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CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) — PART I

Report Control Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
EDUCATIONAL SECTOR PROGRAMS IN GUATEMALA	N/A	USAID/Guatemala

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 84-03

☐ REGULAR EVALUATION ☒ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES	6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY -- B. Final Obligation Expected FY -- C. Final Input Delivery FY --	A. Total $ N/A B. U.S. $	From (month/yr.) 1969 To (month/yr.) 1983 Date of Evaluation Review April 2, 1984

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
I. Issues to be addressed in development of Rural Primary Education Improvement Project		
A. MOE Distribution System The distribution of texts, supplies and equipment has proved to be a significant institutional bottleneck under previous AID loans. The new project will have to address this problem and clearly define linkages with the World Bank Loan's Textbook Distribution system.	Fairchild Odle Méndez	June 15, 1984
B. School Maintenance The new project will define the way in which curricular content concerning the maintenance of schools and the use of latrines will be incorporated into the new bilingual texts and teachers' guide.	Fairchild Odle Méndez	June 15, 1984
C. School Efficiency Measures The new project will support the implementation of a flexible school calendar for migrant children as a way of reducing drop-out rates and improving retention and promotion rates.	Fairchild Odle Méndez	June 15, 1984

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT
☐ Project Paper	☐ Implementation Plan e.g., CPI Network	☐ Other (Specify)	A. ☐ Continue Project Without Change
☐ Financial Plan	☐ PIO/T	_____	B. ☐ Change Project Design and/or ☐ Change Implementation Plan
☒ Logical Framework	☐ PIO/C	☐ Other (Specify)	
☐ Project Agreement	☐ PIO/P	_____	C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)	12. Mission/AID/W Office Director Approval
Frank L. Fairchild, Chief, Office of Human Resources	Signature Typed Name Charles E. Costello, Director Date 4-4-84

AID 1330-15 (3-78)

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR (Cont.)

A. List Decisions and/or Unresolved Issues (Cont.)	B. Name of Officer Responsible for Action	C. Date Action to be Completed
D. Mayan Language Materials		
The Bilingual Education Project will use funds to contract the services of senior anthropologist/linguist to guide the work of the Mayan language teams. The new project will also include funding for this specialty to assist in the development of fourth grade materials.	Fairchild Odle	June 15, 1984
E. Training for Mayan Indian Educators		
The new project will seek to improve the academic qualifications of Mayan Indian educators working within the Ministry of Education.	Fairchild Odle Méndez	June 15, 1984
II. General Sector Issues		
A. Graduates of Santa Lucía Normal School		
The Mission should initiate policy dialogue with the MOE to encourage the employment of graduates of the Santa Lucía Normal School immediately after graduation.	Costello Kolar	March 1984
B. Double Sessions for Rural Schools		
The Mission will undertake policy dialogue to support the implementation of double sessions in rural schools.	Costello Kolar	June 1984
C. MOE Warehouse		
All texts, supplies and equipment procured under previous loans will be distributed immediately. Action has been initiated. It will be completed by September 30, 1984.	Fairchild	Sept. 30, 1984

PROJECT EVALUATION SUMMARY No. 84-03
Educational Sector Programs in Guatemala
(Face Sheet - Cont.)

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR (Cont.)

A. List Decisions and/or Unresolved Issues (Cont.)	B. Name of Officer Responsible for Action	C. Date Action to be Completed
D. Regional/Satellite Concept		
It appears that the regional/satellite school concept was never realized as originally conceived. A separate study is needed to determine why the concept was not successfully implemented.	Fairchild Méndez	February 1985
E. School Maintenance		
Under the Guatemala portion of the plan for Central America, the Mission should initiate policy dialogue with the GOG on the spending levels allocated to meet universal primary education goals and specific budget line items to cover repair and maintenance costs of primary education infrastructure.	Costello Kolar	September 1984

EVALUATION OF USAID-ASSISTED EDUCATIONAL SECTOR PROGRAMS IN GUATEMALA, 1969-1983: FINAL REPORT

by

H. Ned Seelye

for

Agency for International Development

Contract No. 520-0000-C-00-3079-00

December, 1983

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EVALUATION OF USAID-ASSISTED EDUCATIONAL SECTOR PROGRAMS IN GUATEMALA, 1969-1983: FINAL REPORT

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ABSTRACT: An assessment of all AID education programs implemented in Guatemala over the past fourteen years was made by a team of five researchers aided by about 20 Guatemalan educators, working in Guatemala for five weeks in 1983. Diverse methodologies were employed, ranging from experimental and quasi-experimental field studies, to observation of selected traits in various convenience samples, to the analysis of archival data. Findings include the following:

School construction. The buildings were well built and are still in use. Despite lack of a Ministry maintenance program, the buildings remain in good condition years after construction. The special facilities such as library space and multi-purpose rooms that were part of the construction in some of the larger schools more often than not have been converted to general classroom use often due to unanticipated increases in student enrollment. Some equipment was provided to these schools to enhance instructional impact. In many instances this equipment is underused (e.g., sewing machines, cooking utensils, and industrial arts tools), while in other instances (e.g., overhead projectors) it is not used at all.

