of a week serving as a teacher's aide in an isolated community. This type of experience would assist both inservice trainers and university personnel to adapt their courses to the needs of the program.

Anything being done about this?

5. SUPERVISION.

A. Conclusions. The supervision subsystem coordinated by PRONEBI within the national educational system is functioning well at this stage of project development. Supervisors are viewed positively by teachers, who feel that they are providing orientation as opposed to inspection.

The necessities of the PRONEBI schools limit much of the supervisors' contact with the local communities to the resolution of overt problems that arise, such as parents removing their children from the schools as a result of misinformation about the bilingual program.

What does this mean. It sounds a decent introduction to the first manuscript!

PRONEBI has developed a series of instruments to aid supervisors in carrying out their duties. (In their prototype form, these instruments appear too extensive.)

B. Recommendations. PRONEBI must prioritize the activities in which supervisors are involved and work with field personnel to develop realistic schedules that are most advantageous to reaching project goals. For instance, preparing attendance and promotion summary charts can be done more efficiently at PRONEBI, thus freeing supervisors from this task.

When the prototype instruments developed for supervision are revised, they should be simplified and the research and evaluation unit should be consulted on any data retrieval forms that will serve evaluation or research purposes. This will facilitate data processing.

are they being revised?

6. RESEARCH AND EVALUATION.

A. Conclusions. The research and evaluation unit is efficiently run. As there is at present no unit chief, however, most administrative and technical duties are in the hands of the international consultant in evaluation. Although a unit chief is being sought, to date the recruitment effort has not met with success. This is a result of the unavailability of individuals with the necessary qualifications in computerized evaluation at the salary PRONEBI is willing to offer.

Are we going to get national TA to complement international?!

The test development and formative evaluation function of the research and evaluation unit is progressing well. This function will need to be ongoing over the life of the project to provide information for appropriate revisions in the curriculum materials and in PRONEBI's infrastructure.

A great deal of work in data collection and analysis is needed to develop a national impact evaluation design which will permit identification of treatment effects and the selection of a meaningful sample of both PRONEBI and non-PRONEBI schools.

B. Recommendations. PRONEBI should consider the possibility of offering a salary commensurate with those available in the information systems job market, to attract a qualified evaluation unit chief. If this is not feasible, PRONEBI might consider promoting someone within the unit to acting chief while that individual undergoes additional training. *This has been done.*

The additional tasks incumbent in identifying relevant school and community characteristics for developing a stratified random quasi-experimental evaluation design at the national level will require added manpower at a highly technical level of someone who is familiar with rural classroom conditions in Guatemala.

Need to discuss this with Sealy

7. TECHNICAL ASSISTANCE.

A. Conclusions. National consultants are highly qualified for their positions. Despite an emphasis on tangible products, the national consultants have achieved a high degree of integration with ongoing program operations. In some cases, however, the consultants are directly involved in program operations. This creates the danger that technology may not be transferred once the consulting contract has terminated. *How is this going to be rectified?*

The international technical assistance component of the program has been successful in meeting contracted goals. The emphasis on products, combined with the physical isolation of the component from other PRONEBI staff and the lack of designated counterparts, however, has limited the contributions made to staff development and technology transfer by the team. *How can AIT take advantage of contributions of international team?*

In the area of linguistics/anthropology all contractual goals in terms of products such as student dictionaries, language area histories, and grammar analyses, will have been met by June, 1987. No provisions have been made, however, for integrating the products into the overall curriculum development effort. *How is this to be accomplished?*

The contractual objectives related to the bilingual curriculum area of technical assistance have also largely been met. The lack of a counterpart and a concern among PRONEBI staff that the products developed by the consultant are not sufficiently adapted to the Guatemalan reality have limited their usefulness. *(The staff looked too incoherent (soil of a uneducated course) to me)*

The technical assistance in research and evaluation has been successful in aiding in the establishment of a research and evaluation unit in PRONEBI and beginning the development of evaluation systems for the program. The complexity of developing an appropriate evaluation design, the lack of a counterpart, and the need to provide formative evaluation information to the ongoing

Have found anyone here qualified who we could hire!

curriculum development effort, create a need for long term assistance in this area.

B. Recommendations. PRONEBI should consider regularizing the positions of those national consultants involved in program operations where no counterpart is being trained, or work to insure that counterparts are working with the national consultants in each of their areas of expertise. *How does AID accomplish this?*

Plans should be made to incorporate those items produced by the international consultants which have classroom application into the curriculum prior to the termination of the technical assistance contract. This should be done by involving the developers of the instructional materials in the design of activities using the products that can be incorporated into revisions in the teacher guides. *The TA is over so how will AID do?*

Technical assistance in evaluation and research should be continued and broadened. This assistance should be provided by the international consultant presently working in this area, if possible, to insure continuity and to take advantage of that individual's well developed working relationships with program staff. This assistance will be needed for the life of the project. *Scott should be brought back PRONAP & help with his role in PRONEBI some TA is needed also in other areas!*

Given the lack of understanding of the program and the resistance to it found in some local communities, technical assistance is needed in the area of social marketing. A national or international advisor should be sought to work with the public relations department of PRONEBI to develop an effective mass communications plan for informing Mayan communities about the program and encouraging their participation in it.

Anything done about this?

CHAPTER I

INTRODUCTION

In February of 1987, USAID/Guatemala contracted the Academy for Educational Development (AED) to provide an evaluation team which would assess the progress of Project No. 520-0282, the Primary Education Improvement Project (Bilingual Education). Through the mechanism of the Central American Education Field Technical Service contract, a team consisting of personnel from AED and its subcontractor, Juarez and Associates, was fielded to carry out the evaluation over approximately a two-month period. The study was a process evaluation with the following objectives: a) to assess the progress of the Project after one year by determining the adequacy and sufficiency of each of its six components; b) to identify weak areas/components of the Project; c) to establish priority areas for improvement or modification; d) to identify additional Project activities to be developed, such as community participation, and e) to recommend priorities for assignment of additional project funds, if necessary. This report presents the results of that evaluation.

A. Project Background

The National Bilingual Education Program (PRONEBI) came into existence through a governmental decree (No. 1093-84) in December of 1984. Its purpose is to support the coexistence of two cultures--Ladino and Indigenous--and their respective languages in Guatemala by promoting the harmonious development of the individual in two cultural and linguistic contexts, thereby contributing to a conscious definition of a Guatemalan nationality (GOG, 1984). A Ministerial accord on July 10, 1985, ratified the internal operating procedures of the program.

PRONEBI 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 Program is financed for the five year period from 1985 to 1990 by a loan (\$10.2 million) and a grant (\$3.3 million) from the U.S. Agency for International Development (AID) and by counterpart funds from the Guatemalan Government of approximately \$25 million.

PRONEBI has its antecedents in the National Bilingual Castellization Program which began in 1965. This program involves free use of the students' home language to facilitate understanding, and at the same time, a year of intensive instruction in oral Spanish language skills to five year old pre-primary school children. The program uses bilingual facilitators in largely monolingual indigenous areas of the country for pre-primary instruction, and thus, represents Guatemala's initial attempt at using a language of instruction other than Spanish.

First grade instruction in schools with a bilingual preschool program, however, has usually been given entirely in Spanish by native speakers of that language, who do not speak or understand the indigenous language of the children. Consequently, the primary school program has had limited success among indigenous populations. An experimental bilingual education project was funded by AID between 1980-1984. This project developed a linguistically and culturally relevant curriculum and tested the effect of the curriculum 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 national decree and the development of the Rural Primary Education Project.

This Project which has as a primary goal the expansion of the effects achieved in the pilot project, consists of six components. These are: Administration and Supervision, which will create a permanent unit, responsible for the administration of a national bilingual education program, within the Ministry of Education; Curriculum Development, which will create a bilingual curriculum and materials from pre-primary through fourth grade; Textbook Printing and School Furniture, which will provide texts, teacher guides, furniture, and equipment for rural schools; Training, which will provide in-service training in the use of the bilingual materials, long-term in-service professional upgrading training for pre-primary facilitators, and university training in bilingual education; Research and Evaluation, which will establish a permanent monitoring facility to support the bilingual education program; and Technical Assistance, which will provide consulting services to each of the previous five components.

B. GOG and AID Strategies

PRONEBI fits well within the goals of the Guatemalan government as stated in the National Education Plan. These include: to substantially improve access to primary education in the rural areas, especially for indigenous populations; to restructure the curriculum content and instructional materials to the characteristics, needs, and interests of the country's population groups; and to extend coverage of bilingual education for monolingual Indian children. Similarly, the project is consistent with the overall AID strategy of increasing basic education so that individuals can take advantage of other training opportunities later in life and can participate in an informed manner in the emergence of democratic political institutions. It also fits well into the USAID/Guatemala Mission sector strategy of spreading the benefits of growth to those groups previously disfranchised, and improving the

efficiency of the primary education system in Guatemala (USAID/Guatemala, 1984).

The project builds on previous AID-funded projects in the area of bilingual education in Guatemala. Under AID loan 520-V-015 a normal school at Santa Lucia Utatlan (Solola) was constructed and equipped to provide pre-service training for indigenous bilingual teachers. Graduates of this program are to be incorporated into PRONEBI as part of the current project. Under Loan 520-V-025 new bilingual promoters received training in bilingual teaching techniques at the pre-primary level. Many of these promoters will have their skills upgraded under the current project. Under Loan 520-V-029, pre-primary bilingual materials were printed and distributed on a national scale. In the present project these materials will be revised. In the Bilingual Education Project (520-0258), a prototype bilingual curriculum was developed and that curriculum is being expanded and refined under the Rural Primary Education Improvement Project.

C. Previous Evaluation Efforts

Preschool bilingual programs. About a dozen years after the initiation of the preschool bilingual programs ("castellanizacion") by the Rural Socio-Education Directorate (Socio-educativo Rural), Amaro and Letona (1978) prepared a report for the MOE which documented impressive gains in classrooms taught by bilingual promoters--who themselves had only a sixth grade education. Student achievement was shown to be greater than that obtained by rural children taught by monolingual Spanish-speaking teachers. Five years later, Amaro (1983) studied again the comparative effectiveness of bilingual promoters and monolingual teachers in a scientifically identified sample of rural schools. The same general findings were found to be operative in that AID-funded study.

Bilingual teacher training. The only public normal school in Guatemala that exclusively prepares rural bilingual teachers--Santa Lucia Utatlan (Solola)--has been the object of two AID/MOE evaluations. Molina, Guzman, and Escobar (1976) found many areas of the curriculum in need of strengthening. Seelye (1979), who did his study while the first graduating class was in its last year of preparation, verified many of the concerns of the prior evaluation and added a number of new concerns about the relevance of areas of the curriculum (i.e., "pensum") to the needs of rural bilingual classrooms. He found the morale and spirit ("mistica") of the older students to be high and they were looking forward to teaching in rural classrooms. A later follow-up study (Seelye and Castro Feinberg, 1980) visited a sample of Santa Lucia graduates in their rural classrooms and found most to be teaching bilingually.

Bilingual education. A baseline study of 120 rural Indigenous communities was carried out to gather information relevant to developing an experimental bilingual primary school program (Seelye,

Gonzalez Calat, Lopez Raquec, Sanchez Castillo, and Sween, 1979). Using much of the information provided by this study, a bilingual education pilot project began to develop instructional materials for the expansion of bilingual education through second grade in 40 pilot schools (selected from the 120 communities included in the baseline study). This project was evaluated subsequently by Stewart (1983), Amaro (1983), Seelye (1983), Newman (1984), and Troike (1985). These studies found student achievement to be greater in the bilingual experimental programs when compared to similar control schools.

D. Organization of the Report

The chapters following this introduction describe the procedures carried out in conducting the evaluation, detail the findings that resulted from this methodological approach, and present conclusions and recommendations derived from these findings.

Chapter II details the methodological approach employed and the data sources that were tapped during the evaluation.

Chapter III presents the findings of the evaluation team as to the progress made to date by each of the components of PRONEBI in reaching full implementation.

Chapter IV discusses the beneficiaries of the project to date and its contribution to institutional strengthening.

Chapter V summarizes the factors that have impinged on project implementation and what might be learned from them.

Chapter VI presents the evaluation team's conclusions about the progress of the program and offers recommendations for future activities.

CHAPTER II

EVALUATION METHODOLOGY

A. Scope of Evaluation

The evaluation was designed as a process evaluation with the overall objectives of assessing the progress of the project in each of its components after one year of implementation and making recommendations for improvements or modifications, if necessary. Specifically, the evaluation examined the adequacy and sufficiency of the project in each of its components. These were: administration; supervision; curriculum development; textbooks; training; research and evaluation; and technical assistance (national and international). After discussion with the AID technical officers these components were prioritized in terms of the emphasis to be given to each in the evaluation. Curriculum development was given the highest priority, followed by textbooks, training, supervision, research and evaluation, technical assistance, and administration.

B. Evaluation Team

A two-member team consisting of Ray Chesterfield, an educator with extensive experience in the evaluation of both bilingual programs for young children and rural primary school programs in Latin American (Evaluation Specialist and Chief of Party) and H. Ned Seelye, a specialist in bilingual curriculum development, bilingual program evaluation, and bilingual program administration, who has worked extensively in the Guatemalan context as well as in other areas of Latin America (Bilingual Curriculum Specialist) were responsible for the evaluation. Two Guatemalan professionals were added to the team to enhance the fieldwork component of the study through their familiarity with local sites and their ability in the vernacular. These individuals were: Lic. Oscar Velasquez Estrada, a former rural school teacher, who has held a number of administrative and training posts in the Guatemalan educational system; and Lic. Otilia Lux Garcia de Coti, a former faculty member in the program training bilingual teachers at the Normal School of Santa Lucia Utatlan and an experienced bilingual educator. (The curriculum vitae of all team members are included as an appendix to this report.)

The evaluation team was headquartered in the PRONEBI offices which form part of the Rural Directorate of the Ministry of Education, in Zone 1 of Guatemala City.

C. Methodological Approach

A multimethodological approach was used in conducting the evaluation. Various sources of information including documents, key informants within PRONEBI and AID, and school teachers, directors

and community members at local sites, were identified and data collection strategies designed for each. The strategy of triangulation, in which both principal investigators examined all pieces of information from their individual technical perspectives and in which the same topics of information were investigated through different sources, was employed to ensure the consistency of the data collected.

Review of Documents. A critical review was made of AID documents including the project paper, implementation letters and previous evaluations, and PRONEBI documents such as project descriptions, periodic reports, the national education objectives for primary education, curricula vitae, work scopes, training plans and materials. Historical sequencing of events and factors affecting project development and adequacy in a number of areas were extracted from these documents. In addition, all available curriculum materials and texts were reviewed for their congruence with the national educational objectives for primary education and 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. Key informants included: administrative personnel from PRONEBI and the Directorate of Rural Socio-Education, technical and administrative personnel from the PRONEBI sectors of preschool and primary education, training, curriculum development, and administration; personnel within the subsectors of the PRONEBI, such as supervision, language area curriculum development teams, finances, and public relations; AID personnel; World Bank personnel involved in financing the PRONEBI texts; and university professors involved in the continuing education phase of the PRONEBI program. In-depth interviews covering the areas of involvement of each set of key personnel were developed. The interviews were in a topical format that was broad enough so that the areas of common knowledge of the informants overlapped thereby providing multiple perspectives on the same phenomenon. (See Appendix A for a list of persons contacted).

Site selection and visits. Site visits were made to eighteen rural schools and to the normal school at Santa Lucia Uatlan. A sampling strategy for site selection was designed which would allow the team to maximize the variety of classrooms visited and to concentrate the evaluation effort on schools which were, at time of the evaluation, those where the greatest degree of implementation was to have taken place. This strategy consisted of defining the sampling universe as complete-intensive schools (escuelas completas intensivas). That is, those schools in the PRONEBI program offering classes through fourth grade and that presently have preschool, first grade and second grade teaching staff who are providing

instruction in one of the four principal Mayan languages. The PRONEBI database was used to define the universe. Thus, an implicit assumption of the sample selection was that PRONEBI schools which may have not yet been included in the database were not fully integrated into the program. In order to minimize external effects, those schools that had been part of the four-year pilot program or were participating in current activities of the Research and Evaluation component of PRONEBI were eliminated from consideration for the sample. Remaining candidate schools were stratified by language group and a random sample of three schools with relatively easy access and one with difficult access were chosen from each language group. In addition, one school outside the program was visited for the purposes of comparison with a nearby PRONEBI school. The 17 PRONEBI schools represented approximately 8 percent of the 220 schools which made up the sample universe. (See Appendix B for a list of sample sites.)

D. Instrumentation

Interview schedules. Interview schedules were developed for school directors, teachers, and community members. Those designed for directors focused on general information about the student population, and levels of community participation, as well as individual satisfaction with the new program. Teacher interviews dealt with understanding of the bilingual model and attitudes toward it, degree of utilization of the curriculum, satisfaction with training in the use of materials and supervision provided by PRONEBI, and parent participation in the program as well as any other problems outside the program that interfered with the day-to-day teaching and learning process. Interviews with community members dealt with their understanding and approval of the bilingual education program, their familiarity with the curriculum materials, and their participation in school activities. A total of 15 directors, 39 teachers, and 42 community members (34 individually and 8 in group situations), as well as 11 faculty members and administrative staff at the normal school were interviewed.

A combination of interview techniques were used with both teachers and community members. In most cases, individual face-to-face interviews were conducted. However, as both principal investigators of the evaluation team were experienced focus group moderators, this group interviewing technique was also used at times. This method, in which a moderator encourages groups of six to eight participants to voice their opinions on several subjects, often creates a freer interchange among participants. It was used, therefore, to generate additional topics to be considered in the evaluation. Classroom observations also were made in individual classrooms of the sample schools. Data collection combined the observational strategies of time and event sampling: spot observations lasting approximately five minutes were made by the principal investigators in each classroom throughout a site visit.

These periodic observations for a fixed amount of time over the school day permitted the gathering of systematic information on different classroom activities or events. The focus of the observations was on the presence and use of PRONEBI materials and language use by teachers and students in different classroom contexts.

Observations. Observations were made of a variety of the ongoing administrative and technical activities forming part of the PRONEBI program. These included administrative planning meetings, technical meetings, training strategy development meetings, and inservice training activities for bilingual preschool promoters and for second grade bilingual teachers.

E. Assumptions

A number of assumptions were made in carrying out this evaluation that should be made explicit. First, the evaluation team members were selected because of their extensive experience in bilingual education. Thus, the approach taken to the evaluation was a positive one of interested specialists attempting to provide a management tool that would assist program administrators and staff to improve the program.

Second, the evaluation team in its analysis assumed that the major objective of PRONEBI was that of improving rural school retention and promotion rates, increasing scholastic achievement, and developing bilingual individuals through educational interventions. Such ancillary activities of the organization as translation of national documents or the development of definitive orthographies in the Mayan languages were, therefore, ignored by the team except when they related to the principal objective.

Finally, in examining the curriculum materials and training procedures there was a bias on the part of the investigators toward preparing teachers to provide a variety of child-centered learning experiences which reflect local realities. This emphasis is based on the team members' long personal involvement with rural schooling and knowledge of what generally seems to work best in such settings.

F. Methodological Constraints

The primary methodological constraint to the evaluation was the difficulty in recruiting bilingual individuals from each of the four language areas to assist with community interviews during the site visit phase of the project. Owing to limited time and to the fact that many of the available bilingual individuals with experience in rural schooling were already working with PRONEBI, recruitment was limited largely to those individuals not working with PRONEBI whom the team members knew personally. Most of these professionals approached were not available for the period in which the site

visits were scheduled. Thus it was possible to recruit only one person, bilingual in Quiche and Spanish, to work full time with the evaluation team. To carry out interviews in the other language areas, the strategy of using researchers from the PRONEBI Research and Evaluation component to work with an evaluation team member as an interpreter was used when such researchers were available. On two of the site visits, however, the evaluation team had to use bilingual supervisory personnel who were directly involved in the PRONEBI program as interpreters. The consistency of the community data across all sites, however, suggests that the use of such personnel had little or no biasing effect on the information collected.

The lack of experienced bilingual personnel who were both independent of PRONEBI and who could be incorporated into the evaluation team also limited to one language--Quiche--the analysis of the semantic content of those curriculum materials that were designed to teach a Mayan language. This limit was overcome to some extent by intensive discussions with the curriculum teams developing materials for each of the language areas. (In the case of the other academic subjects--Spanish language, mathematics, natural science, social studies, and a series of "applied" subjects such as home economics--the content was identical across language areas. Consequently, this limitation did not materially affect the evaluation team's analysis of these curriculum areas.)

Lack of precise information on the reasons for schools withdrawing from the PRONEBI program prevented the identification and inclusion in the sample of schools that had left the program because of disagreement with the curriculum or philosophy of the program, if any.