Qualitative reform. The schools that received the most concentrated package of construction, texts, equipment, and teacher training (and that met the most rigorous preselection criteria) continue to employ many of the innovations begun over a dozen years ago. The preservice training of new teachers in innovative methods at the two normal schools constructed with AID funding is moderately successful but few of the graduates are being offered teaching positions by the Department of Personnel, perhaps

for political reasons. One structural innovation advanced by several early projects, the creation of "regional" schools to help nearby, smaller "satellite" schools, has been discontinued because it was not institutionalized beyond the pilot projects. The only textbooks currently found in the rural schools were developed over 15 years ago and seem now either not widely available or not widely used. An on-going AID project with considerable promise is developing prototypes for preschool and early elementary bilingual texts (Spanish and one of four Indian languages).

Non-formal education. The first AID project in this area, an experiment to measure the relative effectiveness of various media mixes, was entirely successful. Subsequent efforts to implement a coordinated non-formal education program have met with some success although there appears to be a tendency for the program administration to grow overly centralized and for the program messages to be predominantly in Spanish, a language not understood by Indians in many parts of the highlands.

Special issue studies. As part of this evaluation, two studies were conducted to probe the feasibility of (1) using double sessions instead of one daily school session, and (2) adjusting the school calendar to accommodate seasonal labor migrations. Both were found to be feasible. A third study examined the effectiveness (in terms of pass, failure, and dropout rates) of Indian children who are taught by bilingual "promoters" (who have an elementary school education buttressed by special training) compared to monolingual teachers (who have a normal school degree). Both types of instructors produced similar results in terms of the studied student outcome measures.

Overview. The AID-sponsored projects were well designed and were aimed at the most pressing educational needs among the rural poor. Most of the major project objectives were realized, although frequently the number of outputs envisioned in the project paper proved unrealistic, often because late project startups increased the cost of the projects, resulting in fewer resources to accomplish the planned objectives.

In spite of some failures, many of the project gains subsequently were diffused beyond the sites involved in the AID projects. Some examples of this spin-off effect include AID building construction standards adopted by Guatemalan government agencies, on-going training in problem-solving methods done formally by individuals in several non-target governmental agencies and informally by individual educators interacting with their peers, the distribution of textbooks to many non-target schools, increased sensitization of Ministry officials and technicians to rural needs, and an infrastructure to implement non-formal education techniques.

I. INTRODUCTION

Research Purpose. The goal of this research was to provide USAID/Guatemala and the Guatemalan Ministry of Education with an independent assessment of the impact of eight educational sector programs that received AID technical support and financing over the past fourteen years. Four of these eight projects were on-going at the time of the evaluation. In addition to evaluating the eight projects, this research effort included three separate studies that examined issues relevant to planning options.

Evaluation Team. The overview presented in this report is based on the findings of a team of researchers that worked in Guatemala between August 1 and September 5, 1983. The core of the evaluation team consisted of an international group constituted by a civil engineer and four social scientists, all with considerable experience in evaluating educational programs in rural Guatemala. (A brief description of the principal team members is presented in Annex 1, Contributors.)

Data collection involved retrieving archival data from a number of agencies in Guatemala City and extensive gathering of information (observation checklists, tests, questionnaires, surveys) from children, parents and teachers in various samples drawn throughout rural Guatemala. This data collection was accomplished through the able assistance of some twenty Guatemalans, six of whom were bilingual in Spanish and one or more Mayan languages; all were experienced in collecting data from rural Guatemala. USIPE, Socio-Educativo Rural, and USAID provided considerable institutional assistance to this task. The team was directed by the writer.

Philosophical Approach. A bias found throughout this evaluation effort is that the evaluation team focused on measurable objectives rather on the more lofty purposes and sector goals that were written into each project paper. The team attempted to measure project effectiveness by looking at tangible evidence that key project objectives had been realized. This report then examines (in Section II. Design) whether the objectives relate meaningfully to the basic educational problems that the projects seek to ameliorate.

Although this report consequently is biased toward quantitative data, the data bases are described so that the reader can independently assess the generalizability of the report's findings.

Notwithstanding this bias for "hard" data, all of the researchers are exceptionally well versed in Guatemalan education and occasionally their expert judgments or impressions are recorded to supplement a described data base or when a quantitative data base was not available to the team. The reader should experience little difficulty in differentiating in this

report quantitatively generated generalizations from personal impressions.

Research Products. Four members of the evaluation team produced separate reports of their studies. Ing. Roberto Figueroa prepared an analysis of the building construction components of three projects. Dra. Micheline Morel studied the two non-formal projects sponsored by AID. Dr. Stephen O. Stewart reviewed the on-going bilingual education project and conducted a field assessment of its effectiveness. Dr. Nelson Amaro V. wrote reports on (1) the feasibility of implementing double daily sessions in rural schools, (2) the feasibility of introducing a flexible yearly schedule to accommodate communities affected by labor migrations, and (3) the effectiveness of bilingual promoters compared to monolingual teachers of Indian children. The writer, in addition to coordinating the efforts of the other team members, was responsible for analyzing the qualitative components of four projects concerned with curricular reform and with inservice and preservice training of teachers and administrators.

These studies are cited, where appropriate, in the present report (e.g., Amaro, 1983a). Two other team members had substantial responsibility for assisting in many phases of the study but were not charged with producing a written report: Lic. Antonio Menendez and Lic. Otilia Lux de Coti. Two USAID officials were especially helpful: Drs. Donald Enos and Frank Fairchild.

The present report provides a brief review of the highlights from the six separate reports, although readers with a particular interest in these areas will want to read the much more detailed presentations contained in the individual reports. The present report (the seventh produced through this evaluation effort) also presents the writer's own evaluation of four projects; these data are presented solely in this overview.

Limitations. In the end, the severe limitations of time to gather data (three weeks for field data; four weeks for archival data) proved costly. Some important projects (e.g., the textbook component of two older loans) were inadequately probed. Critical generic data required to see the AID effort within the national context of Guatemala's total educational development effort often were not available in time (e.g., teacher training figures). It was usually easier to gather data on projects that had been financed by AID but even AID data for some of the older projects required considerable time to locate.

Even before the data collection phase was over, it became clear that additional information would be required if AID's assistance were to be placed within the context of Guatemala's national educational development efforts. Unfortunately, the planned return to Guatemala to gather these critical data was cancelled as a result of the November (1983) U.S. Congressional mandate to suspend aid to Guatemala in response to the recent assassinations of a number of Guatemalan educators who had worked on AID projects. (One of these educators, Profa. Julieta Sanchez

Castillo, had participated in the present research project.) An attempt was made by the writer to gather some critical data after he left Guatemala but the effort was not successful.

In spite of these and other limitations, the present report provides a more comprehensive assessment of AID's educational sector effort in Guatemala than has hitherto been available. The picture that comes into focus in this report is that the AID projects were well designed to ameliorate some of Guatemala's highest priority rural education needs and that overall they succeeded rather well at meeting a large share of their measurable objectives in the communities selected to participate.

A number of decisions were made by the writer to, hopefully, increase this report's readability. Since the report presents an overview of AID-assisted educational programs in Guatemala, it does not attempt to duplicate the detailed information on the studies that are contained in the above mentioned six reports. Since each of the studies uses different approaches to data collection and analysis, the methodologies are described at that point in the report where the findings are reported, rather than to have one long section of diverse methodologies precede the discussions of research findings. To further increase the report's readability, the funding levels of projects usually are rounded.

The next two sections of this report will examine the extent to which the above eight projects achieved their measurable objectives and were well designed. Their long-term impact will be examined in Section III. The report concludes, in Section IV, with the writer's response to nine questions posed by USAID/Guatemala at the initiation of the research.

II. PROJECT INPUTS AND OUTPUTS

Sustained AID assistance to Guatemala to improve the primary educational system began around 1961. From 1961 to 1967 this assistance provided 3123 classrooms--approximately 36% of the public primary classroom inventory in Guatemala as of 1968. In addition to classroom construction, AID provided some technical assistance (3% of the program), training (17% of the program), and help with a textbook program (11% of the program).

In conditions that are endemic throughout the third world, virtually all rural areas in Guatemala fortunate enough to have primary schools 15 years ago overflowed with children memorizing impractical lessons within inadequate classrooms devoid of textbooks, pencils, chalk, or writing tablets. Teachers were frequently saddled with teaching preschool through sixth grade in a one-classroom structure--often to children who did not speak the teachers' language, Spanish. The paucity of schools, coupled with serious economic considerations at home and in school, resulted in 68% of the children of school age unable to receive schooling (Census figures of 1973). (By 1983, this figure had dropped to 48% of the school-aged children not attending school.)

Several years of planning and negotiation between the Government of Guatemala (GOG) and USAID/Guatemala to alleviate these conditions culminated, in 1969, in a low-interest loan (2-2.5%) to the GOG. This loan (commonly known as 015) sought substantial improvements in the way rural education was provided in Guatemala. Over the next decade this loan was followed by two other loans and four grants--all of which were designed to expand the educational gains.