The variety of activities scheduled at the same time or on the same days in different locales, forced the evaluators to make choices as to which activities to observe. Thus, findings are based on a sample of the activities occurring within each component of PRONEBI rather than the universe of scheduled events.

Similarly, not all curriculum materials for each year in each language were available for review. The majority of materials were, however, reviewed and the consistency of the results suggest that the findings are generalizable.

Finally, the distance of homes from the school sites limited the data gathered from community members to a small number of cases. Again, the results were triangulated with other data sources to insure the confiability of the findings.

CHAPTER III

FINDINGS

This chapter details the findings for each of the seven priority areas within PRONEBI which were evaluated. The results of the evaluation with regard to the administration are presented first to provide the reader with an overview of the organization. The evaluation took a broad view of administration and examined the overall administrative structure of PRONEBI with the administration unit representing one component within that structure. Thus, description of the administrative structure and intradepartmental functions is presented first. This is followed by discussions of the qualifications of PRONEBI personnel for the positions they hold, interdepartmental management, and coordination with the funding agency.

The subsequent sections of the chapter deal with the different components of PRONEBI in the order of their priority in the evaluation as established by the responsible AID technical officers. Thus, the sequence of the findings is as follows: curriculum development; textual materials; training; supervision; research and evaluation; and technical assistance.

1. ADMINISTRATION

A. Overall Organization

PRONEBI is a component of the Directorate of Rural Socio-Education of the Ministry of Education. This directorate has the responsibility for all rural primary education programs within the country. The offices of all components of the directorate are housed within an open four-story building in the center of the downtown section of Guatemala City. There is a general complaint throughout the directorate about the noise and chemical pollution caused by the location and the openness of the building. Efforts have been made to rent another building for the directorate, but these have been unsuccessful to date.

Most of the contact between PRONEBI and other components of the Rural Socio-Education Directorate is at the program director level. There is a general feeling within PRONEBI that greater contact among different programs is needed at the operational level. The validity of this perception was supported when, during the evaluation period, teams from another component of the directorate arrived in PRONEBI communities with their own inservice training program for teachers. This obviously created confusion in the schools and communities as to program objectives. As a result of this overlap, a monthly meeting of administrators of the different directorate is being established to coordinate activities.

The director of PRONEDI is responsible for the overall functioning of the program. This individual represents the program at the ministerial level and is responsible for interacting with regional and local authorities. The principal decision-making body of the program is the Technical/Administrative Council. This body is made up of the director, subdirector, heads of each operational unit of the program, a rotating representative of the national consultants, the chief of party of the international consultants, and a representative of USAID. The Council meets weekly to make general policy decisions on program activities.

The office of the director is supported by the national and international consultants (see Appendix D, organizational chart). As will be discussed fully in the section of Technical Assistance, however, these consultants are generally involved directly with the component of PRONEDI that is related to their area of their expertise.

An office of public relations is also attached to the office of the director. This office is charged with informing governmental entities, social service programs, and local communities about the national bilingual education program. The office has produced informational letters, video presentations, and calendars and has recently begun radio spots. As the office is staffed by a single person and a part-time assistant with a minimum of equipment, no systematic national effort has yet been carried out.

Four components in the areas of preschool/primary education, curriculum development, training, and administration form the operational units of PRONEDI. The preschool/primary education unit is responsible for the coordination of supervisory activities for the bilingual schools and all of the related logistical support to the rural classrooms. The curriculum unit is responsible for producing the teachers guides, texts, and supplementary materials for preschool through fourth grade in four Mayan languages. The training unit coordinates a "professionalization" or academic upgrading program for bilingual promoters, an inservice program for bilingual teachers, and university training for PRONEDI in-house and field staffs. The administrative unit manages the finances of the organization, provides logistical support and is responsible for procurement and inventorying of material and furniture.

B. Operational Units

The administration unit consists of a unit chief, an accountant, a purchasing agent, a bookkeeper, a cashier, a motor pool coordinator, and a warehouseman. The primary function of this unit is to register incoming and outgoing funds to the PRONEDI program, procure and distribute materials and provide logistical support for field operations. The accounting and budgeting

procedures and controls are adequate and are subject to periodic audits by the Rural Socio-Education Directorate as well as the general accounting office. In addition, special audits have been scheduled and budgeted for during the life of the project.

A major problem of the administration unit has been the distribution of school furniture, which for reasons beyond the control of the administrative unit, has not yet been delivered to PRONEBI schools. Because of a nationalistic backlash which protested the original bid award to a Salvadoran company, the Ministry of Finance cancelled the contract and a new request for bids was made prior to selecting a Guatemalan furniture manufacturer. This caused delays of over a year in the delivery dates and reflected very negatively on PRONEBI in the local schools and communities which had been promised furniture. It is now expected that deliveries of furniture will begin in June of 1987.

With the exception of the public relations unit, which at times has had difficulty scheduling a vehicle for presentations at local events, the dispersal of vehicles has generally been satisfactory.

The preschool/primary education unit is well coordinated and supervisors generally feel that they are well supported by the unit. There were, however, a few complaints about the lateness with which requests for meetings were sent to them. It was suggested that telegrams should be sent well in advance of special meetings so that conflicts in scheduling in the field would be minimized.

The unit is also responsible for supporting the 150 teachers entering the program each year as a major GOG counterpart commitment and contribution. At the time of the evaluation, this contribution had been raised to 175 new positions for the upcoming year. The assignment of teachers to the bilingual classrooms has been a problem for this unit. The selection and assignment is done by the data processing department of the Ministry, rather than by PRONEBI. Personnel in PRONEBI feel that teachers exaggerate their language proficiency in order to qualify for the PRONEBI positions. They feel that a proficiency test must be given to prospective PRONEBI teachers to insure their qualifications. The unit is presently working with the Ministry's computer center to develop a more effective way of selecting teachers.

The curriculum development unit is headed by a temporary coordinator (the unit's permanent chief is presently enrolled in a Master's degree program abroad) and his assistant who coordinate activities among the four curriculum development teams. The curriculum development teams, representing the four major language areas of Mam, Cakchiquel, Quiche, and Kekchi, are made up of a team leader, an anthropologist/linguist, two writers, and a secretary. Coordination among the groups takes place through formal, regularly scheduled meetings which are attended by the unit coordinator, his

assistant, and the team leaders for each language area. These meetings focus on issues of general curriculum policy and on academic subject areas. While these meetings appear to have served well in establishing general objectives for the curriculum development effort, they have been less successful in developing a consistent pedagogical approach across the curriculum materials. As will be shown in the section of Textual Materials (see below), great variation was found in the pedagogical adequacy of the texts and guides.

The training unit has a coordinator who is responsible for the professionalization courses for bilingual promoters. The coordination of inservice training is a joint effort of the preschool/primary coordinator, the curriculum development coordinator and the training consultant. The training consultant coordinates the university training activities. The training unit suffers from a severe lack of space and equipment. Part of its function is to develop the curriculum for the professionalization activities. This often requires six to ten individuals with two typewriters at their disposal to share a single office.

There is also an active research and evaluation unit in PRONEBI. This unit, however, does not appear on the current organizational chart of the program. This may be because the unit is presently managed by the international evaluation consultant rather than PRONEBI personnel. This unit also lacks space as its single office at times contains up to 12 individuals involved in research, evaluation or data entry activities. As will be shown in the Evaluation section, the multiple responsibilities of this unit combined with the need for a well developed impact evaluation, will require additional expertise to ensure full operating capability of the unit.

C. Personnel

Many of the PRONEBI staff members had been employed under the pilot project (No. 520 - 0258) and therefore are knowledgeable about the program and have ongoing experience in bilingual education program design. Most are also studying in a university program thereby upgrading their academic qualifications for the positions they hold. As will be shown in subsequent sections, however, there is a lack of experience in textbook design, early childhood development, and teacher training in the use of student texts in rural classrooms on the part of curriculum development and preschool/primary unit personnel. There appears to be a high degree of motivation and enthusiasm on the part of PRONEBI staff. Program administrators attribute such commitment to having bilingualism recognized as a positive attribute or skill for the first time.

With the exception of the PRONEBI director and the administration unit staff, administrative staff generally lack extensive experience in program administration, but appear to have

learned on-the-job as the program is functioning well. There is a general feeling that staff size is sufficient and that the present workload and multiple responsibilities of staff members are a result of the rapid program expansion and will level off in time.

D. Communication with Other Units

Interdepartmental communication and controls. The management approach taken by the director is that of delegation of much of the day-to-day decision-making to the individual units. Planning is carried out by the units and administrative control functions are maintained through the weekly staff meetings with the heads of units, the technical assistance representatives and AID personnel. Other control mechanisms include the operations manuals being developed for each unit by the national consultants, the monthly reports submitted by the units, and the submittal of annual plans by each unit which are revised every six months after a general organizational meeting.

Communication between units is often carried out informally by the subdirector or the national consultants. Thus, the units have a relatively high degree of autonomy in day-to-day decisions. This has led to some communications breakdowns between units.

For example, until recently, there had been a general feeling among supervisors that curriculum developers didn't really understand the rural situations in which the supervisors and teachers worked. Conversely, the curriculum development units felt that the supervisors did not understand clearly the role of the curriculum in preserving Mayan language and culture. These problems have begun to be resolved through a series of meetings involving all of the supervisors and all of the curriculum development staffs. Through such meetings, a number of general guidelines for orienting teachers have been developed. In addition, steps have been taken to investigate the degree of bilingualism in different communities so as to develop pedagogical strategies to meet different local needs. The meetings, moreover, are run on a group consensus model. Although this management approach may afford the most appropriate manner of winning overall acceptance and integration of diverse opinions, it is quite time consuming and takes personnel away from their other supervisory duties. On balance, reaching consensus on major areas of policy probably is worth the extra effort at this point in PRONEBI's development.

The physical structure of the PRONEBI offices also has contributed to difficulties in communication. The different units are located on different floors of the building in which PRONEBI is housed. Individual components of the different units have expressed some concern that they are not heard "on the third floor" where the offices of the director are located.

Communication with AID. Formal communication with AID is well developed on a technical level and maintained weekly. As mentioned, AID representatives are included in the Technical/Administrative Council and AID personnel are invited to all PRONEBI activities. Recently, however, there was an AID-provoked budget problem that took some time to resolve and interfered with routine PRONEBI program operations. AID had been funding a controller position within PRONEBI to handle financial transactions with AID, and this position was included in PRONEBI's annual budget proposal to the agency for the current year. The position, however, was defunded by AID and the entire budget allocation to PRONEBI was held up until a solution to the problem could be found. Thus, short-term funding difficulties within PRONEBI were created and some PRONEBI personnel were not paid on time.

2. CURRICULUM DEVELOPMENT

This section begins with a discussion of the organization of the unit implementing the curriculum development component of the PRONEBI program. A curriculum is composed of all those elements which delineate the scope and sequence of the learning objectives. The most tangible manifestation of the formal curriculum, of course, is the teacher guides and student texts where issues of scope and sequence are spelled out for subsequent classroom implementation. Thus, the major portion of this section will focus on the philosophical underpinnings of the curriculum (i.e., the basic bilingual program models) and their pedagogical adequacy, and on the congruence between PRONEBI philosophy and classroom practice. A review of the written curricular materials (e.g., teacher guides and student texts) will be the subject of the next section.

A. Organization

The curriculum development unit consists of an acting coordinator, who is presently in charge while the coordinator completes graduate studies in bilingual education abroad, his assistant, a secretary, two illustrators, and a curriculum development team for each of the four language areas. The teams are made up of a curriculum coordinator, a linguist/anthropologist, two writers, and a secretary. The unit coordinator is the representative of all personnel on the technical council that is the main decision-making body within PRONEBI. He also submits reports on the unit's progress, and holds bimonthly meetings with the team coordinators to insure consistency on objectives across teams. Meetings also are held by subject matter (e.g., mathematics, social studies) to increase consistency in the curriculum development effort.

Despite these efforts variations exist in the materials (see below). Team members suggest that not enough attention is given to the detailed technical aspects of the guides and texts by the team charged with the unit's coordination. Other demands on the curriculum teams' time--demands which lend prestige to PRONEBI--also take away from the detail and time that could possibly be devoted to cross-fertilization among the teams. The teams have been asked to translate the national constitution and various laws, as well as speeches for dignitaries, into Mayan languages. All these activities have required great investments of time and have, consequently, delayed the curriculum development. They have, on the other hand, facilitated government acceptance of the bilingual programs.

B. Description of Bilingual Model

Parallel development in the home language and in Spanish as a second language, from preschool through sixth grade, is advocated by all sectors of PRONEBI as the general bilingual model. To promote

student comprehension, the principal language of the classroom is seen as one of the Indigenous languages, "with Spanish used simultaneously," through at least grade four. The actual role of each language -- Spanish and Mayan -- in the instructional process is still being discussed. The circumstances in which each is to be used are not yet clear. To teach students subject matter in a language the child understands, the sole language of the didactic materials through grade two (with the exception of the teacher guides and the Spanish as a second language materials) currently is one of the four major Mayan languages most widely spoken in the countryside--Cakchiquel, Quiche, Kekchi, and Mam. (Bilingual didactic materials for grades three and four are in the development stage; bilingual materials for grades five and six are not currently contemplated.) Spanish is, according to PRONEBI technicians, to be used orally through grade two in subjects such as mathematics, natural science, and social studies, while a Mayan language is used in both oral and written forms from preschool through grade four.

C. Pedagogical Adequacy of Model

The bilingual model described by PRONEBI is pedagogically appropriate for those communities where virtually all of the preschool and first grade students are monolingual in a Mayan language. There are hundreds of such communities. (PRONEBI does not have a listing of just how many such communities fit this category.)

The primary beneficiaries, by design, are the Mayan-speaking children in rural areas where Mam, Kekchi, Quiche, and Cakchiquel are spoken almost exclusively. There are, however, many other communities where a higher level of bilingualism requires some basic modifications in the current model. The site visits made by the evaluation team included indigenous communities where both the Mayan language and Spanish are spoken in the home and local community, and children in these communities could manipulate both languages upon entering school. Small numbers of monolingual Spanish-speaking children also were found in about twenty percent of the classrooms visited. Teaching subject matter entirely in the vernacular in preschool and primary grades containing such children would seem to violate the basic tenant of providing instruction in the language the child best understands. Teachers in this situation were observed to be using Spanish with these children so their education could proceed on a par with their classmates.

The matter of appropriate modifications in bilingual program design to accommodate more varied local circumstances currently is under study by a wide range of PRONEBI personnel: members of the curriculum teams, several national advisors, and by regional coordinators and supervisors. For PRONEBI to present a viable national model, this issue will have to be resolved.

A difficulty of implementing the present PRONEBI model with the current generation of teachers is that there are no bilingual promoters or bilingual teachers anywhere whose own formal education was effected through the medium of a Mayan language. Teachers, therefore, have to make an extra effort to use a Mayan language in the classroom to discuss academic topics which previously almost always were discussed in Spanish. According to many of the teachers interviewed, the "academic" vocabulary of even bilingual instructors is sometimes lacking in depth. This fact is especially critical with regards the task of their teaching Mayan languages as a school subject. Few of the teaching personnel have studied the language, hence few are comfortably literate in it, and few have a conscious, cognitive grasp of the Indigenous language structure. Hitherto, although bilingual preschool promoters and a scattering of other teachers used vernacular languages orally to aid student comprehension, the other language skills--reading and writing--were taught in Spanish.

One response to dealing with this anticipated difficulty (i.e., teachers untrained in the use of vernacular languages in the classroom) is seen by PRONEBI to be an elaborate inservice system (see the training section later in this report). Input into preservice institutions such as the Normal School at Santa Lucia Utatlan or the Instituto Indigena Santiago does not seem to be part of the PRONEBI strategy to obtain better trained bilingual teachers. An on-site visit to the normal school in Santa Lucia revealed little effort on the part of the normal school staff and administration to link into PRONEBI initiatives.

A second PRONEBI response to the teachers' unaccustomed use of Mayan languages in the classroom appears to be the above-mentioned exclusion of Spanish from the student-oriented didactic materials, thus increasing the likelihood that the instructors will use the vernacular in teaching the lessons. (The teacher guides are written in Spanish and most contain Spanish translations of the Mayan language student materials; some bilingual versions of the teacher guides were produced.)

The issue of pedagogical adequacy is dealt with further in the next main section on Textual Materials. See especially subsection E, Pedagogic adequacy of contents and format of didactic materials.

D. Congruence of the PRONEBI Bilingual Model and What Is Implemented at the Village Level

On a theoretical level, bilingual promoters and teachers can and do describe the parallel-language development model that PRONEBI advocates. The two-week inservice provided last year on PRONEBI's philosophy of bilingual education apparently succeeded in getting this message across.

On-site visits by the evaluation team revealed that implementation of the PRONEBI model one year after expanding to 400 schools from 40 is hindered by factors such as the slow distribution of textual materials to the rural classrooms, some dissatisfaction on the part of teachers with the instructional materials, unavoidable interruptions in the inservice schedule, seriously overcrowded classrooms, nutritional and health deficiencies in the children, attendance problems caused in part by seasonal labor migrations and by children orphaned by past violence who must help support their families, some instances of community opposition to the program, and varying levels of community monolingualism which, in turn, affects the appropriateness of the current PRONEBI model and didactic materials. While the evaluation team's on-site visits observed both promoters and teachers using the PRONEBI curricula, most instructors were not yet using them very much.

E. Parental Views on Curriculum

Parent sample. Thirty-four parents of children who attended the schools selected by the evaluation team for on-site visits were interviewed individually; most of the interviews were conducted in a Mayan language. Parents were asked seven questions pertaining to general curricular issues, and two questions pertaining to textual materials. (These latter two questions are reported in the next section.)

General satisfaction with the school. Most parents (82%) were satisfied with the education their children were receiving. This is consistent with the results of a study on linguistic attitudes of a sample of 312 parents carried out by the linguistic/anthropological technical assistance component of PRONEBI. The preliminary results of this study showed 87% of the parent sample to be favorable toward their children's schooling.

The most important skills. While only one parent specifically mentioned Spanish as the most useful skill that students learned in school, 76% of the parents interviewed implied that Spanish was the most important skill by identifying reading and writing as the principal skills to be learned. When parents were asked where school-learned skills could be applied, 64% said that they could be applied in the local community, 52% mentioned the city, and 79% mentioned a series of places such as military service and distant market sites. Specific criteria identified by parents were writing or reading a letter, reading a document or signing one's name. Again, these results are consistent with the PRONEBI study which found that 92% of the parents interviewed wanted their children to learn to read and write.

Involvement in school affairs. Since all of the interviewed parents said they were involved in school events, they were asked for specific ways in which they aided the school. About one-third

(32%) said they provided physical assistance by helping construct classrooms, prepare lunch, maintaining the school premises clean. Others mentioned enrolling students (5%), contributing funds (14%), organizing school committees (Comite Central de la Comunidad) (17%), and in attending school meetings (2%).

What should be taught? Parents had many opinions concerning what they thought should be taught in school. "Correct oral expression in both languages" was the most frequently mentioned skill (47%), followed closely by "reading and writing correctly" (44%). Twenty percent indicated that "moral upbringing" ("formacion moral") should be taught. Many parents identified cultivating eatable plants (17%), weaving and other crafts (11%), animal husbandry (5%). One parent each mentioned "chores" ("oficios"), getting a job, construction ("albanileria"), and sports.

Language use. All of the interviewed parents thought it was a good idea to use both languages in the instructional process. A third (32%) pointed out that it was necessary for communication within their ethnic community. When asked if they would accept their children forgetting their Mayan language, 94% of the parents responded negatively.

Parental suggestions. Some parents identified areas where they felt improvement was needed. The two most common suggestions were: adult literacy classes (11%) and more school materials such as notebooks, texts, and pencils should be provided (11%). Other suggestions were: enlarging the classrooms (8%), providing school furniture (8%), adding secondary grade levels ("basico") (8%), and providing school lunches ("refaccion escolar").

3. INSTRUCTIONAL MATERIALS

A. Description of Didactic Materials

Three types of curricular materials have been prepared: Spanish as a second language texts, Mayan language texts for each of the four largest linguistic areas (Mam, Kekchi, Quiche, Cakchiquel), subject-matter texts for mathematics, natural science, and social studies; teacher guides for all of these areas, plus "applied" areas such as home economics, industrial arts, agriculture, physical education and music; and posters and other classroom visuals to supplement the written materials. As of April, 1987, instructional materials have been published for preschool, and first and second grades. Third and fourth grade materials are in various preliminary drafts.

B. Content Decisions

The four curriculum development teams, one for each language area, are in charge of developing the curricular models and prototypes, piloting the instructional materials, eliciting feedback from teachers, revising the materials, and preparation of camera ready copy for subsequent printing. Final curriculum content is decided by these curriculum development teams in conjunction with the curriculum unit coordinator.