The projects actualized by these loans and grants embraced one or more of the following goals: radical improvement of rural primary curricula; construction and equipping of adequate rural schools, many to replace buildings damaged or demolished by the earthquake of 1976; establishment and strengthening of a non-formal education system in rural areas; development of a preschool through second grade bilingual curricula for four major indigenous language areas; and training for selected Ministry of Education administrators and technicians in techniques of modern administration.

A brief description of the main accomplishments of each of the eight projects that fall within the scope of this evaluation follows. This description will focus on both inputs and outputs. The adequacy of the project designs and the overall impact of the projects are discussed in Sections II and III, respectively.

Rural Primary Education Project (520-L-015)

Project Inputs. The first major effort of AID to help the GOG reform primary education curriculum, rather than just construct schools, was the "Primary School System Improvement Project." The project comprised an extensive program of qualitative improvement, including curricula, textbooks, teaching materials, teacher training, and the regional/satellite school concept, as well as a four-year school building construction program which included both rural and urban primary schools and two normal schools (Santa Lucia Utatlan and Monjas). The acronym for the implementing unit was PEMEP and the project products (texts and methodology) were called by the same name.

The Loan Agreement between AID and the GOG was signed in November, 1968 for $8.6 million, with a GOG counterpart contribution of $6.6 million, or a total funding level of $15.2 million. (The construction part of the Loan was about $8.4 million of which AID paid $6.9 million.) After several extensions, the loan expired in 1976.

Project Outputs. The construction part of the loan produced the following outputs: two normal schools; 27 regional schools; and 265 urban and rural classrooms. The textbook portion of the loan printed 2,361,100 publications for rural primary schools, including 33 ODECA/ROCAP textbooks titles in reading, language arts, mathematics, social studies, and science, plus titles in basic literacy, and preschool materials for Indigenous children.

The qualitative portions of the loan trained teachers in 27 regional schools to use the PEMEP problem-solving methods.

Butler Building Construction Project (520-0241)

Project Inputs. The Butler Building Construction Program was part of the Guatemala Earthquake Disaster Relief Program (Project No. 520-15-0241) which provided grant funds ($25 million) for various purposes related to the reconstruction effort after the earthquake of February 4, 1976, in which 25,000 people died in the first 39 seconds of the disaster.

Most of these steel buildings were to be used as schools; the remaining units were to be used as health posts, social welfare centers, and municipal or service centers. The first buildings arrived in Guatemala in May, 1976 and the program was completed in October, 1978. The total cost of the program was about $2.7 million.

Project Outputs. This grant constructed 399 steel Butler buildings in regions devastated by the earthquake of 1976. Of these buildings, 309 (77%) were used as schools, 48 (12%) as health posts, 11 (3%) as social welfare centers, and 31 (8%) as municipal and service organizations.

Rural Primary Education Project (520-L-025)

Project Inputs. To implement a full scale expansion of the teaching methodologies developed under the previous loan to two main target areas, the Western Highland region (altiplano) and the Eastern region (Oriente), a second loan project was developed. The program included long-term inservice training for educators, procurement of textbooks, equipment and teaching materials, the expansion of school facilities and the construction of new schools to provide the necessary infrastructure for the new teaching methodologies..

To accomplish these purposes, AID provided, in late 1975, a loan for $7 million with a GOG counterpart contribution of $4 million, or a total funding level of $11 million. The GOG counterpart contribution was later increased to $5.7 million, for a total funding level of $12.7 million. The original termination date for the project was December 31, 1979, but it was extended several times, ending finally in October, 1982.

Project Outputs. The construction part of the loan produced the following outputs: 27 primary schools constructed or converted to regional schools; 70 primary schools constructed or upgraded to satellite schools; two normal schools expanded; 186 primary school classrooms; 19 storerooms or administrative or library units; 24 manual arts or multi-purpose units; six dormitory units; and eight teacher residences. The textbook component paid for the printing of 806,000 primary textbooks, 34,000 teacher guides, and 673,000 adult literacy texts.

Primary School Reconstruction Project (520-V-029)

Project Inputs. This project was conceived with the dual objective of helping to restore part of the physical plant of the public primary education system in the area affected by the earthquake of 1976, and also to continue expanding implementation of the new primary school teaching methods developed under two previous loans, 015 and 025. (Since this project would overlap with Loan 025 in execution period and geographical target areas it was planned for project activities to be coordinated.)

The Loan Agreement was signed in September, 1977 for $5.2 million in AID loans and $2.8 million in GOG counterpart funding, or a total funding level of $8 million. The project, however, was not begun until 1982. At this writing, the project is on-going, with a projected completion date of December 31, 1983. GOG counterpart funding has been increased to about $6.2 million, giving a total funding level of about $11.4 million to the project.

Project Outputs. This loan constructed three regional schools; three satellite schools; 10 urban schools; 38 rural schools; one normal school; and two urban schools were repaired. In addition, 33,000 textbooks, 6,000 teacher guides, and 13,000 bilingual preschool primers were printed.

Basic Village Education Project (598-15-190-551)

Project Inputs. One way of augmenting the impact of rural education is to provide non-formal education to those not being reached by the rural primary education system. The Basic Village Education project had as its main objective the determination of the cost-effectiveness of different mixes of communication media used to instruct rural people in practical agricultural matters. A controlled experiment was designed to test the relative effectiveness of four mixes: radio messages; radio messages with a follow-through by a trained monitor from the same community as the listeners; radio messages with a follow-through by a monitor plus low-level assistance by an agronomist; assistance by a monitor only, without the aid of radio.

These programs were oriented toward adults (and their children) who were small subsistence farmers in the highland and Eastern (Oriente) regions of Guatemala. Literacy was not assumed. The content of the media mixes were to support on-going agriculture programs by giving the farmers information to improve their production and profits from basic crops. This practical agricultural content, then, provided the content understanding against which the relative effectiveness of the various mixes could be measured.

The project was planned to cover the four-year span between 1973-1977.. AID provided about $1.1 million in loan funds, about $600,000 in grant funds, and the GOG contributed slightly over $600,000 in counterpart funding, or a total funding level of about

$2.3 million. The project terminated in 1977.

Project Outputs. The outputs of this project were: two radio stations in Momostenango and Quesada equipped and working; daily transmissions of eight hours, Monday through Saturday, in Spanish and Quiche of non-formal education programs; and a staff of self-sufficient people capable of programming and preparing radio transmissions with non-formal educational content.

Basic Rural Education Project

Project Inputs. Toward the end of the Basic Village Education Project, the GOG and AID began planning a project to apply the non-formal education insights gained in the prior experimental study. The Basic Rural Education Project was directed toward small subsistence farmers and their children in the highlands but agriculture was scheduled to comprise but a small part of the message content, with health and other issues taking up the main portion. There were three main components to the project: strengthening the coordination among the many government programs which extended non-formal education services to rural areas; supporting self-managed village activities; and continuing experimentation with communication delivery systems, especially radio.

The project covered five years, from November, 1977 to the end of 1982. AID contributed $1.3 million in grant funds and the GOG contributed $4 million in counterpart funds, for a total funding level of $5.3 million.

Project Outputs. Project outputs include: non-formal education services delivered to an average of 10,000 people a year in over 200 rural communities in five highland departments. The services were provided during two to three sessions of two hours weekly during 10 months a year for five years. Additionally, the program trained 300 promoters in delivering non-formal education content to rural sectors.

Bilingual Education Project (520-0258)

Project Inputs. Few of the highland children speak Spanish. Previous educational projects in Guatemala, with the exception of the bilingual preschool project administered by Socio-Educativo Rural (a division of the Ministry of Education), ignored this reality. In an effort to remedy this oversight, the GOG in collaboration with AID designed a project to develop instructional materials prototypes in each of the four major Mayan languages that are spoken by over two-thirds of the Indigenous population (Mam, Cakchiquel, Quiche, Kekchi). These bilingual materials (Spanish and the corresponding Indian language) were to be developed for preschool through second grade and were to contain adaptations of the basic subject matter concepts prescribed for all Guatemalan children at these grade levels. Importantly, the PEMEP problem-solving methods were to be used in the development of the instructional materials. Training was to be provided to

the curriculum development staff, to local bilingual teachers and promoters who were pretesting the materials, and to other project-related personnel. An elaborate evaluation system was contemplated to provide the information necessary for future planning of rural education in the highlands.

The grant was signed in August of 1979 and is scheduled to end in June, 1984. The AID grant contribution was about $1.9 million and the GOG counterpart funding level was $1.1, for a total funding level of about $3 million.

Project Outputs. To date (September, 1983), this on-going project has produced the following outputs: four Mayan language curriculum teams have produced prototypes of didactic materials for preschool and first grade, and second grade materials are currently being developed; and all preschool and first grade materials have been field tested, and field testing of second grade materials has begun. This project has stirred considerable interest in bilingual education in the presidency (Rios Mont) and in the Ministry of Education. (A new Chief of State took office in August, 1983, and it is too early to gauge the new administration's interest in Indian education.) Current plans call for printing the prototype bilingual instructional materials with funds provided under a World Bank loan, and distributing them nationally.

Educational Administration Project (520-0259)

Project Inputs. It is no secret in Guatemala that the Ministry of Education needs to become more effective administratively. The Educational Administration Project is a modest beginning in the amelioration of this condition. The ambitious project goal is to help institutionalize within the Ministry, through a 12-member inservice training unit, a capability for assessing human resource requirements and for designing and implementing staff development programs to meet these requirements. To this end, short-term training of 125 rural supervisory personnel, 35 program heads, 15 local program directors, four scholarships for obtaining masters degrees in education from the University of New Mexico, and 18 two-year scholarships for urban Ministry personnel to earn masters degrees in educational administration and evaluation at the Universidad del Valle de Guatemala were planned.