C. Consistency of Content Across Language Areas

The scope, sequence, and content topics of each student text designed to teach Mayan languages, and the corresponding teacher guides, were independently developed by each of the four curriculum teams. One Spanish as a second language text is used for all four language areas. All other academic areas addressed by the curriculum teams--mathematics, natural science, social studies, practical applications (e.g., industrial arts, home economics, agriculture)--differ only in the language of exposition (i.e., Mam, Kekchi, Quiche, Cakchiquel).

D. Consistency of Contents with Bilingual Model Objectives

The instructional objectives contained in the teacher guides are all taken from the national curricular objectives. Importantly, the contents of the student didactic materials all relate directly to the objectives in the teacher guides. Suggestions are presented in the teacher guides on how to realize each instructional objective and the relevant page(s) of the student didactic materials are cross-referenced in all of the guides except for the one on the Mam language. The suggested learning activities also relate directly to the stated objectives. With the exception of the guides that accompany the texts for teaching Mayan languages, all of the

objectives for any one subject matter at a given grade level are the same.

This congruence with the national objectives facilitates MOE acceptance of the bilingual program and eases the integration of PRONEBI schools into the broad context of MOE supportive services (e.g., the supervisory system). On the other hand, the national objectives were not designed with the rural Indigenous student in mind.

E. Pedagogic Adequacy of Contents and Format of Didactic Materials

Strengths. The student texts contain many strengths. Great effort obviously was expended to insure that the language of the texts contained the forms most commonly in use throughout the relevant Departamento where the didactic materials were piloted.

The graphics which illustrate the student texts appear to be well done and culturally authentic in a generic, trans-Mayan sense. That is, the graphics are generally the same for all four culture areas but they are accepted by users of different language/culture areas as comfortably "homey." (There was some discontent on the part of the curriculum teams with regards changes in some graphics which were made by the printers without prior consultation with the teams.)

The Mayan orthographies used in the texts have achieved general acceptance by the major linguistic agencies (i.e., Instituto Indigenista, Instituto Linguistico de Verano, Instituto Linguistico Francisco Marroquin).

Many "nice touches" occur in the texts; for example, the social studies texts contain the Himno Nacional in all four Mayan languages.

All in all, the student texts are pleasant, linguistically and culturally appropriate for the rural areas they were meant to serve--mostly monolingual in one (not two or more) of the four Mayan languages that are spoken by the majority of rural people.

The teacher guides have many outstanding strengths, too. Student learning objectives are clearly related to both the suggested classroom activities and to the relevant pages in the student texts. The general format is clear: student objectives in one column, suggested activities in another, and "evidences of learning" in a third column. Some--but not all--of the guides have appended Spanish translations of the text.

The teacher guides in the "applied areas" (e.g., agriculture, home economics, physical education) are well done (although some of the graphics that appeared in the pilot version for agriculture would have added to the final version).

The teacher guides for mathematics contain much variety in their suggested activities and both concrete and abstract reasoning are incorporated.

The social studies materials engender respect for other people and courtesy in meeting others; good civic habits; punctuality; cooperation; and provide skills in participation in formal activities within and outside of the school setting.

Many relevant philosophical issues were examined by the original curriculum development teams and much of this discussion provides a sound basis upon which to refine the didactic materials.

Notwithstanding these commendable strengths, there are several troublesome issues with regards the student texts and many problematic issues with regards the contents of most of the teacher guides.

Scope of instructional materials evaluation. Preschool, first, and second grade materials were reviewed by the evaluation team and they revealed similar types of problems. In the rating matrix and in the discussion that follows, first grade instructional materials will illustrate these weaknesses unless otherwise noted. There is a wide variation in the quality of the texts at any given grade level, with some of the materials being much better pedagogically than others.

The following exhibit presents a matrix summarizing the key features in the instructional materials that the evaluation team assessed. The ratings--from 0 to 5--are an average of the scores assigned on each attribute by each member of the team who examined the materials. The major strengths are listed above. A discussion of some major weaknesses is presented immediately after the following Materials Evaluation Matrix.

EXHIBIT 1

MATERIALS EVALUATION MATRIX:
STUDENT AND TEACHER FIRST GRADE INSTRUCTIONAL MATERIALS

	Spanish	Mayan	Math	Science	SocStud	Others
Physical Attributes of Student Texts:						
Attractiveness.....	5	5	5	5	5	--
Clear printing.....	5	5	5	5	5	--
Attractive visuals.....	5	5	5	5	5	--
Color.....	3	3	3	3	3	--
Artistic layout.....	5	5	5	5	5	--
Culturally appropriate...	5	5	5	5	5	--
Durable text paper.....	5	5	5	5	5	--
Durable poster paper for visual supplements.	2	2	2	2	2	--
Linguistic Appropriateness:						
Applicable to pilot communities.....	5	5	5	5	5	--
Applicable to wider speech community.....	5	3	3	3	3	--
Standardized Mayan orthography.....	--	5	5	5	5	--
Standardized Spanish orthography.....	5	--	--	--	--	5
Vocabulary development appropriate for given level.....	5	5	5	5	5	--
Sentence development appropriate for given level.....	3	1	1	1	1	--
Objectives Presented in Teacher Guides:						
Clearly stated.....	5	5	5	5	5	--
Reflect national objectives.....	--	5	5	5	5	5
Appropriate.....	3	3	3	3	3	4
Classroom Activities Suggested in Teacher Guides:						
Multi-sensory and motor activity.....	3	3	3	1	1	4
Small group activity....	0	0	0	0	2	3
Hands-on activity.....	0	0	4	0	2	3
Innovative activity.....	0	2	4	1	2	3

Personal/affective involvement of student.	0	0	0	0	0	0
Use of Student Texts Suggested in Teacher Guides:						
Use of texts indicated..	2	1	2	2	2	2
Clearly cross-referenced	4	4	4	4	4	4
Appropriate.....	3	3	3	3	3	3
Detailed directions for ease of application	1	1	1	1	1	1
Interesting.....	2	2	2	2	2	2
Appropriateness of visual supplements.....	4	4	4	4	4	4
Content Presentation in Student Texts:						
Logical.....	4	4	4	4	4	4
Clear.....	3	3	3	3	3	4
Motivating.....	3	3	3	3	3	3
Student-centered.....	1	1	1	1	1	2
Community-centered.....	2	5	3	3	4	4
Generalization of concepts in Mayan.....	--	0	0	0	0	0
Generalization of concepts in Spanish...	0	--	0	0	0	0
Focal Skills Development:						
Clearly stated.....	3	3	3	1	1	3
Sequential.....	2	2	4	3	3	3
Reinforcement.....	3	3	3	2	2	3
Second language (oral)...	3	--	4	3	3	3
Concomitant Learnings:						
Organizing.....	1	2	5	2	3	3
Logical thinking.....	2	2	5	1	1	2
Creative thinking.....	0	1	3	1	2	2
Generalizing.....	2	2	3	2	2	2
Evaluation.....	1	1	1	1	1	2
Teacher Evaluation Procedures:						
Pre-and posttests or checklists.....	0	0	0	0	0	0
Self-scoring tests.....	0	0	0	0	0	0
System for unit testing..	3	3	3	3	3	3
Immediacy of feedback to students.....	1	1	1	1	1	1
Criteria for refinement of evaluations by teachers.....	0	0	0	0	0	0

Problem areas. Nine major problem areas were detected in the didactic materials: (1) the learning model is teacher-centered; (2) there is an emphasis on rote learning; (3) the materials prematurely assume student literacy; (4) few non-traditional classroom activities are suggested; (5) the use of the materials is not intuitive even to experienced teachers; (6) there is no sign of the incorporation of any Guatemalan curriculum reforms of the past 30 years; (7) inattention to dialect differences provokes teacher resistance; (8) the format of the student texts limits their application to monolingual communities; and (9) there is no criterion suggesting when and how students are to use their notebooks--the most common "active" classroom writing activity. Many of these problems also were detected in the national curriculum guides upon which the bilingual curriculum was based.

1. Teacher-centered learning. A major weakness of the guides and texts is that they rarely suggest ways to involve the student actively in the learning process. The instructional materials never suggest ways to involved individual students personally in the learning; that is, individual student feelings and opinions are not elicited.

The vast majority of teaching techniques suggested in the guides are teacher-centered--even when the activity in question clearly should be student-centered. The following, for example, is taken from the first grade social studies text: "Explain to the children that houses protect us from heat, cold, rain" ("Explicue a los ninos que la casa nos protege contra el calor, frio, lluvia"). Another example from the same guide where the teacher is directed to tell the students the answer to something they could very well answer from teacher questions instead of from teacher information: "Describe a family" ("Describe lo que es una familia").

There are few, if any, questions directed to the student in the student texts. For example, neither the first grade social studies or natural science texts contain any questions at all (and only 18 questions are modeled in the corresponding social studies teacher guide), and the second grade social studies text contains only 13 questions (and none are modeled in the corresponding teacher guide). The few questions that do appear are all directed at checking content comprehension--none asks students for their ideas or reactions. Virtually all of the sentences in the student texts are straightforward expositional statements that tend to be dull and listless, without a sense of poetry or humor. The student texts appear to be made more with the teacher in mind than with the student.

There were no activities in any of the four sets of instructional materials designed to teach Mayan languages that related to one of the four overreaching objectives stated in the

beginning of the teacher guides--"the students will, in their home language write with ease and clarity paragraphs that express their ideas, interests, and necessities" ("El alumno debera en su Idioma Materno...Escribir con habilidad y claridad parrafos que expresen sus ideas, intereses y necesidades"). (When queried about this, several curriculum teams indicated that these overreaching goals were prepared hurriedly at press time.)

Only 11% of the activities (21 of 183) suggested in the mathematics guide involve the student actively.

The social studies and natural science teacher guides were more successful in suggesting activities to involve the student actively in the learning process--78 of 172 activities (45%) in the social studies guide and 38 of 101 activities (38%) in the natural science guide. Still, the majority of suggested activities (55% and 62%, respectively) view the student as a passive agent, a sponge soaking up what the teacher or text said.

The teacher guide for Spanish language instruction suggests 119 activities. Of these, only 14 (12%) involve the student actively in the learning process.

The teacher guides that most frequently view the student as an active (vs. passive) learner was the Manual de Areas Practicas. Eighty percent of the physical education activities, 61% of the agricultural activities, 60% of the cooperativism ("cooperativismo") activities, 54% of the music activities, 52% of the home economics activities, and 38% of the industrial arts activities actively involved the student.

On balance, the learning model implied by the overwhelming majority of learning activities suggested in the teacher guides--that of teacher-centered learning--is at least a century out of date.

2. Emphasis on rote learning. The teacher guide for the Spanish language course presents 10 learning activities that relate to gaining a mastery of oral Spanish. Of these activities, only one asks for the students to demonstrate an understanding of what they learned. Of the 17 objectives pertaining to reading and writing Spanish, none deals with the issue of student comprehension. (The first grade Spanish (as a first language) objectives in the national curriculum include only one that deals with comprehension.)

Of the Maya language materials, the best was the Kekchi which had the most elaborated teacher guide and the most varied activities in the student text. Even so, of the 28 student learning objectives only eight concerned themselves with student comprehension rather than with rote mechanical skills. (The Quiche guide, on the other hand, did not have any objectives dealing directly with student

comprehension, and the Cakchiquel guide only had one objective dealing with student comprehension.) Of the 112 classroom activities suggested by the Kekchi guide, 10 focused on student comprehension.

Thinking skills in general are poorly served by most of the instructional materials (mathematics is an exception). Activities to awaken student creativity are exceedingly rare in the teacher guides.

3. Premature assumption of literacy. Literacy is assumed prematurely in all of the subject-matter areas. (The mathematics materials are the least guilty of this.) When questioned about this assumption, the curriculum teams reasoned that since the "complete" PRONEBI model contains a bilingual preschool, students reach first grade knowing how to write in their home language. On site observations by the evaluation team, however, suggest that this assumption contains three weaknesses. First, reading readiness--rather than actual literacy--is the goal of three of the four language areas preschool materials. Second, in spite of counsel to the contrary, many preschool promoters are preparing students for literacy in Spanish rather than for literacy in the home language. Third, many students enter first grade directly without benefit of preschool. An examination of first grade student notebooks (cuadernos) bears out the fact that many students were unable to write whole words, let alone sentences, in any language by the third month of instruction (March, 1987).

The reader is struck by the length of the sentences in all of the student texts. The first social studies lesson in grade one, to use an example, contains one sentence--of about 20 words. (The exact word length differs slightly from language to language.) The average sentence length for the first three lessons of the first grade social studies text in Quiche, for example, is 19 words. Page 17 of the Mam language text presents three sentences: the first contains 16 words; the second 19 words; and the third, 25 words.

Little attempt was made to correlate the vocabulary in the academic areas with that of the Mayan language texts of the same grade levels. Consequently, the lexical items often are beyond the reading level of the students. When one combines long sentences with new words, the result is a text whose written language is beyond the reach of most students. (Curriculum team members who are involved in training teachers in the use of the texts offered no suggestions on what the teachers should do about this.)

4. Few non-traditional classroom activities. Perhaps the best set of materials is in the area of mathematics, where a long, sequenced list of objectives in the teacher guide is supplemented by many varied activities which often involve the use of student manipulables. (Curiously, the unit on the use of the zero does not

mention that the first people on this planet to invent the zero were the Maya; it was independently invented several centuries later in India and the Arab world.)

Innovative classroom activities, in contrast to commonplace ones, were evidenced by only eight activities--out of a total of 112 activities--in the best of the Maya language teacher guides, the Kekchi. (No innovative activities were found in the Quiche guide.)

Student activities suggested in the teacher guides are almost always seen in the collective, with the instructor at the head of the class. Only two percent of the activities in the first grade social studies guide (four out of 171 activities) suggest that the students be divided into smaller groups. The agricultural guide, for example, does not suggest any activities to divide students into small groups to use tools, to till the ground, or to sow. (Only one of the Quiche activities was thus focused.) In the four guides to Mayan language learning, small group work was contemplated in only one activity in one of the guides.

5. Use of the texts is not intuitive. The intended use of any given lesson in the student texts is not intuitively apparent to even experienced teachers. One opens the student texts and wonders where the lessons begin and end, what is the student (and teacher) to do, how is student success to be measured. The teacher guides help clarify these issues but do not go nearly far enough in suggesting what can be done to enhance learning. Teachers are left to their own devices, supplemented by one or two weeks of PRONEBI inservice each year.

How student texts interface with learning objectives is only weakly indicated. Although the learning objectives contained in the teacher guides do relate directly to the cross-referenced sections in the student texts, the teacher is given little assistance in how to effect the interface. Any direct use of the student text is specifically suggested in few of the suggested activities (11 out of 171 activities--six percent--contained in the first grade social studies text, for instance). And most of these suggestions are the equivalent of "Dialogue with the students about the pictures contained in lesson 28" ("Dialogue con los niños sobre las graficas de la leccion 28"). The Mam language teacher's guide does not give any indication that there is an accompanying student text. On the other hand, with the exception of the Mam language text, the teacher guides make it clear which pages of the student texts are relevant to any given lesson; they just do not have much to say about how to use the texts in the development of the lesson.

The result is a curriculum that depends heavily on inservice to work--a very costly intervention that needs to be repeated every year.

6. No sign of prior curricular innovations. There is no indication in the teacher guides (or in the student texts) that any attempt has been made to reflect the two major pedagogical techniques engendered by prior AID/COC curriculum reform projects (015 and 025). These are the interdisciplinary teaching of academic content through school projects such as a garden ("integracion de materias; trabajar a base de proyectos"), and the purposeful involvement of children in the resolution of community projects ("trabajar a base de problemas comunales") such as building latrines or assisting with a community construction project.

In a related issue, the number and scope of activities designed to teach important learning objectives sometimes seems sparse. For instance, in the home economics guide, only one activity (out of 48) deals with personal hygiene. Some learning objectives are noticeable by their absence: no activity in the home economics guide attempts to awaken creativity.

7. Inattention to dialect variations. Once the pilot project expanded beyond the initial 40 schools in four Departamentos to the present 400 schools in nine Departamentos, dialect variations became more troublesome. In some language areas, Mam is the best example, dialect differences were substantial from Departamento to Departamento (e.g., Mam de Huehuetenango and Mam de San Marcos), while in other language areas (e.g., Kekchi) the prestige of one dialect area (Coban) minimizes dialect problems.

Other than to occasionally place a usually sparse list of dialect variations at the end of some didactic materials, dialect differences were not taken into account in the original development of the texts. That is, dialect differences were ignored. This limits somewhat the usefulness of the instructional materials to the wider speech community.

The most common complaint of teachers in the schools sampled by the evaluation team focused on dialect differences between teachers and students, or students and text, or teachers and text.

8. Application of student texts limited to monolingual communities. Presently, all first and second grade student texts are written exclusively in a Mayan language. This is quite appropriate for monolingual communities. Many rural communities with sizeable Indigenous populations, however, contain many children who are Spanish-dominant, or children who have achieved considerable fluency in Spanish prior to entering first grade. For use of the student texts to be expanded to communities where many of the students are bilingual, or monolingual in Spanish, PRONEDI will have to reexamine the issue of whether the student texts should be published in a bilingual version.

9. Confused use of student notebooks. One of the two most common classroom activities the evaluation team observed that involved students in an active role was for them to be copying things into their notebooks. (The other "active" activity was for students to respond chorally to teacher questions.) Occasionally, the teacher guides suggest that students be instructed to copy things in their notebooks ("Diga a los niños que lean y copien en su cuaderno las lecciones correspondientes al objetivo"). However, there appears to be no pattern (i.e., criterion) as to what types of exercises are to be copied. In practice, the multiple copying of letters or words seems to occupy much of the space in student notebooks. What principles of learning should be brought to bear in deciding what type of activities should utilize student notebook writing? This is an issue PRONEBI may want to spend some time on.

Editorial errors. Small copy editing errors were discovered in most of the materials. For example, in the mathematics guide the 6-page unit (pp. 28-33) on the use of Dienes logic blocks should have been labeled "Annex 1" and cross-referenced on page two of the guide; occasionally a sentence appears in the Spanish translation of the guide but does not appear in the student text in the Maya language (e.g., "Un día completo," p. 28 of the guide). Frequently, the glossaries at the end of the student texts do not contain all of the vocabulary presented in the texts. These editorial errors are not of a magnitude that would seriously detract from the quality of the didactic materials.

F. Level of Acceptance and Use of Instructional Materials by Coordinators, Supervisors, Teachers, Parents/Community

Coordinators and supervisors. The coordinators and supervisors have a fair grasp of the materials (as of March, 1987) and ongoing inservice is increasing their sophistication.

Teachers. Of the teachers interviewed by the evaluation team (39), only one thought that the curriculum materials were simple. Most teachers expressed the opinion that the materials were too difficult for their students, and some instructors said that the materials were too complex even for themselves. Many appeared to have some problems reading the Maya-language texts. This was alleviated somewhat by the Spanish translations which many--but not all--of the teacher guides contain. These criticisms had all surfaced during the pilot project (see Troike, 1985) and had been dealt with to some degree--but not to a sufficient degree. One 45-word sentence on the first page of a first grade pilot text, by way of example, was reduced to "only" 20 words.

Since the ways to implement the student texts are not intuitive--even for experienced teachers--actual use of the materials was dependent upon inservice training provided by PRONEBI. At the time of the evaluation team's on-site visits (March, 1987),

the second grade teachers had not yet been inserviced, although such training occurred several weeks later. (A national supervisors' strike had delayed the originally scheduled inservice training.) Most first grade teachers observed by the evaluation team were not using the materials either, however. When questioned, they indicated that the two weeks of inservice on how to use the didactic materials had not given them enough training for them to feel comfortable using the materials (see the training section that appears later in this report).

Parents. Only about 10% of the 34 parents interviewed had seen the student texts. This is not surprising since most of the teachers do not allow the texts to leave the classroom. A number of teachers expressed the view that this was necessary in order to maintain them in good condition.

G. Distribution of the Texts

Most preschool and first grade classrooms had received an allotment of guides and student texts, although not infrequently an insufficient number of texts had been sent. This was often the result of an unexpectedly large local enrollment; a number of preschool classes were observed where promoters had 70 or more students enrolled in their classes. Many second grade classrooms also had received an allotment of texts. In many cases, the school had received first and second grade materials only very recently, often the day before the scheduled visit by the evaluation team.

4. TRAINING

A. Organization of Training

The in-house training component of PRONEBI is made up of 11 regular PRONEBI staff and the national consultant for training. The curriculum development teams and supervisor also take part in the inservice training of grade school teachers. The training unit is responsible for coordinating three distinct types of activities: the academic upgrading or professionalization of bilingual promoters; the inservice training of teachers working in PRONEBI classrooms; and the upgrading of the professional level of the curriculum development staff, coordinators of supervision, and supervisors through university training.