The grant agreement was signed in September, 1980. AID provided $915,000 in grant funds and the GOG contributed $430,000 in counterpart funding, for a total funding level of $1,345,000. The project is scheduled to end in June, 1984 unless a decision is made to continue the training program.

Project Outputs. This on-going project has trained the following to date: 205 district supervisors in two 60-hour courses; 80 in 1982 and 125 in 1983; 18 urban Ministry employees in a two-year master's degree program at Universidad del Valle; two master's degree students at the University of New Mexico; 35

Ministry of Education department heads in a 70-hour program; 40 school district secretaries in a one-week program; and an 18 person team that received training in administration, curriculum, planning, and evaluation--240 hours in all.

III. PROJECT DESIGN

Identification of Problem. Are the "problems" identified by the projects real problems? Each of the eight projects studied as part of this evaluation identified principal goals that have compelling face validity. That is, each project dealt with real and substantive problems afflicting the delivery of basic educational services to the rural sectors. One would be hard pressed to identify problems of greater contemporary priority than those addressed by these eight projects.

Selection of target population. The sole direct beneficiaries of most of the projects, and the main beneficiaries of all the projects, with the possible exception of the administrative training project (259), are the rural poor. This was the intended and appropriate target population. A vignette will illustrate this sector's poverty. In one larger rural school visited by the evaluation team in El Quiche, the Ministry of Education had authorized the school to collect two quetzales (equivalent to two U.S. dollars) from each student in payment of a hot lunch program for the entire school year. The school, however, in spite of not having enough money to buy the needed foodstuffs could only charge one quetzal per child per year because the families could not afford more. (When visited, they were serving hot tea because their meager supply of INCAPARINA, a highly nutritious milk substitute, a thick atol that is always served hot, had been exhausted.)

Notwithstanding the poverty of the project beneficiaries, an even poorer rural population has been left relatively untouched by these projects--communities that are located more than a two hour's walk from the nearest road. (Distance stated in kilometers tends to be misleading in mountainous areas.) One town which is visited occasionally by a supervisor lies 30 kilometers and two creeks away from the nearest highway. One one-room school known to this team is located two days by foot from the nearest highway: it is visited by supervisory personnel once every few years at most. The non-formal education projects, for example, have been concentrated in rural areas where other public welfare programs have reached. This is justifiable since it increases the likelihood that the target villages will have the basic resources necessary for the projects' success but the selection criteria underscores the unmet need in even more isolated regions.

Funding level. In the areas of rural primary school curriculum development, non-formal education, and rural school construction, AID has been by far the largest foreign contributor.

AID and GOG counterpart funding for the eight target projects totals about $54 million over the past 14 years, $21.9 million of

which was in loans, $7.4 million in grants, and $24.6 million in GOG counterpart funds. In seven of the eight projects, rural school aged children were seen as the direct beneficiaries, although two of the projects (the two non-formal education projects) also viewed adults as direct beneficiaries. In the administrative training project children are to be the indirect beneficiaries.

To get a crude idea of how much of a dent in the overall national need these funds made, let us take the larger figure of the total amount of AID and GOG funding for the eight projects over the past 14 years (ignoring allowances for the two projects where adults were also direct project beneficiaries and the project where children were the indirect beneficiaries) and divide this total funding figure by the universe of needy children. Divided by the number of rural school-aged children (aged 7-14) in Guatemala in 1983, this investment represents a total per capita expenditure of $50.64 over the course of the 14 years, or an average per child expenditure per year of $3.62 ($53,980,943 divided by 1,065,872 rural children divided by 14 years). There were fewer children who were direct beneficiaries of the eight projects, of course, so the actual per capita expenditure of target children was much greater than $3.62. (The writer was unable to identify the numbers of children directly affected.)

Clearly, much more money is needed if the woefully inadequate circumstances of rural education in Guatemala are to continue to improve. Guatemala, an agrarian society that has recently begun to industrialize, does not have the necessary wealth to meet is current educational needs. Additional sources of foreign funding are required to meet a greater share of the educational development needs of rural Guatemala.

Project objectives. The objectives of all eight projects relate meaningfully to the basic educational problems the projects seek to alleviate. While the AID format encourages objectives to be written to a number of different levels of specificity, many not measurable, technically sound outcome objectives are to be found in the project papers.

There is a marked tendency, however, for the number of anticipated project outputs to be stated unrealistically in the project papers. For example, a primary school project (Loan 015) called for a 500% increase in achievement when a 20% increase would have been substantial and more realistic. Another project called for the construction of 1,707 classrooms when 265 were all that could be built given inflation and the rising cost of labor. Overall, the project objectives tend to claim double the number of outcome products that a more realistic assessment of implementation difficulties--and hindsight--would suggest.