B. Professionalization

Organization. The major responsibility for most of the training units' staff is the coordination of academic upgrading for bilingual preschool promoters. This is a three-year program designed to allow the promoters to complete the basic general education cycle of secondary school. (Bilingual preschool promoters currently need only have a sixth grade education.) The program presently serves 600 bilingual preschool promoters and that number is expected to rise to 1100 in the coming year. The coordinator of this training component manages a team consisting of 10 specialists in secondary education (ciclo basico) who are developing curriculum for the program. Six of these individuals are engaged in writing lessons while the other four are involved in designing the curriculum for the professionalization activities. The professionalization unit receives support from the national consultant in training.

The physical conditions in which the professionalization team works are difficult, as six of them work in a single office that also contains the coordinator, two secretaries and the national training consultant. The specialists also have had to bring in their own typewriters owing to a lack of equipment in PRONEBI, in order to further the work.

The in-house PRONEBI staff is supported by regional teams consisting of a regional program coordinator and five instructors, one for each of the academic areas, all of whom are employed part-time. Instructors were selected on the basis of their experience in the subject matter at the secondary level (ciclo basico). Although a number are bilingual in the predominate Mayan language of the area, bilingualism was not a criterion for selection. Regional coordinators assisted in the identification of likely candidates in their areas.

Course content. The bilingual preschool promoters who enrolled in the program were given a five-week refresher course in study habits prior to beginning the academic content of the professionalization course. The promoters are presently studying the five academic subjects of the preparatory first year program. Subject matter is presented in a traditional lecture format. Classroom participation is, however, encouraged and students were observed by the evaluation team to participate actively in the courses. It was further observed that many of the students' questions or examples were those related to their local communities or to their work situations.

Materials are adequate and are in the form of a detailed text in a programmed learning format that allows students to check their own progress. There is a problem with some of the textual materials in that they are too small to allow the accompanying captions to be read.

An additional problem noted by promoters is the evaluation schedule which requires them to prepare for and be tested on the accumulated content of five subject areas every three weeks. This is a quantity of information which they find difficult to manage, given their time constraints. PRONEBI training staff are aware of these problems and are working to find solutions for them.

Student participation. promoters attend the courses on their own volition and have to walk, hitch rides, or pay bus fare out of their own pockets to reach classes held every Saturday. Three of the four regional training programs have two different sites at which classes are given. Students expressed added difficulties in attending classes in two different cities. Despite logistic difficulties, the evaluation team found student attendance to be high in all classes observed.

C. Inservice Training of PRONEBI Teachers

Organization. The inservice training for PRONEBI teachers is planned as intensive workshops of one to two weeks duration. The training for each grade level is held separately and two sessions are to be carried out with teachers of each grade level. Training is given simultaneously in each of the four high priority linguistic areas.

Virtually all levels of PRONEBI personnel are involved in the training efforts. The coordinator of the preschool/primary unit of PRONEBI has overall responsibility for the training. The training activities are the dual responsibility of the preschool/primary education unit and the curriculum development unit which furnish the instructors from supervisory personnel and the curriculum development teams, respectively. The national consultant in training designs the training plan. A regional coordinator, who is

the departmental supervisor, serves as liaison between PRONEBI and the department directorate of education. The local PRONEBI supervisor in each site where the training is held is the administrative coordinator, and a member of the curriculum development team coordinates pedagogical activities. As the entire training program is carried out by in-house PRONEBI personnel, there is considerable congruence between the program objectives and the training.

Course content. The first intensive training session provides a general orientation to PRONEBI and bilingual education and gives an introduction to reading and writing Mayan languages. The second session, given some months later, relates specifically to the use of the texts and guides in the classrooms, to which approximately 16 hours are devoted. This session also provides an additional 10 hours of training in reading and writing Mayan languages, and includes classes on planning, student evaluation, and Mayan culture.

Handouts supporting the lectures are provided to teachers. Visual aids in the form of charts are used in the presentations, and demonstrations of classroom activities are held. Teaching responsibilities are divided among supervisors and curriculum development teams of a given linguistic area, with the former generally developing such subjects as student evaluation and planning, and the latter providing instruction in Mayan literacy and use of the guides and texts. Implicit in the training is the separation of the two languages in classroom activities as subject matter is to be presented either in the mother tongue or in Spanish (the students' second language).

Observations of the inservice training by the evaluation team showed that the inservice sessions on the use of the teachers' guides and texts often involved innovative activities such as role playing and small group problem solving by the teachers. The content of the sessions was not, however, directly related to the use of the texts, but rather focused on activities designed to meet the learning objectives suggested in the guides. The activities designed were often child-centered and showed great creativity, but seldom involved actual use of the texts. This is understandable as the trainers themselves are former teachers who generally had to work without texts during their teaching days. It suggests, however, that the teachers could profit by a short-term course focusing especially on the use of the textual materials.

In addition, great variation was found in the pedagogical approaches used by the trainers in different linguistic areas. Similarly, the content presented in sessions having the same title often differed from one area to another. For example, whereas a session in Spanish as a second language in one linguistic area focused on a definition of the didactic process through a formal lecture, the same session in a different linguistic area was

conducted with teachers working in small groups to develop activities which could be used in rural classrooms and were consistent with the objectives in the teachers' guides.

Student participation. Student participation has been high, with 344 and 354 teachers of a possible 400 participating in the sessions held to date. Students are provided per diem expenses by PRONEBI during the time they are away from their sites participating in the training sessions.

One difficulty in the inservice training has been that it has been held during the school year, thus making it difficult to find unoccupied training sites and interrupting the PRONEBI children's education for up to two weeks.

The course generally has been successful in demonstrating the philosophy and importance of a national bilingual education program for Guatemala. All of the teachers interviewed by the evaluation team saw the importance of the program in aiding children to learn subject matter in a language that they understood. Most of the first grade teachers who had had the second training session still felt a great degree of insecurity with writing their first language correctly and felt that greater emphasis on using the materials in rural schools was needed. The insecurity in writing was also reflected in the inservice evaluation forms filled out by the teachers. Although rating the presentation highly, the area of written language was identified most often as the subject where teachers were not satisfied with their own performance.

PRONEBI administrative personnel are aware of these concerns and one of the ways proposed to deal with the perceived need is to form training teams ("equipos capacitadores"). These teams, made up of individuals from the curriculum development unit would travel to schools and provide on-site training to teachers as needed. While this idea has great merit, such training will require additional personnel if it is to be tried in the near future. The substantial revisions needed in the existing textual materials and the preparation of the third and fourth grade texts and teachers' guides must be the first priority of the teams. Thus, only limited time would be available for such field training efforts by existing staff.

D. Upgrading Professional-level Staff: University Training

Organization. Five universities were asked to bid on developing the university training programs. The proposals, including a course plan especially designed for PRONEBI needs, and the curriculum vitae of the proposed professors were submitted to PRONEBI where they were reviewed by a selection committee and a choice of universities was made.

Two distinct university training programs are being coordinated through the PRONEBI training unit. These are a two year "university technician" program in the administration of bilingual programs and a complete university program leading to a degree in bilingual program administration and curriculum. The 33 bilingual supervisors are participating in the former program which is being carried out by Rafael Landivar University. Twenty-five individuals including both the supervision coordinators and the technicians developing the bilingual curriculum are participating in the latter program at Mariano Galvez University.

The evaluation team's review of the professional qualifications of the university personnel showed them to be generally among the best known scholars in their respective fields in Guatemala. Little practical experience in rural primary schools or in the implementation of a bilingual curriculum, however, was evidenced in their resumes, and few appeared to be bilingual in a Mayan language.

Courses for both groups of students take place weekly on Friday afternoons and on Saturdays. PRONEBI furnishes scholarships to the students and per diem to cover the expenses incurred by those coming from outside the capital.

Mariano Galvez University has proved flexible in altering the course schedule at the request of the students, changing the course offering from five courses to two intensive ones in the current academic period. All course offerings and scheduling changes are coordinated with the universities by the national consultant for training.

Student participation. All but one of the students in the degree program at Mariano Galvez are making normal progress toward their degrees. As will be discussed more fully in the subsequent section on supervision, a third of those participating in the short course at Rafael Landivar University have not successfully completed all of the course work. Professors interviewed by the evaluation team at both universities tended to attribute problems encountered by the students to a lack of interest on the part of some and to a lack of preparation for university courses by others.

Students, on the other hand, felt that difficulties arose because of their professional responsibilities which took time away from studying; and on the lack of relevance of the university courses to the realities of their jobs. PRONEBI personnel compared those in the degree course to the students in the short course and suggested that differences in achievement between the two groups resulted from contrastive levels of knowledge about and commitment to the PRONEBI program. It was pointed out that the degree students were involved in the pilot program and thus were committed to the PRONEBI goals and saw a relationship between these and their course work.

The supervisors, in contrast, entered the university shortly after being hired by PRONEDI and most of their difficulties, PRONEDI staff has suggested, occurred in the first semester, before they had a good understanding of PRONEDI.

5. SUPERVISION

A. Organization of Supervision Component

In order to insure an informed and orderly expansion from 40 pilot schools to 400 schools in nine different Departamentos, a system of supervision was developed as part of the preschool and primary education component of PRONEBI. This supervisory system forms a subsystem of the national supervisory system of the directorate general of education. The subsystem, made up of seven regional coordinators and 41 supervisors is administratively responsible to the division of technical supervision within the department in which it operates. Most of the direction provided to the supervisors in the areas of methodology, materials use, and curriculum design comes from PRONEBI. This information is passed on to the classroom teachers by the supervisors.

Agreements with educational authorities within the departments as to jurisdiction, lines of command, and pedagogical orientation were worked out through a series of visits to each department by PRONEBI staff and other Ministry of Education personnel during April and May of 1986.

B. Selection Procedures for Coordinators and Supervisors

A rigorous selection procedure was conducted to determine the supervisors for the PRONEBI schools. The 16 "Bilingual Education Supervisors" (supervisores tecnicos de educacion bilingue) who were already working in the pilot program were incorporated into the expanded supervisory system. In addition, 33 new supervisors were selected. Minimum requirements for selection were: that the candidate be a native speaker of the language spoken in the geographical area in which he/she had applied and spoke Spanish fluently as a second language; that the candidate be less than 45 years of age; that the candidate be at a minimum a "C" on the salary scale ("escalofon"); and that the candidate had successfully completed a minimum of 15 university level courses. A rating scale was then used to judge the academic and on-the-job experience of the individuals meeting the initial qualifying criteria.

The top three scorers in each geographical area then were interviewed by a committee consisting of the director of PRONEBI, the coordinator of operations, a representative of AID, and a representative of the personnel department of the Ministry of Education. Based on the results of the interviews, the committee prepared a report with its choices for each of the positions. In some areas of the country, to insure that the positions would be filled by candidates who had the needed language proficiency and who were willing to live in the specified areas, it was necessary to accept a few candidates that did not meet the other minimum

requirements (e.g., individuals having only a "B" classification on the salary scale).

Coordinators were selected from the entire group of supervisors. Selections were made by the director and subdirector of the preschool/primary education unit of PRONEBI, together with the national consultant for supervision. This selection committee was composed of those who operationally would have the greatest interaction with the supervisory staff in implementing the PRONEBI activities. The criteria for selection was that of experience with bilingual education, previous positions of leadership, and familiarity with the administrative procedures related to supervision.

The rigor of the selection process appears to have been successful. The evaluation team's conversations with supervisory personnel, observation of supervisors in the field, and participation in orientation meetings showed a group of generally highly motivated and competent individuals. The coordinators and supervisors generally feel themselves comfortable with their supervision responsibilities. In some cases, however, there is concern about personal oral fluency in the Mayan language and all supervisors expressed concern about their ability to manipulate the written vernacular.

C. Systems Operations

Nationally. Operationally, there seems to be a good system of communication between PRONEBI administrative staff and the supervision teams. Messages are sent to and received from the field regularly via telephone and telegram, and administrative staff make personal visits to the field as needed. In addition, as a result of their inservice visits to PRONEBI and training at universities in Guatemala City, supervisors visit the PRONEBI offices weekly. Informal meetings with central staff are common during these visits and formal meetings are at times arranged.

There is a concern among supervisors, however, that guidelines have not been established for providing systematic orientation to teachers throughout the national program. There is also a general feeling that field personnel must provide input into the content of the curriculum and to the inservice training being given to teachers, as it is they who know the realities of rural schooling.

These concerns have been expressed to PRONEBI administrators who, in turn, have organized a series of meetings designed to establish guidelines for teacher orientation. The initial two meetings--involving PRONEBI administrators, consultants, curriculum specialists, and supervision coordinators for the first meeting, and all of the supervisors and curriculum groups as well in the second meeting--were viewed positively by the participants. There was a

general feeling that the meetings were a first step in incorporating local reality into the curriculum development activities, and that the meetings should continue. Some participants felt, however, that greater direct involvement by the director was needed in the meetings to insure that the decisions made at such meetings would be institutionalized.

A growing concern among both coordinators and supervisors is the possible change in organizational structure which may arise through the national regionalization of education program. It is anticipated that under that program, PRONEBI supervisors would be incorporated into a regional supervision system under the administration of a regional coordinator. Thus, in such a system the PRONEBI coordinator might cease to exist. PRONEBI administrators are aware of this threat to the supervision subsystem and are working with other Ministry personnel to clarify the situation.

Locally. Although the evaluation team's field visits showed the supervision subsystem to be organizationally well implemented, a number of factors were found which impinge on achieving greater efficiency of operations.

First, in a number of the schools visited, the bilingual classes were conducted under difficult physical conditions. Chicken coops or lean-tos were being used for classrooms, children outnumbered available seats and had to sit on rocks or were so crowded together that opening the texts or attempting to write, was difficult. In addition, there was a general lack of chalk and supplementary teaching materials. Thus, in most instances the first priority of the supervisors was in improving the basic physical conditions of the classrooms by obtaining chalk, chairs or desks.

A complaint also was voiced by some teachers that supervisors did not visit often enough. This seems to be a result of the heavy workload of the supervisors that requires them to service about 20 schools each. Considering the time needed to reach isolated schools, the time spent with individual teachers, and the loss of one workday a week (Friday) for university classes, the supervisors interviewed by the team stated that they could visit each school between once a month and once every six weeks. As the policy of the program is to concentrate on complete intensive schools (since these are where the curriculum development effort is concentrating), less than "complete" schools may be visited even less frequently.

Those teachers who have been visited by PRONEBI supervisors were generally positive about the supervision. They stated that the purpose of the visits was pedagogic orientation as opposed to the inspections they had sometimes received in the past. Teachers asked for greater direction, however, in the use of the textual materials and in writing the vernacular. When teachers outside the PRONEBI

program were interviewed, they provided an indirect positive endorsement of the PRONEBI supervisors by complaining that they themselves were not being visited by their supervisors as often as the PRONEBI teaching personnel were visited by PRONEBI supervisors.

To aid the supervisors in programming, inventory, and orientation, a series of prototype instruments has been developed by the regional coordinators, the coordinators of the preschool/primary education component of PRONEBI, and the national consultant in supervision. These instruments are to be tested in the field by supervisors who will provide feedback for their modification. The instruments are well thought out and will encourage active interaction with the PRONEBI teachers and promoters. They may, however, prove to be too extensive and time consuming to be effective. Also, the instruments have been developed independently of the evaluation unit of PRONEBI, which could cause data reduction problems if the data gathered are to be used as part of formative or impact evaluations.

Although the community members interviewed tended to view individual supervisors positively, there has been only limited contact between the supervisors and many communities. This is understandable, given the work and study loads of the supervisors. It has meant, however, that community orientation at this time consists largely of the resolution of overt problems that arise in individual communities, rather than the ongoing contact envisioned by PRONEBI.

Inservice training. Thirty-three supervisors are presently studying the administration of bilingual education programs in a two-year program at Rafael Landivar University in Guatemala City. The course has been especially designed for the supervisors and consists of a series of disciplines such as Mayan grammar, sociolinguistics, school statistics, psycholinguistics, and bilingual school supervision, which appear to be related theoretically to the needs of the supervisors. As mentioned previously, there have been complaints on the part of the students that the courses are not directly relevant to the reality of their field situations and the backgrounds of the professors providing instruction show little experience with rural schooling. The teachers, on the other hand, identified a lack of motivation and a low level of previous preparation as reasons for student difficulty.

As mentioned, the time of the evaluation, the university informed PRONEBI that twelve of the supervisors were failing in their courses. PRONEBI moved quickly through a series of meetings to determine the interest of the students in continuing the course and a letter entering into agreements with most of them that the students themselves would finance the cost of make-up study in order to continue in the program.

An additional difficulty in the inservice training program arose during the course of the evaluation. This was a decision on the part of the Ministry of Education to eliminate per diem allowances for the supervisors on the days that they attended courses. The rationale was that as the supervisors were dispensed from their regular duties to attend classes Guatemala City was their city of origin on Fridays and Saturdays. Many of the supervisors have been awaiting salary reclassification since September 1986, and have used the per diem to maintain financial solvency during that period. The Ministry's decision has, therefore, lowered morale and lead to protests by supervisory personnel.

4. RESEARCH AND EVALUATION

A. Organization of Research and Evaluation Component

The research and evaluation component, as originally envisioned, had three principal functions. These were: to develop instruments for calibrating the curriculum development effort which included measuring the progress of the students enrolled in the program; to continue the longitudinal study of the 40 pilot schools; and to develop procedures for measuring the impact of the national bilingual education program. To these functions has been added a fourth, that of serving as a documentation center for PRONEBI.

The research and evaluation unit is headed by a chief. This position is at present vacant, but is being held "de facto" by the international consultant in evaluation. PRONEBI is at present looking for a unit chief. The organization hopes to pay this individual a salary in the range of that being made by other unit chiefs. Given the demand for expertise with computerized evaluation systems, however, this may not be realistic. Additional staff members are a data manager, a secretary/librarian, two data inputters, four researchers, and four evaluators. The unit is also assisted in data entry through arrangements with local training centers which provide students for on-the-job training.

The data manager is presently studying information systems and has received extensive on-the-job training through working with the international consultant. She is able to operate the center in the absence of the evaluation consultant as far as coordinating data reduction, inputting, and generation of routine reports. She does not, however, have the training in research design, test design and validation, field operations, or inferential statistics to head the unit at present. The other members of the unit have also received on-the-job training and are competent for the positions they hold.

There are differences in the contractual arrangements made between PRONEBI and the various members of the evaluation unit. The data manager, for example, has a yearly contract whereas unit researchers have been hired through 1990.

A number of practical issues that hinder maximum efficiency of the unit were noted by the evaluation team. The grime which enters the office from street pollution is a serious danger to the floppy disks on which computer programs are maintained. In addition, the extensive activities of the unit create wear on unit hardware such as computers and printers that will require maintenance. At this time, however, PRONEBI does not have a computer maintenance contract. The unit lacks paper and is forced to use both sides of the paper and to reduce the space among alternative choices when developing tests. The resulting lack of clarity of the measures

could affect the achievement of children, and thereby the reliability of the tests. Data collection is hampered by the lack of vehicular support for data collectors. Bus and foot travel to distant schools often limits the sample size or delays analyses.

On the whole, however, the evaluation unit is relatively quick in processing data and in producing reports.

B. Description of Impact Evaluation Design

The impact evaluation design serves two main purposes. The first is to provide curriculum developers, teacher trainers, and classroom teachers with useful feedback on the progress of student achievement (at a learning objective level) so necessary improvements in the instructional process can be made. The second is to provide policy makers in the Ministry of Education and other interested parties such as the World Bank and AID with global outcome measures of program success (e.g., Do overall retention and promotion rates increase in bilingual schools?).

The first of the two major purposes of the evaluation design--providing curricula teams, teacher trainers, coordinators and supervisors with the information they need to make program refinements and modifications--is well under way. Teachers have been provided with reports on student progress for each learning objective at given grade levels in the areas of Spanish (grades 1, 3, 4), mathematics (grades 1, 3, 4), and natural science (grades 1, 3), Mayan languages (by language for grade 1), and social studies (grade 3). This information is based on a random sample of some 32 PRONEBI schools; similar data on a comparison random sample of some 32 non-PRONEBI was included also in the reports.

This accomplishment has required the development of instruments in five languages to measure these academic areas. Reliability tests (Kuder-Richardson 21) have been performed on all of the instruments, with resulting values ranging from about .60 through .70. Attempts to increase test reliability through an increase in the number of test items is progressing well.

The second of the two major purposes of project evaluation--the documentation of outcome measures (e.g., dropout and promotion statistics, measures of academic achievement) has begun. A system is in place for recording these measures in a relational database (dBaseIII) and preliminary data runs have been made wherein PRONEBI schools have been compared to other non-PRONEBI rural schools. The data base for these measures is the same random sample described above.

C. Adequacy of Evaluation Design

Two basic assumptions built into the design are that (1) treatment effects are a result of PRONEBI-trained bilingual

instructors using the PRONEBI instructional materials, and (2) the achievement of random samples of PRONEBI schools can be compared to that of random samples of non-PRONEBI rural schools.

While both assumptions were reasonable a year ago, subsequent on-site visits to PRONEBI and non-PRONEBI schools suggest that both need to be importantly qualified at this juncture.

First, the actual existence of the critical components which constitute the experimental treatment (i.e., bilingual education) need to be verified (and scaled) through on-site observations. These components are: the PRONEBI instructors are bilingual and biliterate in the relevant languages; the instructors use their bilinguality in the conduct of their daily classes; the instructors have been trained sufficiently to use the PRONEBI instructional materials; the PRONEBI materials have been delivered in sufficient classroom quantity; the teachers are following the courses as outlined in the PRONEBI teacher guides; and the tested children have attended class some minimum number of days. Schools that do not meet these criteria--whether or not they are labeled as PRONEBI schools--should not be considered bilingual schools. Conversely, schools that do meet many of these criteria--even if they are labeled non-PRONEBI schools--should not be considered "comparison" schools.

Second, random samples of PRONEBI and non-PRONEBI schools can be compared validly only after critical school and community characteristics have been taken into consideration to insure that comparable children in similar circumstances are being compared (with the principal experimental difference being whether children are taught in a language they understand). This consideration requires that a stratified random sampling be drawn within each of the two main groups of rural schools in Mayan-speaking regions: bilingual schools and monolingual schools. One would hypothesize that Indigenous children in a bilingual program will out perform similar children in an all-Spanish school.

Stratification variables which should be considered after schools are classified accurately as bilingual or non-bilingual include the following:

Community characteristics:

- Degree of modernization (i.e., technological development)
- Language(s) spoken
- Level of bilingualism
- Degree of isolation from the main road
- Level of acceptance of bilingual program

School/teacher/student characteristics:

- Size of school (e.g., number of grade levels/students/teachers)
- Degree of bilingualism or multilingualism of entering preschool and 1st grade students
- Time teacher spends in using each language
- Years of teaching experience

A lengthy list of potentially relevant variables was presented in the baseline study (Seelye, 1979).

A second comparison of non-equivalent children also can be made: Mayan-speaking children with Ladino children of similar socio-economic characteristics. One would hypothesize that the achievement gap between the two groups will be smaller than the gap between Indigenous children taught exclusively in Spanish and Ladino children taught exclusively in Spanish.

An additional problem that makes it difficult to assess properly the global success of the PRONEBI bilingual schools is that there has been no research to determine what percent of the variance in outcome measures (e.g., dropout rates) is the result of school-related variables such as curriculum, versus out-of-school variables such as nutrition. (An exemplary study which determined the variance accounted for in rural Guatemalan schools by seasonal migrations was done by Amaro in 1983.) At this point, it is not known (empirically) to what extent any school intervention can affect global indices of student success in rural Guatemalan schools, although it is reasonable to hypothesize that basic changes in curriculum hold the promise of affecting dropout rates and other global measures of success.

D. Adequacy of data sources

Two important sources of variance are errors in reporting collected data (either because the information is poorly assessed or because it is incorrectly coded) and errors in keying the data into PRONEBI's data base. There does not seem to be any systematic statistical quality control system for estimating data collection errors, but several controls for errors at the point of data entry are being implemented. Namely, each set of entered data is checked for overall consistency to make certain the data fields are of the same length and that illegal characters do not appear. The unit's director is searching for a computer program that can be integrated into the unit's computer system that will allow double entry checking.

7. TECHNICAL ASSISTANCE

A. National Technical Assistance

Organization. In addition to the international consultant team from the University of New Mexico, four national consultants provide technical assistance to PRONEBI. These individuals are independent contractors hired by PRONEBI. They report directly to the director of PRONEBI and work in four distinct areas: distribution of textbooks and furniture; supervision; administration; and training.

The national consultants are each to provide a series of products for PRONEBI during their tenure with the program. The distribution specialist, for example, is to provide a series of instruments for data capture and inventorying, the administration specialist is to develop personnel and policy manuals for each unit of PRONEBI, the supervision consultant is to produce documents developing a model for the supervision subsystem, and the training specialist is to conduct a needs assessment in the area of training. Many of these products had been completed at the time of the evaluation and the consultants were working on other of the contractual requirements.

The national consultants work directly with counterparts who are regular PRONEBI employees. The counterpart or counterparts are generally the coordinators of the appropriate PRONEBI units.

Selection. A description of job qualifications for each of the four consultant positions was developed by PRONEBI and circulated. The qualifications included a university degree but not ability in a Mayan language. Ninety-four candidates applied for the positions. These were reviewed by a selection committee and the top three choices were submitted to the office of the Minister of Education where the final decision was made. The chosen consultants were offered contracts that varied in length from 21 months to five years depending on projected program needs in a certain area.

Activities. The national consultants appear to be more integrated into PRONEBI activities than the international technical assistance advisors. They alternate representation on the technical committee and are involved directly in the day to day activities of the components to which they are attached. In two cases the consultants are actually located in the component that they are assisting and are directly involved in the operations of the component.

The work of the national consultants is generally viewed favorably by PRONEBI staff. Some concern was raised, however, about the functions of the consultant in administration. Interviewees suggested that this individual sometimes takes too active a role in

the operations of the unit to which he is attached and at others, fails to provide advice as requested. There is also an overlap of skills between those of the consultant in administration and those of the distribution consultant. A reconsideration of the functions or work scope of these individuals might be of benefit to PRONEBI.

The contact between the national and international technical assistance teams is largely informal. They generally view each other as working in separate areas with little overlap, except in the area of curriculum and training.

B. International Technical Assistance

Organization. The international technical assistance contract was awarded to the University of New Mexico through the mechanism of competitive bidding. The major objectives of the contract were to provide ongoing technical assistance in the areas of bilingual education curriculum development, in improving the linguistic and curricular relevance of rural education for monolingual Mayan-language speaking children, and in the establishment of a research and evaluation unit to support the institutionalization of the national bilingual education project.

Specifically, the international technical assistance in curriculum was to provide staff development for the members of each of the project's four curriculum development teams and to advise in the development and review of materials in order to assure that all are appropriate in terms of content and sequence, and are linguistically and culturally appropriate to the needs of Guatemala's rural Maya student population. In the area of evaluation, the contractor was to assist the research and evaluation unit, once established, to conduct formative curriculum evaluations of all bilingual materials, to continue the longitudinal study of school achievement, enrollments, and retention, and to conduct research on the organization and development of resources in the program schools.

To meet these objectives, the contractor furnished a team consisting of four long-term advisors: a bilingual education specialist, who also served as chief of party; a research and evaluation specialist; and a linguist and anthropologist couple, who shared a third full time position.

Products. As with the national technical assistance, there was an emphasis on the development of products that are to have a lasting effect in the development of PRONEBI. For example, the linguist/anthropologist advisors were to prepare: a manual outlining anthropological and sociolinguistic aspects of each of the four language areas to be incorporated into the curriculum materials; dictionaries in each of the four language areas for use by students; and a grammatical analysis of each of the four

languages. The research and evaluation advisor was to develop and apply instruments to evaluate the attitudes and performance of project staff; to assist in the development of instruments for the evaluation of 3rd and 4th grade student achievement and school success in the pilot schools of the original pilot program; and to develop an evaluation design and implementation plan for monitoring student success in the 400 schools of the PRONEBI program. The curriculum specialist was to advise on the preparation of 3rd and 4th grade materials; prepare an analysis of the curriculum for each grade level with recommendations for improvement; and prepare a manual describing the curriculum development process used by the program as well as serve as administrator for the international technical assistance team.

Constraints. The project was originally envisioned as a three-year technical assistance effort. Owing to budget constraints, however, the contract was renegotiated for a period of eighteen months. This restructuring has put an even greater pressure on the technical assistance team to produce the numerous products called for in the contract. This emphasis, combined with difficulties in identifying counterparts (no counterpart has been found for the research/evaluation advisor and the individual envisioned as the counterpart for the curriculum advisor is presently studying abroad), and the workloads of other PRONEBI personnel, such as members of the curriculum development teams, who might be potential counterparts, has limited the participation of PRONEBI staff directly in the product development efforts of the technical assistance team. The organization of physical space in which the international technical assistance team is isolated in three contiguous offices on the first floor of a building in which the other PRONEBI staff offices occupy the second and third floors has also hindered the integration of the technical assistance effort and the subsequent transfer of technology.

Contributions. The international technical assistance component of PRONEBI appears to have had effective administration to date. This is attested to by the team's success in meeting most of the product development requirements of the contract.

This is especially evident in the linguistic/anthropological technical assistance where it is anticipated that all of the deliverables for the contract will be completed by June, 1987. There has, however, been no systematic plan for integrating these studies into the curriculum nor for publishing the dictionaries or incorporating activities for their use into the teachers' guides. This component of the international technical assistance also has carried out a workshop in creative writing and planned other workshops in such areas as bilingualism. Difficulties in scheduling caused by PRONEBI staff members' workloads have prevented these planned workshops from taking place.

The bilingual curriculum advisor also has developed most of the products called for in his scope of work. There is some question among PRONEBI staff, however, about the usefulness of the products developed in the area of bilingual curriculum. These are seen as taken from other national contexts rather than developed to meet the needs of the Guatemalan reality. In addition, there is a feeling among some PRONEBI staff that the materials are too general to meet the need of assisting rural teachers to provide meaningful learning experiences for children in a bilingual school setting. The evaluation team's review of the PRONEBI teachers' guides and texts, which found insufficient detail to allow teachers to employ the materials effectively and a lack of the variety in classroom activities that is necessary to motivate young learners, also suggests that the bilingual curriculum products provided by the international technical advisor may not have served the purpose for which they were developed.

The advisor in research/evaluation has been successful in establishing a research and evaluation unit for PRONEBI and has begun development of computer-based systems of evaluation within that unit. As these tasks are less product oriented, he has been less limited in the breadth of the assistance provided than his U.N.M. colleagues. Most PRONEBI staff members have knowledge of his work and it is viewed positively by all. There is, however, a tendency on the part of PRONEBI personnel to view the assistance in this area as simply the compilation of data. This narrow view seriously underestimates the complexity of the assistance being provided in this area. Perceptions of this type also underestimate the staff development needed in such areas as research design, test development and norming, sampling procedures, data collection and reduction, and statistics necessary to assure proper operation of the unit within PRONEBI.

The advisor works with teams made up basically of students of computer science or other disciplines. Through their work with the research and evaluation unit these individuals are receiving technical training in data collection and the manipulation of computer software. One member of the PRONEBI evaluation team is receiving training to assume the routine maintenance and management of the established computer-based systems. None of the trainees, however, yet have the requisite skills to maintain the unit upon the departure of the advisor. Although a search is being conducted for a counterpart, there is at present no one with all the necessary skills to replace the international consultant.

CHAPTER IV

DEVELOPMENTAL IMPACT

As the evaluation was designed to investigate the progress of program implementation after one year of operations, measuring impact is premature. The evaluation team, however, identified a number of indicators of the potential developmental impact of the Rural Education Improvement Project (Bilingual Education). These are summarized under two main areas: beneficiaries and institutional strengthening.

A. Beneficiaries

The principal beneficiaries of the program are the approximately 54,000 children who participated in the bilingual program during its first year of operation. As can be seen from Exhibit 2, potential additional beneficiaries are the 26,570 children in second, third, and fourth grades who are presently served administratively by PRONEBI. Second grade children have been incorporated academically into the program in the current year and the other grades will be incorporated in subsequent years. It is anticipated that 260,000 children will be served over the course of the project. If results consistent with those of the pilot schools are found in the approximately four hundred schools where the program is to be fully implemented, it can be expected that the children in the program and those of additional grades who are added to the program will have higher achievement and lower dropout and retention rates than similar children in non-PRONEBI schools.

EXHIBIT 2

CHILDREN SERVED ADMINISTRATIVELY AND ACADEMICALLY BY PRONEBI

Grade Level	Served Academically	Served Administratively
Preschool	38,085	38,085
First	13,521	17,333
Second	1,307	13,242
Third	987	8,465
Fourth	-	4,863
TOTAL	53,900	86,499

Source: Estadística de la evaluación final de los alumnos de PRONEBI: 1966, PRONEBI, February, 1967.

Additional beneficiaries of the PRONEBI program are the approximately 600 bilingual promoters who are having the opportunity to continue their education under the auspices of the program. These individuals will be able to move to higher job classification upon completion of their schooling.

A third group of beneficiaries are the nearly 700 PRONEBI teachers who have received specialized inservice training designed to make them effective bilingual teachers. Obviously, the students in the bilingual classrooms should be indirect beneficiaries of the inservice training provided to their teachers.

To date there has been little parent participation in the bilingual program beyond the of contributing labor and attending school promotional activities. Thus, potential local beneficiaries of the program could not be identified. Increased participation by local communities in the schooling of their children would seem to require a larger, more systematic communications effort on the part of PRONEBI.

B. Institutional Strengthening

The project appears to be highly effective in increasing the organizational capabilities of PRONEBI. Administratively, the project is running smoothly and a system of supervision has been installed which is providing technical support to the PRONEBI school teachers. Program administrators have developed a series of procedures for creating dialogues between in-house and field staffs which has moved the organization toward common goals and objectives on all levels.

The professional skills of PRONEBI in-house personnel are being upgraded through university training courses. As these courses have been developed especially to meet the needs of the national bilingual education program, there is great likelihood that the professionals being trained will remain with the organization to apply their learning upon completion of their courses.

Over the fifteen months of the project an active evaluation and information center has been created. The international consultant working with the center has trained a data manager who can provide routine reports from existing data to assist in decision-making.

CHAPTER V

LESSONS LEARNED

A number of lessons for the continuing development of the National Bilingual Education Program can be learned from this evaluation. They can be divided into two main areas. The first is concerned with project design and administrative decision-making. The second relates to technical aspects of program implementation.

A. Program Design and Administration

Formal training in program administration would not appear to be a prerequisite for developing a well functioning administrative system. With the exception of the director and the personnel in the administration unit, PRONEBI administrative personnel have learned on the job and while a number of administrative strategies are still being tested, on the whole, the program is running smoothly.

The difficulties encountered with providing school furniture when originally scheduled argues for caution in making promises which may be beyond the control of the organization to keep. Failure to fulfill a promise in one area of a complex program such as PRONEBI may jeopardize the implementation of other components of the program because of local animosity. In fact, several instances of this came to the attention of the evaluation team.

The development of textual materials for young children requires more than expertise in the cultural and linguistic nuances of the population to be served, or even expertise in the area of curriculum development. The current versions of the texts and teachers guides suggest that expertise in child development and textbook design should be included in curriculum development efforts of this type. Flexibility should be built into all such projects to accommodate unforeseen needs.

The results of prior AID-funded projects that had developed successful curricular innovations for rural schools in Guatemala were not incorporated into the PRONEBI program (e.g., Loans 015 and 025). This suggests a need for a greater effort on the part of AID to build on past experience. Building on previous projects that have proved successful could multiply the benefits on both the GOG's and AID's original investment.

The opportunity for free academic study and personal advancement, may not always be sufficient motivation for further study among field staff implementing a program, as shown by the situation of some PRONEBI supervisors at the time of the study. Integration into the program over a length of time may be required to build commitment before training can be effective.

AID must be careful not to jeopardize the operation of an entire project because of changes in its own accounting personnel or policies. If changes that will affect the approval of a project's budget are contemplated by AID, these must be communicated to the local project administrators with sufficient anticipation to allow solutions other than delaying the approval of an entire budget.

Although it is important that technical assistance efforts provide products that will have ongoing utility to a program, such products should not be over emphasized to the exclusion of interpersonal interaction or technology transfer. Ideally, the consultants' work scope should include interactions with counterparts to jointly develop products. This will help create the expertise to make appropriate adaptations in the products after the completion of technical assistance.

B. Program Implementation.

Inservice training programs at all levels seem to be more effective when they deal with the everyday needs and concerns of the professionals implementing the program. This requires a commitment on the part of the teaching staff to learn about the realities of the trainees and to incorporate such realities into the classroom activities.

In the area of curriculum development, the PRONEBI experience shows that a controlled experimental context, such as that of the pilot project, may not be broad enough to develop an adequate curriculum model for national needs. It suggests that research to determine the characteristics of the population (i.e., universe) should be built into the early stages of program development, and that pilot schools should be representative of the heterogeneity of the population, rather than be chosen for logistical convenience.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

PRONEBI is engaged in the tremendous task of expanding a pilot bilingual project into a national program of more than ten times the scope of the pilot. As might be expected in a program which has expanded so rapidly, there are certain areas of the program that could be strengthened by concentrated technical effort or additional technical input. This chapter summarizes the findings of the evaluation team and provides recommendations for strengthening the Rural Education Improvement Project (Bilingual Education).

ADMINISTRATION

A. Conclusions

PRONEBI is made up of qualified, highly motivated individuals who, through their efforts, are helping the organization to make good progress toward the goals of this five year curriculum development effort. The overall administration of the program is efficient and a number of communication and control mechanisms are being developed to increase interaction among units.

The financial and logistical support provided by the administrative unit of PRONEBI is adequate for the needs of the program.

Despite the general administrative efficiency of the program, the multiple responsibilities of administration, product development, and program implementation required in each operating unit has led to over-extension of some of the personnel in these units. This, combined with normal changes in direction taken by PRONEBI in its development, have created the need for additional expertise in the areas of bilingual textbook design, early childhood development, training teachers in the use of bilingual texts, social marketing, and evaluation design.

The physical environment in which PRONEBI is located hinders overall program effectiveness. Noise and chemical pollution associated with the location and openness of the building in which PRONEBI is housed cut down on staff efficiency and the latter endangers computer hardware.

B. Recommendations

PRONEBI should consider consolidating its services to the current 400 schools at this time. A period of consolidation is needed to ensure the technical adequacy of the materials, services,

and operational systems in development. This period of consolidation should continue for several years and possibly until 1990, the end of the current phase of program development.

To aid in this consolidation, long-term expertise in bilingual textbook design, evaluation, and social marketing should be sought to complement the experience of existing PRONEBI personnel. Short-term expertise in early childhood development and the use of texts in primary classrooms can enhance the curriculum development and training units' effectiveness.

PRONEBI or its parent institution, the Rural Socio-Education Directorate, should accelerate the search for adequate working quarters for their personnel.

CURRICULUM DEVELOPMENT

A. Conclusions

The curriculum development unit is adequately staffed and organized so that communication occurs across curriculum teams at a general level and within subject matter areas. Despite such coordination, lack of detailed orientation and other demands on the time of the curriculum development teams, has led to wide variation in the pedagogical adequacy of the texts and guides developed for the different language areas.

A parallel model, which encourages instruction in the native language in preschool and first grade and the dual use of the Mayan language and Spanish as languages of instruction in subsequent grades, is the bilingual education model advocated by all sectors of PRONEBI. This model is pedagogically appropriate for those communities where the perceived need is greatest, those communities in which virtually all children are entering school monolingual in a Mayan language. The model, however, is not appropriate for PRONEBI schools in communities where children have considerable Spanish proficiency upon entering preschool or in classrooms containing children who are monolingual in Spanish.

Thus, the rural bilingual program if it is to be truly national in scope, will have to deal with the question of variations in the degree of monolingualism within a classroom. PRONEBI personnel are aware of the varying degrees of bilingualism existing in the communities containing program schools but have not yet developed curriculum/teaching strategies for dealing with such differences.

Even in those schools that contain students who are largely monolingual in a Mayan language, the teachers' unfamiliarity with Mayan as a language of instruction (versus an oral language for use at home and in the community) tends to hinder program implementation. Although teachers may be fluent bilinguals, their

own academic training has been in Spanish, thus they often feel more comfortable using that language as the language of instruction in the PRONEBI classrooms. Similarly, as few of the teachers have studied an indigenous language formally, most are not comfortably biliterate in their first language. PRONEBI has attempted to deal with this through inservice training. At the time of this evaluation, however, teachers still expressed insecurity in reading and writing their native language.

A number of physical and logistic factors also hinder model implementation. Overcrowded classrooms, lack of rudimentary materials such as chalk and serviceable blackboards, nutritional and health deficiencies in the children, a general dissatisfaction with PRONEBI and AID in delivering school furniture when originally promised, some dissatisfaction with the instructional materials themselves, and unavoidable interruptions in the inservice schedule, have all contributed to less than optimal use of the materials at some schools.

Parents' primary concern in sending their children to school is that the children learn Spanish. The basic criteria for success are seen as being able to read or sign documents and to write a letter. In those communities where the program had been carefully explained, parents see the advantage of a bilingual program in aiding their children to learn Spanish. Parent involvement in their children's schooling is generally that of contributing to school maintenance or assisting at school promotional activities. They have no direct involvement in the bilingual curriculum and few have seen the curriculum materials.