A glaring omission in five of the eight projects are objectives which consider the fact that most people in the rural highlands do not speak Spanish. (Of the 119 communities in four provinces surveyed for the Baseline Study for Rural Bilingual

Education [Seelye et al, 1979], in only nine percent of the communities did more than half of the adult population speak Spanish.) The textbook component of one loan (015), for example, aspired (in the Loan Agreement) to provide new textbooks "for all children in public primary schools." Nevertheless, only textbooks at the preschool level were produced in any of the Mayan languages spoken by the rural highland children, generally as their sole language (and these textbooks were prepared by the Summer Institute of Linguistics, a private missionary organization). This omission occurred because the Ministry of Education approached rural primary school education in non-Spanish-speaking areas from the urban, teach-everything-in-Spanish perspective.

(The GOG National Education Law [Articles 9 and 60] and the National Education Plan of 1979-1982 foresaw the use of vernacular languages in preschool through second grade; USAID/Guatemala began to encourage implementation of a dual language approach around 1977. Before this, the Ministry of Education had been successful in fielding bilingual "promoters" who had a sixth grade education to teach preschool in the vernacular languages; the Summer Institute of Linguistics primers in the Mayan languages assisted them in this effort. The Bilingual Education Project, started in 1981, confronted this need head on, and the earlier construction of a normal school in the highlands did envision the training of bilingual teachers to teach in rural Indian schools using the vernacular languages as well as Spanish.)

In short, at least some levels of objectives in each of the projects are technically sound, although the quantity of desired outputs frequently seem unnecessarily exaggerated and often oblivious to the special language and culture needs of rural Indian children.

SPECIAL STUDIES: Feasibility of Two Selected Planning Alternatives

At the request of USAID, the evaluation team explored the feasibility of two alternative planning designs: double sessions and flexible annual scheduling to accommodate migrant labor patterns. These possibilities were researched by Nelson Amaro (1983a, 1983b).

Double Sessions. Guatemalan primary and secondary schools prior to 1972 had, generally, both a morning and afternoon session, with the same students attending both sessions. In 1972 the Ministry began single session (jornada unica) programs, with the schools offering two daily sessions which students attended in either the morning (the preferred choice) or the afternoon session instead of both sessions. In some of the more inaccessible rural areas the traditional double session, with the same students attending both sessions, is still being implemented with one modification--the school day ends officially at 4:00 PM instead of 6:00 PM as was the case formerly.

Amaro (1983a) studied the feasibility of combinations of

single and double sessions in eight rural communities in four different provinces where the schools had been constructed with AID assistance. Both Indian and Ladino communities were visited.

Interviews were conducted with 74 parents and 42 teachers. They were asked about their attitudes with respect to a possible implementation of double sessions (enrolling different children in the AM and PM) in their communities and they were asked about their experience with whatever scheduling practice was prevalent in the community. Parents and teachers tended to prefer the status quo, irrespective of the type of scheduling being implemented currently in their communities, but there seemed to be little energetic opposition to change.

Amaro examined the cost effectiveness of double sessions (with different students attending in the AM and PM) and found that changes provoked by adding an afternoon session "do not show significant additional costs in the long run" (p. 29). In fact, Amaro calculated that in the long run there would be an annual cost savings to the GOG of between Q311,000 to Q778,000 for each complex of 100 schools and 400 teachers if the Ministry would convert single session schools (the majority of rural schools), or double session schools teaching the same students, to double session schools teaching different students in each session. Much of this savings would be the result of paying double session teachers less than double the cost of single session teachers, and in the differential range in the estimated cost savings (depending on the rate of teacher recompense for the additional hours). Further, since the cost of school construction is constant whether or not a school is used for a single or double session, it is obviously more efficient to use a school building for two daily sessions, although increased cost of maintenance and faster building deterioration mitigate to make the savings for a double session less than double that of a single session.

Flexible Annual Scheduling. Many rural communities have populations which migrate each year to other parts of the country (usually the coast) to work as seasonal agricultural laborers. Amaro (1983b) designed a study to respond to the question, How much of the rural primary school absenteeism rate can be attributed to parental migrant work patterns? Amaro's study is the first study to try to establish the relative contribution migrant patterns make to school attendance in Guatemala. Amaro estimates, conservatively, that about 44,000 school aged children are affected by seasonal migration, approximately 10% of the total enrollment of rural public schools. In the high risk (for migration) schools studied by Amaro, about 30% of the children had attendance rates than were affected adversely by seasonal migration.