B. Recommendations

Greater communication should be encouraged among the curriculum development teams with regard to the pedagogical quality of the texts. A formal mechanism for dealing with such questions should be developed, such as regular meetings on this subject. These could be coordinated by the curriculum development unit coordinator when he returns from graduate study abroad.

One way to allow the current parallel language development model to be more widely responsive to the needs of communities with varying degrees of bilingualism is to provide bilingual, rather than monolingual, versions of the student texts. This could be accomplished either through developing parallel versions of the curriculum materials in Spanish for preschool and first grade or by including Spanish translations within the current textual materials.

First language literacy training should be made an integral part of the inservice training for teachers. The training should emphasize exercises and activities for developing children's first language literacy but should also provide the teachers with practice in reading and writing their first language.

Attempts should be made to establish working relationships with the major preservice training institutes involved in preparing rural bilingual teachers (e.g., Santa Lucia Utatlan).

If PRONEBI is to improve the curriculum materials and to accurately measure their impact, the organization must know the degree to which the bilingual curriculum is actually implemented. Thus, efforts should be made to provide program classrooms with the minimum physical conditions to implement the curriculum. An accurate description of classroom conditions should be made so that the impact of differing classroom conditions on student achievement can be documented.

Care should also be taken by PRONEBI to avoid making promises that may be beyond the control of PRONEBI to keep, as delays in fulfilling promises raise animosity toward the program.

A comprehensive communications plan for informing communities about the bilingual education program should be developed and implemented. This plan should incorporate the felt needs of parents, such as their desire that school prepare the children to write a letter, into the informational campaign.

TEXTUAL MATERIALS

A. Conclusions

A critical weak link in the PRONEBI curricula is the mother-language texts and guides. Their complexity mitigates their effective use and all of the other curricular materials (except Spanish as a second language) assume first language fluency and literacy.

Texts accurately reflect the national primary education objectives (and this is part of the problem) and, with the exception of the Mayan language texts, are consistent across the four language areas. The texts appear to be culturally and linguistically appropriate for the areas in which they were developed. Dialect differences are, however, substantial in the expanded geographical areas in which PRONEBI is working and little attempt has been made to provide teachers with approaches for dealing with such differences.

There is wide variation in the pedagogical adequacy of the teachers guides and student texts. A number of consistent problems, however, exist in varying degrees across all of them. These are: a reliance on teacher-centered learning; an overwhelming emphasis on rote learning; lack of consistency with child development principles and a corresponding premature assumption of literacy; few creative classroom activities; failure to indicate adequately how student

texts are to be used; lack of integration with previous Guatemalan curricular innovations; and lack of attention to the language needs of the broad speech communities. Most of these deficiencies exist also in the national curriculum guides upon which the bilingual curriculum was based.

Teachers interviewed generally found the texts too difficult for their students and felt the guides did not offer them sufficiently detailed information to aid them in efficiently using the texts. First grade teachers felt that although the inservice training they had received had been helpful, it was not sufficient for them to feel comfortable using the materials.

Parents interviewed had not seen the student texts as a general rule.

P. Recommendations

Teacher guides need to be substantially revised. They need to suggest more creative activities, detailed lesson plans should accompany the suggested activities, the activities should involve students directly and personally, and the activities should be much more varied.

Varied techniques to turn what is currently perceived to be the problem of dialect differences into opportunities for student learning need to be identified and incorporated into the teacher guides in all subject areas. For example, students can be asked how words or sentences that appear in the text are said in their own speech communities and teachers can lead discussions on how language forms change from area to area, using examples from both the Mayan language and Spanish. Students can compile their own dictionary of those words or phrases that differ from the forms given in the text.

The Mayan language texts should also be revised so that they are sequenced to take into greater consideration the cognitive, social and linguistic development of young children. Simplifying the texts would also aid teachers who are unfamiliar with written Mayan languages.

Technical assistance should be sought in the revision of the teacher's guides to make teaching methods more applicable to the target student populations and conditions of rural primary education and to make more explicit the bilingual approach being followed by PRONEBI. This assistance could be either national or international but requires experience with Guatemalan rural schooling, child development, and the production of creative pedagogical materials.

PRONEBI and AID should consider a short-term observation tour abroad to an organization specializing in the development of early childhood bilingual curriculum materials for the curriculum

development teams. Discussions with curriculum development teams with extensive experience in the area and observations of the curriculum development process at organizations such as the Escuelas Nuevas in Colombia, and the Intercultural Development Research Association (IDRA) in San Antonio, Texas or the High Scope Foundation in Ypsilanti, Michigan would provide the teams with a broader perspective on the curriculum development process. This in turn, would aid in revisions of the texts.

PRONEBI should consider the feasibility of developing some materials in a cheap disposable form such as newsprint, or providing supplementary worksheets with exercises from the textual content. These, the children could take home with them to use in the home and acquaint their parents with their activities at school.

TRAINING

A. Conclusions

The professionalization program for bilingual promoters is well organized and implemented. Teaching staff are qualified for their positions. PRONEBI administrative and curriculum development personnel are also qualified for their positions. Their cramped physical conditions and lack of equipment, however, hinders optimum efficiency.

Despite logistic difficulties, promoters are attending classes and demonstrating active participation in the professionalization program. Often their questions and examples deal with personal experiences in their local communities or on the job.

Participants in the professionalization program have problems with the clarity of the captions for illustrations in their texts, have logistical problems in those areas where instruction is split between two sites, and have difficulties with the examination schedules of the training program. PRONEBI personnel are cognizant of these problems and are working to resolve them.

The inservice training program for teachers is well organized and well attended by teachers who are generally positive about the experience. The training has been largely successful in winning the teachers' acceptance of the philosophy and goals of PRONEBI. Additional training is needed in Mayan language literacy and in using the texts and teachers' guides in the realities of the rural bilingual classrooms, two areas in which teachers feel unsure of themselves.

The pedagogical approaches and presentation of material in the inservice training differed greatly across the four linguistic areas. Greater integration of the teams conducting the inservice training in each of the language areas is needed to insure that the most appropriate approaches are used consistently.

PRONEBI relies on the inservice training sessions to overcome a number of deficiencies in the teachers' guides and texts. The principal content of the training sessions devoted to the guides and texts has been the development of activities for reaching the learning objectives in the guides. As the trainers themselves have little experience teaching with texts, however, these activities seldom incorporate the use of the textual materials.

The inservice training materials and activities reflect an implicit pedagogical approach to educating the PRONEBI children bilingually, that of language separation. The language of instruction is Mayan with summaries provided in Spanish, and Spanish is taught as a second language.

The university courses are well organized, offer topics related theoretically to bilingual education program implementation, and are given by well known Guatemalan scholars. The professors, however, appear to have little experience with the practical aspects of applying their disciplines to the implementation of a bilingual program.

The academic achievement of the students in the two university programs varies a great deal. Nearly all of the students in the degree program are successfully completing their course work, whereas a third of those in the short course are encountering difficulties. A number of factors have contributed to the academic problems of the supervisors. These include workload and time demands, lack of sufficient interest or preparation for university studies, unfamiliarity with the goals of PRONEBI, and a lack of relevance of course content to the direct implementation of the PRONEBI program.

B. Recommendations

Given the tendency among bilingual promoters to emphasize their own reality in classes, PRONEBI should incorporate local examples or activities involving this local reality into the student texts.

Sufficient physical space and adequate equipment and support staff should be sought for the professionalization team so that they can perform efficiently.

Further training in Mayan language literacy and the use of the texts and teachers' guides in rural schools should be provided to PRONEBI teachers. This might be accomplished through the training teams proposed by PRONEBI. To be effective, however, the trainers need a short course on how to use the PRONEBI texts in the rural classrooms. This course should be given by an experienced bilingual educator who is familiar with Guatemalan rural schooling.

The implicit pedagogical approach of language separation should be made explicit and the theoretical and practical appropriateness of this model for Guatemalan rural bilingual classrooms should be investigated.

All individuals involved in training PRONEBI teachers, supervisors, and in-house personnel should have field experience in the PRONEBI schools. Where feasible, such experience might consist of a week serving as a teacher's aide. This type of experience would assist both inservice trainers and university personnel to adapt their course to the needs of the program.

PRONEBI should work with the universities and individual university professors to develop on-the-job practicums for its personnel. These could be in the form of assisting in the ongoing activities of PRONEBI such as curriculum design, design of supervision instruments, the collection of community survey data, or the analysis of evaluation data, and the presentation of a report on the experience or findings as part of their grade in the course.

SUPERVISION

A. Conclusions

The supervision subsystem coordinated by PRONEBI within the national educational system is functioning well at this stage of project development. A rigorous selection process was followed in choosing supervisors and coordinators and most are well qualified for their positions.

Field operations and communications are well established and a system of communication channels that permits a dialogue between PRONEBI home office staff and the field personnel is being created.

Supervisors are viewed positively by teachers, who feel that they are providing orientation as opposed to inspection. Teachers wish, however, that supervisors would visit more often and give greater orientation in writing the Mayan languages.

The frequency of supervisors' visits seems to be a function of the workload and the multiple PRONEBI activities in which the supervisory personnel are involved which limit field time. The necessities of the PRONEBI schools limit the supervisors' contact with the local communities largely to the resolution of overt problems that arise, such as parents removing their children from the schools as a result of misinformation about the bilingual program.

A series of instruments have been developed to aid supervisors in carrying out their duties. Although well thought out, these instruments in their prototype form appear far too extensive to be

used effectively. Their development has not yet been coordinated with the research and evaluation unit. This may result in difficulties in data reduction, if information gathered by the supervisors is to be used in formative or impact evaluations.

During the period of this evaluation, one university (Landivar) reported that a third of the supervisors were failing course material. The evaluation findings suggest that lack of interest and experience with the goals and mission of PRONEBI as well as insufficient preparation of university study contribute to the difficulties of the failing students. Lack of relevance of the course content to their jobs in the field as well as workload and time demands were also factors which most students felt reflected on student achievement.

The delays in salary reclassification, combined with the recent Ministry decision to cut supervisors' per diem allowances, and concern over possible changes in the PRONEBI subsystem has lowered morale among the coordinators and supervisors. PRONEBI personnel are aware of the problems and are working to find solutions to them.

B. Recommendations

PRONEBI must prioritize the activities in which supervisors are involved and work with field personnel to develop realistic schedules that are most advantageous to reaching project goals. For instance, if teacher orientation is the primary goal, it may be possible to work with the universities to schedule intensive classes for supervisors during the primary school recess period, thus allowing more time for orientation. Also, preparing attendance and promotion summary charts can be done more efficiently at PRONEBI, thus freeing supervisors from this task.

When the prototype instruments developed for supervision are revised, they should be simplified and the research and evaluation unit should be consulted on any data retrieval forms that will serve evaluation or research purposes.

RESEARCH AND EVALUATION

A. Conclusions

The research and evaluation unit or evaluation and documentation center, as it is called within PRONEBI, is efficiently run. As there is at present no unit chief, however, most administrative and technical responsibilities are in the hands of the international consultant in evaluation. Although a unit chief is being sought, to date the recruitment effort has not met with success. This is a result of individuals with the necessary qualifications in computerized evaluation, not being available at the salary PRONEBI is willing to offer.

The data manager for the unit is highly competent and can carry out the routine data processing management of the unit. Although not yet at a technical level to serve as unit chief, she is developing technical skills in the area of research and evaluation. She is not, however, a permanent staff member but is hired on a yearly basis.

The test development and formative evaluation function of the research and evaluation unit is progressing well. This function, however, will need to be ongoing over the life of the project to provide information for appropriate revisions in the curriculum materials and provide a basis for an impact evaluation.

A great deal of work in data collection and analysis is needed to develop a national impact evaluation design which will permit identification of the treatment effects and selection of a meaningful sample of schools.

B. Recommendations

PRONEBI should consider the possibility of offering a salary commensurate with those available in the information systems job market in general, in order to attract a qualified evaluation unit chief. If this is not feasible, PRONEBI might consider promoting someone within the unit to acting chief while that individual undergoes additional training.

The data manager is a key element in the efficient functioning of the research and evaluation unit. If possible, this individual should be hired for the duration of the project to ensure continuity within the unit.

The additional tasks incumbent in identifying relevant school and community characteristics for developing a stratified random quasi-experimental evaluation design at the national level will require added manpower at a highly technical level. If a unit chief cannot be found with the requisite skills, an additional consultant in evaluation, who is familiar with rural classroom conditions in Guatemala should be sought.

TECHNICAL ASSISTANCE

A. Conclusions

National consultants were selected through a rigorous selection process and are highly qualified for their positions. There must, however, be a clearer definition of the functions of the consultant in administration.

Despite an emphasis on tangible products, the national consultants have achieved a greater degree of integration with ongoing program operations than the international consultants. In some cases, however, the consultants are directly involved in program operations. This creates the danger that technology may not be transferred once the consulting contract has terminated.

The international technical assistance component of the program has been successful in meeting most contracted goals. The emphasis on products, combined with the physical isolation of the component from other PRONEBI staff and the lack of designated counterparts has, however, limited the contributions made to staff development and technology transfer by the team.

In the area of linguistics/anthropology all contractual goals in terms of products such as student dictionaries, language area histories, and grammar analyses, will have been met by June, 1987. No provisions have been made, however, for integrating the products, themselves, into the overall curriculum development effort.

The contractual objectives related to the bilingual curriculum area of technical assistance have also largely been met. The lack of a counterpart and a concern among PRONEBI staff that the materials are not sufficiently adapted to the Guatemalan reality, have limited the usefulness of the products developed by the consultant.

The technical assistance in research and evaluation has been successful in aiding in the establishment of a research and evaluation unit in PRONEBI and beginning the development of evaluation systems for the program. The complexity of developing an appropriate evaluation design, the lack of a counterpart, and the need to provide formative evaluation information to the ongoing curriculum development effort, create a need for long term assistance in this area.

B. Recommendations

PRONEBI should consider regularizing the positions of those national consultants involved in program operations where no counterpart is being trained or work to insure that counterparts are working with the national consultants in each of their areas of expertise.

Plans should be made to incorporate the products produced by the technical assistance component for classroom use, such as the student dictionaries, into the curriculum prior to the termination of the international technical assistance contract. This should be done by involving the developers of the instructional materials in the design of activities using the products that can be incorporated into revisions in the teachers' guides.

Technical assistance in evaluation and research should be continued and broadened. This assistance should be provided by the international consultant presently working in this area, if possible, to insure continuity and take advantage of that individual's well developed working relationships with program staff. Given the complexity of developing valid and reliable student achievement measures in five languages and in determining and implementing an appropriate evaluation design for the program, it is likely that this assistance will be needed for the life of the project.

Given the lack of understanding of the program and resistance to it found in some local communities, technical assistance is needed in the area of social marketing. A national or international advisor should be sought to work with the public relations department of PRONEBI to develop an effective mass communications plan for informing Mayan communities about the program and encouraging their participation in it.

FUNDING PRIORITIES

During discussions about the evaluation findings with PRONEBI and AID personnel, the evaluation team was asked to prioritize directions for additional funding which might become available over the course of the project. An immediate area where funds might be well invested would be in a workshop to discuss the results of this evaluation. Such a workshop would allow personnel from the different levels of PRONEBI to respond to the evaluation results and develop action plans for implementing those recommendations considered appropriate.

Of primary concern is investment in technical assistance to aid in appropriate revisions in the teachers guides. The team suggests both short-term observation tours for the curriculum teams and specialized technical assistance in bilingual textbook design in this area.

A short-term training course in the use of textbooks in classroom activities for teacher trainers is an area where a relatively small investment could pay large dividends.

Long-term technical assistance in evaluation design is also a fundamental investment to ensure accurate measurement of the effects of the PRONEBI program when compared to non-PRONEBI schools.

Assistance to the public relations office of PRONEBI in the form of social marketing expertise to help develop a systematic information campaign using channels accepted by the Mayan communities, could also offer a high return on investment of additional funds.

Finally, improved working conditions and additional equipment for FRONELI staff at a number of levels has the potential to improve productivity.

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APPENDICES

- A. List of Persons Contacted
- B. Project Schools Visited
- C. Curricula Vitae of Principal Investigators
- D. Organizational Chart of PRONEBI

APPENDIX A:

List of Persons Contacted

LIST OF KEY ADMINISTRATIVE PERSONNEL CONTACTED

Paul White, Deputy Director, AID/Guatemala
Liliana Ayalde, Acting Chief, HR/HD, AID/Guatemala
David Bosk, Project Manager, HR/HD, AID/Guatemala
Gilberto Mendez, Special Advisor, HR/HD, AID/Guatemala
Julio Diaz, Program Assistant, HR/HD, AID/Guatemala
Tom Kellerman, Assistant Program Officer, AID/Guatemala
Nadine Duetcher, Education Officer, World Bank
Ricardo Grijalva, Director, Socio-Educativo Rural
Hector Cifuentes, Director, PRONEBI
Domingo Chuc, Subdirector, PRONEBI
Carlos Morales, National Consultant, PRONEBI
Ernesto Morales, National Consultant, PRONEBI
Julia Espana, National Consultant, PRONEBI
Oscar Orellana, National Consultant, PRONEBI
Ernest Gurule, International Consultant, PRONEBI
Patrick Scott, International Consultant, PRONEBI
Michael Richards, International Consultant, PRONEBI
Julia Richards, International Consultant, PRONEBI
Florencio Chuy, Public Relations Office, PRONEBI
Arnoldo Choocooj, Acting Chief, Curriculum Unit, PRONEBI
Manuel Mimatuj, Chief, Administration Unit, PRONEBI

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APPENDIX B:

Project Schools Visited

HORARIO DE VISITAS A LAS ESCUELAS PRONEDI COMPLETAS INTENSIVAS:

Marzo de 1987

MAM

Quiajola, Huehuetenango, San Sebastian Huehuetenango (5 de marzo)
Pueblo Viejo, Huehuetenango, San Sebastian Huehuetenango (5 de marzo)
Tojcañ, Huehuetenango, Santa Barbara (5 de marzo)
Acal, Huehuetenango, San Idelfonso Ixtahuacan (6 de marzo)

KEKCHI

Caquipec, Alta Verapaz, San Juan Chamelco (5 de marzo)
Samac, Alta Verapaz, Coban (5 de marzo)
Chantaca, Alta Verapaz, Chamelco (6 de marzo)
Pocola, Alta Verapaz, San Pedro Carcha (6 de marzo)
Tzunutz, Alta Verapaz, San Pedro Carcha (6 de marzo)

QUICHE

Panajxit II, El Quiche, Santa Cruz del Quiche (9 de marzo)
Panajxit I, El Quiche, Santa Cruz del Quiche (9 de marzo)
El Novillero, Solola, Santa Lucia Utatlan (9 de marzo)
Escuela Normal Regional, Solola, Santa Lucia Utatlan (9 marzo)
Chuguexa I, El Quiche, Chichicastenango (10 de marzo)
Xepol, El Quiche, Chichicastenango (10 de marzo)

CAKCHIQUEL

Paxorotot, Chimaltenango, Tecpan (10 de marzo)
La Canoa, Chimaltenango, Patzicia (10 de marzo)
Santa Catarina Palopo, Solola (11 de marzo) ?
San Antonio Palopo, Solola (11 de marzo)

TOTAL: 18 ESCUELAS COMPLETAS INTENSIVAS
1 ESCUELA NORMAL REGIONAL

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APPENDIX C:

Curricula Vitae of Principal Investigators

Ray Chesterfield

Dr. Chesterfield is an evaluation specialist and applied anthropologist, with over fifteen years experience in the areas of international development, human resource development, and bilingual education. He has designed and evaluated a number of projects involving the identification and integration of the cultural and linguistic patterns learned informally in the home and local environment into the formal processes of schooling. Dr. Chesterfield holds a B.A. in Anthropology, an M.A. in Latin American Studies, and a Ph.D. in Comparative and International Education (emphasis, Anthropology), all from U.C.L.A.

His background includes the following:

Senior Associate, Juarez and Associates, Inc.

- Chief of Party for a USAID-funded evaluation of El Salvador's rural primary education expansion program. Responsible for instrument development; interviewing of key personnel, site visits to schools and the preparation of reports in Spanish and English.
- Chief of Party and Information, Education, and Communication Specialist for an evaluation of the USAID-funded expansion of family planning services in El Salvador project with the Asociación Demográfica Salvadoreña. Responsibilities included coordination of the multidisciplinary evaluation team, assessment of the management of the organization's IE&C component and of the quality of the mass media campaign, and writing all reports.
- Coordinator, Central American Education Field Technical Support Project. Responsible for the coordination of Juarez and Associates' subcontract with the Academy for Educational Development to provide support to LAC/DR/EST and USAID Mission Education and Human Resource Development Offices over a four-year period.
- Project Director coordinating a four and one half year national (HHS/ACYF-funded) evaluation of the Bilingual Bicultural Head Start Curriculum Development Project. In addition to managing a field staff of up to forty individuals, Dr. Chesterfield was responsible for (1) conceptualization and design of appropriate techniques for assessing language acquisition and degrees of bilingualism among Spanish-speaking Head Start children, (2) monitoring naturalistic observation researchers at a number of sites, (3) coordinating psychometric testing, (4) integrating quantitative and qualitative data, and (5) writing all project reports.

- Principal Investigator for a national (NIE-funded) ethnographic study of interactional strategies for language acquisition used by elementary school children in bilingual settings.
- Evaluation Research Specialist for an OBEMLA-funded evaluability study to provide evaluation design options for Title VII bilingual programs.
- Bilingual Specialist for a Dept. of Education study to identify successful strategies in bilingual vocational instructor training programs funded by OBEMLA.

Senior Research Fellow, CNPQ - Brazil, worked with schools of education at several universities in Northeast Brazil to broaden their research perspectives to include qualitative and multimethodological approaches to evaluation.

Visiting Lecturer, U.C.L.A. Graduate School of Education, teaching courses in Educational Anthropology for graduate students in education and other disciplines.

Visiting Professor, School of Education, Universidade Federal de Sergipe, Aracaju, Brazil. Teaching courses in research methodology, educational evaluation, and rural development. Evaluation Specialist for and evaluation of in-service teacher training programs for rural primary schools conducted by the university.

Project Director of an evaluation of a pilot program to create local control of rural education in Passo Fundo, Brazil.

Coordinator of a three-year (INEP-funded) longitudinal project examining school - community integration and culturally acceptable educational alternatives among rural populaces of southern Brazil.

Visiting Professor of Education and Anthropology at the Federal University of Rio Grande do Sul, Brazil. Taught courses in Ethnographic Field Research, Cultural Awareness for Teachers, Economics of Education, Research Instruments, and Proposal Preparation. Served on the coordinating committee for the Graduate School of Education and participated in the development of a doctoral level program in education.

Consultant, for agencies such as the Corporación Venezolana de Guayana, the Brazilian Ministry of Education, I.D.R.C. of Canada, and U.S.A.I.D., in various parts of Latin America and the Caribbean, conducting short-term evaluations, seminars, and feasibility studies.

Research Anthropologist employed by the UCLA Latin American Center to gather ethnographic data on the indigenous education practices of subsistence cultivators in Venezuela and on the non-deliberate effects of agricultural extension among such groups.

Anthropologist studying the role of formal education in the modernization of attitudes in rural and peripheral urban environments of Venezuela.

Instructor, Pepperdine School of Continuing Education, Los Angeles. Taught courses in Spanish for Teachers: A Bicultural Approach.

PeaceCorps Volunteer, Machiques, Venezuela. Taught English as a Second Language and Physical Education to high school students, trained elementary school teachers in the fundamentals of teaching Health and Physical Education, and organized barrio self-help organizations through the rural nuclear school system.

Relevant publications include the following:

"Qualitative Methodology in the Evaluation of Early Childhood Bilingual Curriculum Models". In Ethnographic Evaluation: Theory, Practice, and Politics, D. Fetterman (ed.): Sage Publications, pp. 145-171 1986.

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"A Naturalistic Approach for Evaluation". Bilingual Journal. 6(1), 23-28, 1982. (with L. Moll & R. Perez).

"Peer Interaction, Language Proficiency, and Language Preference in Bilingual Preschool Classrooms". Hispanic Journal of Behavioral Sciences. 4(4), 467-480, 1982. (with K. B. Chesterfield & R. Chavez)

"Factorial and Naturalistic Observation Procedures in an Evaluation of Preschool Bilingual Curriculum Models" In R. Padilla, ed., Bilingual Education Technology. Ypsilanti: Eastern Michigan University Press, 1981. (with others)

"Dual Language Acquisition Among Hispanic Preschoolers in Bilingual Settings". The Bilingual Review. 8(1), 20-28, January-April 1981. (with R. Perez)

"O Conceito de Carente Cultural é Carente?" Educação e Realidade, 5 (2) 305-312, 1980.

"Educação e Desenvolvimento Rural Integrado". Revista Brasileira de Estudos Pedagógicos, 63 (146), 305-312, 1980. (with Paulo Schutz)

"Traditional Agricultural Training Among Peasant Farmers" Anthropos, 74 (314), 549-565, 1979. (with K. Ruddle)

"The Rural School and the Creation of Modern Attitudes: A Venezuelan Case". Compare. 8(2), 1978.

"The Effects of Environmentally Specific Materials on the Teaching of Reading in Rural Brazilian Primary Schools". The Reading Teacher. 32(3), 1978.

"Traditional Skill Training and Labor in Rural Societies". The Journal of Developing Areas. 12(4), 389-398. 1978. (with K. Ruddle)

"Ruralização da Educação: Um Enfoque Alternativa". Cadernos de Pesquisa. 25, 47-52, 1978. (with P. Schutz)

"Attracting University Professors to Interior Cities of Brazil: Individual Perceptions as a Basis for Educational Planning" Higher Education. 7, 405-416, 1978. (with W. Enders & N. Fischer)

"A Strategy for Nonformal Continuing Education in Rural Brazil" Lifelong Learning: The Adult Years. 12-16, Oct. 1976. (with P. Schutz)

Avaliação de Uma Alternativa Educacional no Meio Rural SEC, Porto Alegre, Brazil, 1978. (with P. Schutz)

"Pesquisa Educacional para o Meio Rural". Educação e Realidade. 3, 35-40, 1977. (with P. Schutz)

Education for Traditional Food Procurement in the Orinoco Delta, Ibero-Americana, 53, University of California Press, Berkeley, 1977. (with K. Ruddle)

"Mobile Units for Vocational Training in Rural Brazil" Agricultural Education. 50(1), 9 & 23, July 1977. (with P. Schutz)

"School-Community Integration in Rural Brazil" Community Development Journal. 12(2), 1977. (with P. Schutz)

"Purposeful Play in Rural Venezuela" Children Today, 6 (5), 14-15 & 35, 1977.

"Nondeliberate Education: Venezuelan Campesino's Perceptions of Extension Agents and Their Messages". In T. J. La Belle, ed. Educational Alternatives in Latin America Los Angeles, UCLA Latin American Center, 1975. (with K. Ruddle)

"A Case of Mistaken Identity: Ill - Chosen Intermediaries in a Venezuelan Agricultural Extension Programme". Community Development Journal, 11(1), 53-60, 1976.

"Change Perceived as Man-made Hazard in a Rural Development Environment". Development and Change, 7(3), 1976. (with K. Ruddle)

Selected Presentations:

"The Integration of Qualitative and Quantitative Data in a Multisite Evaluation of Bilingual Programs". Paper presented at the XI International Congress of Anthropological and Ethnological Sciences, Vancouver, Can., August 1983.

"Análisis Comparativa de Estudios Etnográficos". Paper presented at the International Conference on the Interpretation of Qualitative Data, Bogota, Colombia, April 1983.

"Participatory Strategies Among Non-talkers in Bilingual Preschool Classrooms". Paper presented at the meeting of the American Anthropological Association, Los Angeles, December, 1981.

"Integração e Administração de Sistemas na Formação de Recursos Humanos". Invited seminar, Universidade Federal de Rio Grande do Norte, Natal, Brazil, May-June 1981.

"A Multimethod Evaluation of Four Early Childhood Bilingual Education programs". American Educational Research Association, Los Angeles, April 1981.

"Formal and Informal Educational Trade-offs Among Latin American Cultivators". Comparative and International Education Society, Tallahassee, March 1981.

"Qualitative methods in Bilingual Education Research". Early Childhood Education Forum: A Bilingual Approach,

Austin, Texas, August 1980.

Relevant reports include the following:

Evaluation of the Expansion of Family Planning Services and Commodities in El Salvador, Project No. 519-0275.
USAID HR/HA Contract No. 519-0275-C-00-6185-00, March 1986.

Evaluation of El Salvador's Rural School Expansion Project
USAID/OET El Salvador, Contract No. 519-0168-0-00-5473-00,
September, 1985.

Pilot Study Results and Child Assessment Measures. An
Evaluation of the Head Start Bilingual Bicultural Curri-
culum Development Project. HEW/ACYF. Contract No. HEW
105-77-1048. June 29, 1979. (with others)

Report of the Pilot Study Results and the Training of
Fieldworkers for the Ethnographic/Observational Compo-
nent. An Evaluation of the Head Start Bilingual
Bicultural Curriculum Development Project. HEW/ACYF.
Contract No. HEW 105-77-1048. September 28, 1979.

Field Supervisor Observations and Quality Control of
Ethnographic Data. An Evaluation of the Head Start Bilin-
gual Bicultural Curriculum Development Project. HEW/ACYF.
Contract No. 105-77-1048. December 30, 1979. (co-author)

Pretest Results and Posttest Analysis Plan for the Quali-
tative Component. An Evaluation of the Head Start Bi-
lingual Bicultural Curriculum Development Project. HEW/
ACYF. Contract No. 105-77-1048. February 28, 1980. (with
others)

Field Supervisor's Spring Parallel Observations and De-
briefing of Fieldworkers. An Evaluation of the Head
Start Bilingual Bicultural Curriculum Development Pro-
ject. HEW/ACYF. Contract No. 105-77-1048. July 1980.

Evaluation of APROFAM/IE&C Activities for the 1979-
1981 Period U.S. Department of State, AID, Guate-
mala. Contract No. AID/SOD/PDC-C-0398. Nov. 12, 1981.

Final Report. An Evaluation of the Head Start Bilingual
Bicultural Curriculum Development Project. HEW/ACYF.
Contract No. 105-77-1048. January 14, 1982. (with
others)

A Review of Evaluation Policy and Practice in Head Start
and Title VII Programs: Implications for Future Title
VII Program Evaluations. OBEMLA. Contract No. 300-
810244. Spring 1982. (with others)

Interaction Strategies of First Graders Who Have Ex-
perienced Different Bilingual Preschool Models. Final

Report. National Institute of Education. Grant No.
NIE-G-81-01-24. September 30, 1962. (with others)

Professional organizations:

Comparative Education Society
Committee on Anthropology and Education

Dr. Chesterfield is fluent (FSI 4) in Spanish and Portuguese.

CURRICULUM VITAE

H. Ned Seelye
1840 Kalorama Rd., N.W.
Washington, D. C. 20009

Telephone:
Office: (202) 462-8848

PROFESSIONAL EXPERIENCE

Overview: Chief executive officer of non-profit educational organization since 1986; CEO of research firm since 1977; director of multi-million dollar state-wide bilingual education program for six years; state foreign language supervisor for three years; and teacher in both the U.S. and Latin America at every level from junior high school through graduate school, since 1956.

1986-present

Executive Director, Spanish Education Development (SED) Center (Washington, D.C.), a non-profit, United Way agency offering educational services (e.g., bilingual preschool, English and basic literacy for adults) to immigrants, mostly low-income Hispanic. Computerized agency's management information system and revised English curriculum during first year. Supervise staff of 40.

1977-present

Founder and CEO of International Resource Development, Inc. (LaGrange, IL), a social science research firm servicing educational and industrial organizations (Dun & Bradstreet rating No. 13-970-7178). In addition to fiscal and administrative duties as CEO of the firm (e.g., financial and human resource management, proposal writing), academic responsibilities have included serving as principal investigator for a number of projects. The following partial listing illustrates their range:

Workplace Productivity:

1. Review of the management information system needs of mental health agencies, nationwide, and an analysis of the current and recommended role of mini- and microcomputers to handle routine administrative and clinical needs, 1984-85. (National Institute of Mental Health)
2. Identification of the critical characteristics of Quality Circles (small participative management work groups) in U.S. and Japanese industry and development of an evaluation design to measure QC effectiveness, 1982. (U.S. Department of Defense)

Program Development and Evaluation:

3. Development of a four-year national plan for rural primary school bilingual education in four Mayan Indian language areas, 1978-79. This plan formed the basis of an international treaty. (Guatemalan Ministry of Education and USAID/Guatemala)
4. Evaluation of the impact of \$46 million dollars in U.S. educational aid to Guatemala during the previous 15 years in

- the areas of primary school construction and curricular reform, non-formal education, bilingual Indian preschool and elementary school education, and administrative training, 1983. (U.S. Department of State and the Guatemalan Ministry of Education)
5. Evaluation of program to train rural Indian bilingual teachers at the Escuela Normal de Santa Lucía Utatlán, Sololá, 1978-79. (Guatemalan Ministry of Education and USAID/Guatemala)
 6. Evaluation of Quechua-Spanish primary-school curriculum development and teacher training project in Cochabamba, Bolivia, 1978. (USAID/LaPaz)
 7. Annual evaluation of the Dearborn, Michigan, Arabic-English bilingual programs, K-12, 1978 to 1986. One program (1982-85) focused on developing microcomputer courseware in a number of academic areas for Arabic-speaking high school students. (Dearborn Public Schools)
 8. Evaluation of formal and non-formal education among upper-Amazon Indians of six different jungle tribes in Ecuador, 1977-78. (Summer Institute of Linguistics)
 9. Analysis of the standardized testing program at the Catholic University of Ecuador, 1978. (Pontificia Universidad Católica del Ecuador)

Survey and Market Analyses:

10. Analysis of listener response to radio announcements in Santiago, Chile, 1981. Focus group response to radio, TV and print advertisements, Chicago and Kansas City, 1980. (Bonnevillie International, Inc.)
11. Baseline study of 120 rural communities preparatory to a national bilingual education project, 1979. (Guatemalan Ministry of Education; USAID/Guatemala; Academy for Educational Development)

Exploratory and Feasibility Studies:

12. Exploratory research into the development of social and academic competency skills by Hispanic youth residing in a U.S. urban area, 1980-81. (National Institute of Education; SED Center)
13. Study of the feasibility of conducting an international evaluation of bilingual education programs for linguistic "minorities" in Ghana, Nigeria, Zaire, Kenya, India, Australia, Indonesia, Philippines, Mexico, Guatemala, Ecuador, Peru, Bolivia, and Paraguay, 1977. (AID/Washington and Center for Applied Linguistics)

1968-77

Illinois Office of Education. Began as State Foreign Language Supervisor (1968-71) and after three years was promoted to State Director of Bilingual and Migrant Education (1971-77).

Duties as State Foreign Language Supervisor included giving consultative assistance to approximately 200 classrooms yearly in

Chicago and the surrounding 13 counties, and organizing over 50 inservice training workshops for experienced teachers. Participated in 45 state evaluations of school district foreign language programs and in eight North Central States Association accreditation visits to Illinois public and private primary and secondary schools.

Accomplishments during the six years as State Director of Bilingual Education included the following:

- (1) Organized, staffed, and supervised the Bilingual Department which consisted of 20 professional and five support staff;
- (2) Administered the state's bilingual education programs (during this tenure, Illinois bilingual programs grew from nothing to the largest state-funded program in the U.S., enrolling 30,000 students in 29 different languages in over 150 schools);
- (3) Developed and implemented a statewide longitudinal evaluation design and a statewide plan to provide ongoing inservice to 1200 bilingual teachers and 600 teacher aides;
- (4) Drafted state regulations and proposed amendments to the State School Code;
- (5) Led negotiations and was responsible for review of several thousand school district proposals;
- (6) Responsible for the fiscal management of an annual budget (MBO and zero base) in excess of 14 million dollars.

UNIVERSITY APPOINTMENTS, 1959 to present.

1. Associate Professor of Sociology and Anthropology, George Williams College (Downers Grove, IL), 1983-1985. Taught Introduction to Sociology, Racial and Ethnic Minorities, Cross-Cultural Communication, Modern Sociological Theory, Cultural Anthropology, Peoples and Cultures of Latin America, and Introduction to Social Science Research. Full-time position. Appointed Director of the International Intercultural Studies Program, 1984. (The 100-year-old college declared financial exigency in 1985 and suspended all course offerings.)
2. Lecturer in Anthropology, Morton College (Cicero, IL), 1980-1986. Taught Physical Anthropology and Cultural Anthropology. Adjunct appointment.
3. Lecturer, Graduate School of Education, Department of Curriculum, Loyola University of Chicago, 1973 to 1983. Taught graduate course on multicultural curriculum development and evaluation. Adjunct appointment.
4. Visiting Associate Professor, Department of Education, University of Miami, 1979. Taught graduate extension course on bilingual education program design, in San Jose, Costa Rica and in Tegucigalpa, Honduras.
5. Visiting Professor, Institute of Languages and Linguistics, Catholic University of Ecuador, 1976 and 1977. Taught graduate seminar on bilingual education (Spanish-Quechua) and supervised independent studies.
6. Senior Fulbright Lecturer in Comparative Education and Educational Evaluation, Catholic University of Ecuador (Quito), 1975.

7. Visiting Assistant Professor of Education, University of Hawaii, 1971. Taught graduate course on the methodology of teaching cultural concepts in foreign language classes.
8. Instructor in Spanish, Northern Illinois University (DeKalb), 1967-69. Coordinator of 2nd year Spanish courses in matters of examinations, syllabi, grades (10 teachers involved). Also taught 3rd year literature courses. Full-time. (Granted leave of absence during 1968-69 to work with the Illinois Office of Education. Resigned from NIU, June 1969.)
9. Instructor in English as a Second Language, Universidad del Valle de Guatemala, 1967. Implemented a pilot program of English as a Second Language. Adjunct appointment.
10. Lecturer (catedrático) in Physical Anthropology, 1966, and Instructor in English as a Foreign Language, 1965, Universidad Rafael Landivar (Guatemala City). Adjunct appointments.
11. Teaching Fellow, Department of Spanish and Portuguese, Tulane University of Louisiana; taught in an experimental language laboratory, 1962-63.
12. Instructor in Spanish, Ursinus College (Collegeville, PA), 1959-62. Taught beginning and intermediate Spanish, Advanced Grammar, Commercial Spanish, Spanish Literature Since 1800, Spanish Literature of the Golden Age, Spanish-American Literature, and Advanced Composition and Conversation. Full-time.

SECONDARY SCHOOL APPOINTMENTS

1. Instructor in Social Studies and Literature, Colegio Americano de Guatemala (student body 85% Guatemalan, 15% foreign, mostly U.S.), 1964-67. Taught 11th and 12th grades and their equivalents in the Guatemalan secondary educational system (bachillerato program). Courses included U.S. History, U.S. Literature, Introduction to the Social Sciences, World Problems, English as a Second Language. During annual school vacations, taught ESL at the Instituto Guatemalteco Americano, 1964-66.
2. Teacher of Spanish and U.S. History, Coopersburg Jr.-Sr. High School (Coopersburg, PA), 1956-57. Taught grades eight through eleven.

OTHER WORK EXPERIENCE

U.S. Army Personnel Specialist (MOS:716.16), 1957-59. In addition to regular duties, taught part-time for 18 months in the GED program at the Army Education Center, Vicenza, Italy.

Freelance writer, 1954. Traveled through Cuba, Haiti, Santo Domingo, and Puerto Rico writing feature stories for hometown newspaper, the Sunbelt Daily Item (PA).

EDUCATION

M.A. in Latin American Studies plus an additional three years of graduate work in social science and language study.

Northwestern University, 1971 [2 qts]. (Social psychology; research design)

Universidad de San Carlos de Guatemala, 1960-67. M.A. in estudios hispánicos. Thesis: Transculturización en la colonia norteamericana residente en Guatemala.

Tulane University, 1962-64. (Spanish/Portuguese, anthropology)

Brigham Young University, 1955-56. B.A. in Spanish and sociology.

University of the Americas, Mexico City, 1952-54. (First three undergraduate years.)

PUBLICATIONS

Over 60 publications (excluding research reports, book reviews, and brief notes) of which the following is a sample. (Complete listing available upon request.)

(a) Cross-cultural Testing:

"Field Notes on Cross-Cultural Testing," Language Learning 16 (1,2), (1966): 77-85.

"Item Validation and Measurement Techniques in Culture Tests," in A Handbook on Latin America for Teachers: Methodology and Annotated Bibliography. H. N. Seelye, ed. Springfield, IL: Illinois Office of Education, 1968, pp. 29-33. (ED 027 797)

"Measuring the Ability to Function Cross-Culturally," in A Handbook on Latin America for Teachers: Methodology and Annotated Bibliography, op cit, 1968, pp. 34-43.

"An Objective Measure of Biculturation: Americans in Guatemala: A Case Study," The Modern Language Journal 53 (7.. (Nov. 1969): 502-514.

"Ethnocentrism and Acculturation of North Americans in Guatemala," with N. E. Brewer. Journal of Social Psychology 30. (Apr. 1970): 147-155.

(b) Intercultural Communication:

"Analysis and Teaching of the Cross-Cultural Context," in The Britannica Review of Foreign Language Education, Vol. 1. E. M. Birkmaier, ed. Chicago: Encyclopaedia Britannica, 1969, pp. 37-81.

The Newspapers: A Reflection of Life Styles in the Spanish-Speaking World (with J. L. Day). Lincolnwood, IL: National Textbook Co., 1974, revised edition, 1982.)

Editor: Living in Latin America: A Case Study in Cross-Cultural Communication, by R. L. Gorden. Lincolnwood, IL: National Textbook Co., 1974.

A Guide to the Selection of Bilingual Education Program Designs (with B. Navarro). Arlington Heights, IL: Bilingual Education Service Center, 1977.

"Self Identity and the Bicultural Classroom," in Bilingual Education. H. LaFontain, B. Persky, and L. Golubchick, eds. Wayne, NJ: Avery Publishing Group, Inc., 1978, 290-298.

"Curriculum in Multicultural Education" (with J. H. Wasilewski), in Multicultural Education: The Cross-Cultural Training Approach. M. Pusch, ed. Chicago: Intercultural Press, 1979, pp. 63-85.

Teaching Culture: Strategies for Intercultural Communication. Lincolnwood, IL: National Textbook Co., 1974, expanded and revised edition, 1984.

(c) Workplace Productivity:

"Phenotype and Occupational Mobility in Guatemala City: A Preliminary Survey," (with M. G. Mirón) Science Education 54 (1), (Jan.-Mar. 1970): 13-16.

"Critical Components of Quality Circles: Survey Results," (with J. A. Sween) The Quality Circles Journal 6 (1), (Feb. 1983): 14-17.

"Dimensions of Japanese QC Circles and Industry Type," (with J. A. Sween) International Journal of Quality & Reliability Management, 2 (2), 1985: 25-32.

"Computer Use in Automated Mental Health Agencies: Survey Results," Computers in Human Services. Currently making final changes suggested by CHS review panel.

SPECIAL REPORTS AND PAPERS READ AT CONFERENCES

Delivered over 200 reports and papers; about one-third of the talks were given as addresses. The following is a sample.

"Elementos sociales y politicos en las novelas de Miguel Angel Asturias." Modern Language Association Conference, Swarthmore College (Feb. 1962). (Asturias was later awarded the 1967 Nobel Prize for Literature.)

"Social Stratification: A Matrix for Cross-Cultural Communication." Rocky Mountain Modern Language Association Conference, Eastern Illinois University, 1969.

"A Critique of the New York State Regents Foreign Language Examinations on Culture." Conference on Modern Language Instruction in New York State for the Next Decade, Albany, 1969.

Developing Performance Objectives for Language and Culture Instruction. Three-day symposium sponsored by the American Council on the Teaching of Foreign Languages. Los Angeles, 1970. (Co-directed this symposium with Florence Steiner.)

"First Independent Educational Accomplishment Audit Report for the Chicago ESEA Title VII Bilingual Centers, 1969-70." Special report prepared for the U.S. Office of Education, with the assistance of R.E. Brewer, W.F. Marquardt, and R.R. Rivera, Nov. 1970.

"Vulture Culture: An Hypothesis-Testing Model for Teaching Cultural Concepts." Minnesota Foreign Language Conference, Minneapolis, Oct. 1972. This speech was also audio-taped for the Connecticut State Department of Education for use in workshops there.

"Do Bilingual Education Programs Inhibit English Language Achievement?: A Report on an Illinois Experiment." (Co-authored with K. Balasubramonian and R. Elizondo de Weffer.) Annual Conference of Teachers of English to Speakers of Other Languages, San Juan, Puerto Rico, May 1973.

"What Are the Skills Necessary to Communicate Cross-Culturally?" Vide -taped keynote presentation for the University of Minnesota program in foreign language teacher training. Minneapolis, Dec. 1973. This is still in use.

"Strategies for Using the Mass Media for Teaching Intercultural Communication Skills." International Conference on the Mass Media, sponsored by the American Association of Journalism in Education. Mexico City, March 1971.

"Elementos extra-lingüísticos en la comunicación transcultural." Centro Ecuatoriano Latino-Americano. Guayaquil and Quesada, Ecuador, Dec. 1975.

Ten public lectures, in Spanish, on bilingual education program design, assessment, and teacher training. Pontificia Universidad Católica del Ecuador, Quito, Aug. 1976.

"Informe sobre el estudio de base para la educación bilingüe (idiomas mayances y castellano) en Guatemala" (with M. González Calat, M. López Raquet, J. Sánchez Castillo, and J. A. Sween). Universidad del Valle de Guatemala, Guatemala City, Aug. 1973.

HONORS, AWARDS, GRANTS (grants and university fellowships excluded)

WRITING: Editor in U.S. Army Southern European Theater Book Review contest, Verona, Italy, 1958. Stephen A. Freeman Award for best published article on foreign language methodology (with J.L.

Day), Northeast Conference on Teaching Foreign Languages, 1973.
Listed in Contemporary Authors, (Gale Research, Vol. 102, 1980).

TEACHING: Awarded Senior Fulbright Hays Lectureship, Catholic University of Ecuador (Quito), 1975. (After the Fulbright, I became the first American professor to receive a regular appointment by the university.)

VISUAL ARTS: First Place and an Honorable Mention in U.S. Army Southern European Theater Photography Contest, Verona, Italy, 1959. One-man art exhibition (oils), Instituto Guatemalteco-Americano, Guatemala City, 1966. SPORTS: Kodokan Ni Kyu (brown belt) award in judo, Mexico City, 1953. (Taught judo avocationally from 1956-1967.)

LISTED IN... National Directory of Latin Americanists (The Library of Congress, 1971, 1983), Directory of American Scholars (American Council of Learned Societies, 1974), Who's Who in International Education (Cambridge, England, 1980).

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Best Available Document

CURRICULUM VITAE

DATOS PERSONALES:

Nombre: Otilia Inés Lux García de Cotí.

Nacimiento: 21 de enero de 1957, en Santa Cruz de El Quiché, Guatemala.

Cédula de Vecindad: H-14, Reg. 17,321. PASOS DE

Dirección: Lote 1. Manzana "L" Sector C-5 Villaflor zona 19. Guatemala.

PREPARACIÓN ACADÉMICA:

- Licenciada en Pedagogía con especialidad en Administración Educativa, graduada en la Universidad " RAFAEL LANDIVAR " en 1981.

- Profesora de Enseñanza Media en Pedagogía y Ciencias de la Educación, en la Universidad de " SAN CARLOS " en 1975.

- Maestra de Educación Primaria Urbana, en el Instituto Normal " JUAN DE LEÓN " , en Santa Cruz de El Quiché 1968.

- Educación Primaria realizada en la Escuela Nacional Tipo Federación " ESCUELA UYAN " en Santa Cruz de El Quiché 1973.

- Educación Propriaria en la escuela de Párvulos " MARIA MONTESSORI " en Santa Cruz de El Quiché.

- Hice un semestre en la carrera de Sociología de la Universidad de San Carlos. En 1980.

- Recibí un curso sobre la Enseñanza de los Medios sociales en Educación Media por la Universidad de SAN CARLOS como delegada del Instituto Nac. Básico de la Colonia Carolingia. En 1979.

- Recibí el curso de Frustraciones Educativas, proporcionado por la Universidad del VALLE, a nivel Multinacional, Noviembre de 1977.

- Recibí varios cursos impartidos por Socio Educativo Rural. para Escuelas Primarias.

- Recibí un curso sobre lingüística en el Instituto Lingüístico de Verano en noviembre de 1983.

EXPERIENCIA PROFESIONAL:

- Catedrática de tiempo completo en el Instituto Nacional de Educación Básica de la Colonia Carolingia zona 19, Guatemala, sirviendo la cátedra de Estudios Sociales, Actualmente.

- Catedrática auxiliar en la Universidad Rafael Landívar en el primer semestre de 1985. en la cátedra Supervisión, Planificación y Administración Educativa. Para Técnicos en Educación Bilingüe.

- Catedrática de tiempo completo en la Escuela Normal Regional de Occidente en Santa Lucía Utatlán , Sololá, con las cátedras de Evaluación

y Organización Escolar, 1977-1979.

- Técnico en -diestramiento II. en el Proyecto de Extensión y Mejoramiento de Educación Primaria PEMEP, 1975-1977. *
- Participación en cursos de capacitación a profesores en servicio del nivel primario realizado por PEMEP.
- Asesora de planificación del área de los Estudios Sociales en el programa de Educación -ilingüe en 1983.
- Profesora con grado en la Escuela Nacional de Educación Primaria en la Aldea Nactzul 1o y 6o de Michicastenango El Quiché.
- Directora con grado en la Escuela Nacional de Educación Primaria en el Caserío de Jalancoc, Joyabaj, El Quiché. 1969-1971.

MERITOS OBTENIDOS:

- Condecorada con la Orden Francisco Marroquín, proporcionada por el Ministerio de Educación en 1981.
- Madrina de la 2da. Promoción de Maestros para el área Rural de la Escuela Normal Regional de Santa Lucía Utatlán, Sololá 1979.
- Maestra distinguida para el día del maestro en el Instituto Nacional de Educación Básica de la Colonia Carolingia zona 19.
- Madrina de la cuarta promoción de alumnos egresados del Instituto Nac. de Educación Básica de la Colonia Carolingia. 1983.
- Abanderada por 3 años en el Instituto Nacional JUAN DE LEON de El Quiché.

OTILIA I. LUX GARCIA DE COTI

Guatemala febrero 1985.

Best Available Document

CURRICULUM VITAE

Oscar Velásquez Estrada

Fecha de Nacimiento: 5 de diciembre de 1926

Lugar de Nacimiento: San Antonio Huista, Huehuetenango, Guatemala.

I. EDUCACION:

1. Primaria, en las escuelas públicas de Huehuetenango, finalizada en 1941.
2. Secundaria, en la Escuela Normal Central para Varones de la ciudad de Guatemala, de 1942 a 1947.
3. Educación Superior. Cursos en el Departamento de Extensión de la Facultad de Humanidades y cursos regulares de la misma Facultad en 1951 y 1960, en la Universidad de San Carlos de Guatemala.
4. Curso de Supervisión y Administración Escolar en la Universidad del Estado de Pennsylvania, Estados Unidos de Norteamérica, durante 1960 a 1962, como estudiante regular.
5. Intership en las escuelas públicas de Chambersburgh, Pennsylvania, 1961.
6. Cursos sobre desarrollo curricular, Universidad del Valle, julio y agosto de 1975.
7. Estudios en la Universidad del Estado de Pennsylvania, con el grado de Bs. C. en Educación de dicha Universidad, con énfasis en matemática, de 1967 a 1968.
8. Estudios en Administración y Supervisión Educativa en la Universidad Rafael Landívar, de 1982 a 1984 (graduado como Licenciado en Pedagogía, con orientación en evaluación y administración educativa).

II. TITULOS OBTENIDOS:

1. Maestro de Educación Primaria
2. Bachelor of Science, P.S.U.
3. Grado de Licenciado en Pedagogía

III. CARGOS DESEMPEÑADOS:

1. Profesor de grado en escuelas públicas del departamento de Huehuetenango, de mayo de 1947 a diciembre de 1954.

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2. Director con Grado de la Escuela Privada de la Compañía Minera de Guatemala, en Alta Verapaz, de 1955 a 1958.
3. Técnico en Educación del Servicio Cooperativo Interamericano de Educación (SCIDE), en el área de Matemática.
4. Coordinador del Programa para el Desarrollo de siete Centros Urbanos seleccionados bajo SCIDE., de 1959 a 1960.
5. Subjefe de la Sección de Educación de Adultos de Asistencia Cooperativa en Educación Nacional en Guatemala, de septiembre 1962 a julio 1963.
6. Editor Asistente del Programa Regional de Libros de Texto para Centroamérica y Panamá y Asesor en Matemática, de 1963 a 1964 (ROCAP).
7. Editor General del Programa de Libros de Texto ROCAP en Guatemala y Asesor en Matemática, de 1964 a 1967.
8. Editor-Asesor en el área de Matemática del Programa de Libros de Texto de ODECA en San Salvador, El Salvador, de 1969 a 1970.
9. Experto en Curriculum del Proyecto de Extensión y Mejoramiento de la Educación Primaria (PEMEP), de 1971 a 1975. Elaboración de Programas de Primaria.
10. Director Fundador de la Escuela Privada Exmibal, de septiembre 1975 a abril de 1977.
11. Técnico en Adiestramiento del Programa de Formación Permanente de Maestros, Programa 025 M.E. 1978 y Asesor de Escuelas Normales Regionales.
12. Subdirector de la Dirección de Asistencia Educativa Especial de la Secretaría de Bienestar Social de la Presidencia de la República, de 1979 al 31 de julio de 1984.
13. Director de Asistencia Educativa Especial de la Secretaría de Bienestar Social de la Presidencia de la República, del 10. de agosto de 1984 a la fecha.
14. Consultante de UNESCO en elaboración de una Guía para Escritura de Materiales de Lectura para Neolectores, 1981.
15. Catedrático de Materiales Educativos Bilingües. Universidad Rafael Landívar, 1985.
16. Cátedra de planificación y evaluación de aprendizajes.

IV. OTRAS ACTIVIDADES DOCENTES Y DE DIVULGACION IMPARTIDAS POR EL SUSCRITO

1. Cursillo a Maestros de Suchitepéquez y Retalhuleu en el área de matemática, julio de 1959, Guatemala.

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2. Cursillos a Maestros de Matemática para la Escuela Media en el Instituto Normal Centro América (INCA), noviembre 1959, para zona oriental del país. Guatemala.
3. Cursillo a Maestros de las Escuelas Públicas de Mazatenango y Retalhuleu, sobre matemática, febrero 1960.
4. Cursillo a Maestros de las escuelas públicas de Jutiapa, junio 1960.
5. Clases sobre Matemática Moderna en Televisión Educativa, 1963.
6. Participación en los programas de estudio para la escuela primaria, como invitado del Ministerio de Educación de Guatemala, octubre 1963.
7. Cursillo a supervisores de la República de Costa Rica, sobre Matemática Moderna, sede C.R.L.T. en Guatemala, febrero 1965.
8. Cursillo a supervisores de la República de El Salvador, sede C.R.L.T. en Guatemala, mayo 1965, sobre libros de texto.
9. Cursillo a supervisores y directores de la República de Panamá, sobre Matemática Moderna. Sede Guatemala, marzo 1965, en libros de texto.
10. Curso a supervisores y directores de la República de Costa Rica, en la Escuela Normal de Heredia, junio 1965, sobre libros de texto.
11. Cursillo a Maestros de la ciudad de Guatemala, en el Hospicio Nacional, mayo 1966, sobre libros de texto.
12. Cursillo a supervisores de la República de Honduras, en Tegucigalpa, agosto 1966, sobre libros de texto.
13. Cursillo a supervisores y directores en la Escuela Normal de Managua, abril 1967, sobre utilización de libros de texto.
14. Cursillo de Directores de Costa Rica, en San José, sobre los libros de texto y programas de estudio, febrero 1969.
15. Cursillo a las maestras del colegio Capouillez sobre Matemática Moderna. Enero a marzo 1969.
16. Práctica sobre enseñanza de Matemática Moderna a estudiantes de supervisión, en la Escuela Normal Superior de San Salvador, El Salvador.
17. Cursos de entrenamiento a directores y maestros de escuelas piloto y regionales del PEMEP y participación activa en Seminarios y Cursillos a supervisores y maestros de la Normal Regional de Occidente.
18. Distintos Seminarios a nivel internacional en Guatemala y Honduras, - 1978 y 1979.
19. Catedrático titular de la Universidad Rafael Landívar, sobre materiales educativos bilingües.

V. PUBLICACIONES

1. Preparación de una página de lectura fácil en Prensa Libre, para recién alfabetizados, 1963-1964.
2. Traducción y adaptación de un folleto para lecturas complementarias de educación de adultos, 1964, "La Fascinante Historia de las Medidas".
3. "Aritmética Básica", libro para la enseñanza de matemática para adultos, 1964.
4. Como asesor en matemática del Programa Regional de Libros de Texto y editor del mismo, participación como escritor, especialmente guías para 5o. y 6o. grados.
5. Publicación de programas de estudio para escuelas experimentales en PEMEP. Dirección y elaboración de los mismo, 1971-1975.
6. Co-autor del libro "La Administración Educativa a Nivel Local y de las Instituciones", solicitado por la División de Políticas y Planificación de la Educación de UNESCO. París, 1981.
7. Dirección en la escritura de la "Guía para Escritores de Materiales de Lectura para Neolectores. Educación Extraescolar". Guatemala, 1981.

VI. ASOCIACIONES PROFESIONALES

1. Miembro de la Asociación de Ex-alumnos de la Universidad de Pennsilvania, Estados Unidos de Norteamérica.

VII. DIRECCION

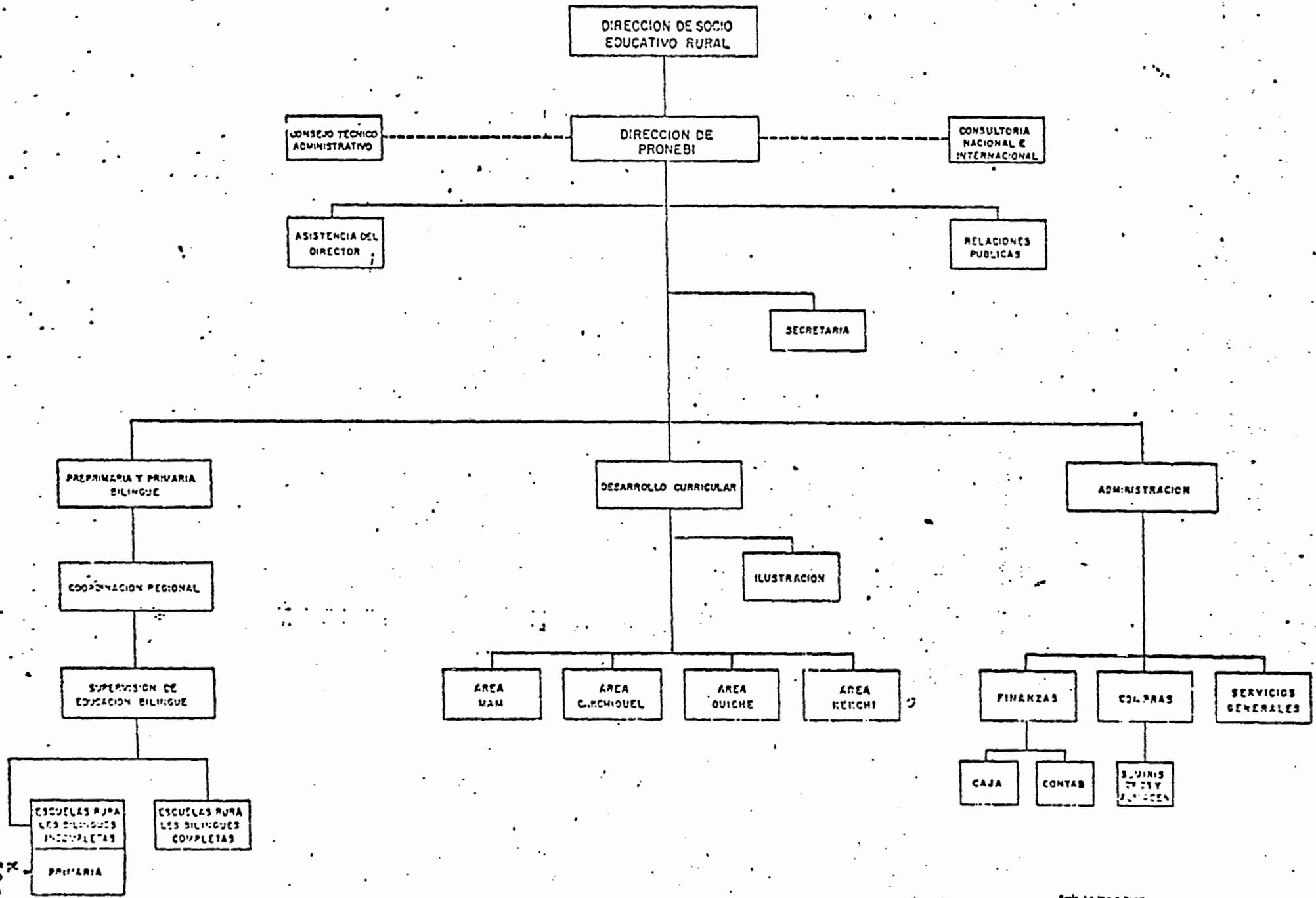
Arco 4-7, No:72, Jardines de la Asunción, zona 5, Guatemala. Guatemala C.A.
teléfono 500567.

Guatemala, 1987.

APPENDIX D:

Organizational Chart of PRONEBI

ORGANIGRAMA GENERAL OPERATIVO
PROGRAMA NACIONAL DE EDUCACION BILINGUE "PRONEBI"



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