Amaro bases his conclusions on a convenience sample of 12 heterogeneous communities, some with high levels of migration, others with low levels. Fifty-seven parents of children with high absenteeism rates were interviewed to determine the reasons behind their childrens' absenteeism. For those months where the

community experienced seasonal migrations, between 23-38 percent of the variance in absenteeism can be explained by parental migration patterns, according to Amaro's study. Amaro says "[t]eacher attitudes [regarding absenteeism] differ somewhat from those of parents, suggesting a distance between teacher and parent and community with respect to the problems the school has to confront as a result of being an institution inserted as an instrument of modernization into a rural environment."

In probing, through the same sample, the feasibility of adjusting the school calendar to the local migrant patterns, Amaro reports that many of the rural schools already make some adjustments in the school calendar to accommodate migratory community patterns, testing students, for example, prior to the official end of the school year.

IV. PROJECT IMPACT

Did the projects have a long-term effect on rural Guatemalan education after the external funding for the projects had ended? Or, in the case of on-going projects, can they reasonably be expected to have a future long-term impact?

To probe these questions the evaluation team selected key objectives from each of the eight projects and conducted an independent assessment of the impact of their outcomes. The discussion of these projects will be organized under the following topics: (1) school construction, (2) rural primary school education (curricular reform, teacher training, regional/satellite school concept, and textbook printing and distribution), (3) non-formal education, (4) bilingual education, and (5) educational administration.

1. School Construction

Background. The total AID investment in educational infrastructure from 1968 to 1983 has been about $16.1 million, channeled through three loans and one grant. In the three loans, the school building programs were part of a larger program which was directed toward qualitative improvements in the educational system. The percentage of the total AID contribution in these three loans that was dedicated to construction ranged between 80 percent in Loan 015 to 55 percent in Loan 025. In general, the AID efforts in school construction have been directed to the primary school system of the rural areas.

The school building construction programs which were a part of the AID financed projects were designed specifically to respond to the basic qualitative objectives of the projects. Taking this into consideration, these programs cannot be considered or evaluated only as school building construction programs but as programs that intended to provide the specific type of infrastructure needed to implement the desired qualitative improvements (see next section, 2. Rural Primary School Education,

for a discussion of the qualitative aspects of the loans).

Methodology. To assess the impact of this school construction effort, one member of the team, Roberto Figueroa, a civil engineer, visited 46 of the schools. Although an attempt was made to select a stratified random sampling of the universe of schools constructed with USAID assistance, this design was eroded by travel restrictions resulting from the need to obtain security clearances (there were hostilities in some areas of the country) and by a coup d'etat which occurred on the eve of the field work.

Findings. This section of the report is based on the conclusions drawn by Figueroa (1983), many of which are included here more or less verbatim.

Project Design. In general, the design of the school construction components of the loans (015, 025, 029) did provide the type of infrastructure needed to accomplish the curricular objectives of the projects.

The site selection criteria used for the regional schools financed under Loan 015 were very good. Each site had at least one manzana (1.7 acres) and this provided ample space for playgrounds and agricultural projects. The sites were well selected: they are accessible by the target communities and have desirable topographical conditions.

The site selection criteria for schools financed under Loan 025 were less successful than those used for Loan 015. In some cases, sites do not have sufficient space for agricultural projects (an important part of the curriculum reform). In satellite schools, the need for minimum space for playgrounds is not adequately addressed.

Loan 029 aimed at reconstructing school buildings that had been, for the most part, destroyed. The same limitations observed with the construction under Loan 025 were in evidence with Loan 029 also. Namely, inadequate space for agricultural projects and minimum space for playgrounds.

The consideration of real distance between regional and satellite schools was not adequately considered in some cases of Loan 025. While most satellite schools comply with the design condition to be located within a five kilometer radius of their regional school, real access conditions and topographical features makes it difficult in many cases to go from one school to the other. As a result, some regional schools have developed a much better relationship with nearby non-satellite schools than with the schools designated as satellites.

The grant project, to build Butler Buildings in the wake of the devastating earthquake, was totally successful, providing urgently needed school buildings in a very short time.

In general, the construction-related designs of these

projects served well the project objectives and were adequate for the local conditions of the geographical regions where they were constructed. The buildings have the necessary space, adaptability, ventilation, and illumination requirements. The AID building designs were adopted by the GOG as prototypes for other GOG-financed schools.

Project Products. The construction outputs were much smaller in number than originally programmed. Although this difference can be explained partially by the effects of inflation which caused substantial increases in construction costs, the most important factors for this difference were: (1) the considerable implementation delays that the projects experienced, mainly due to the poor performance of the GOG implementing units; and (2) the use in the project design of excessively optimistic assumptions of possible cost increases and the anticipated efficiency of the implementing units. Very rough cost estimates with insufficient engineering support, and little input from the prospective implementing units, may be contributory factors.

The size and capacity of the school facilities were, generally, sufficient for the school enrollment at the time of their construction. Rapid increases in student population has made many of them insufficient at this date, however. These initial miscalculations in the projected number of students point out the need for improving the data base upon which these decisions are made.

The buildings constructed under Loans 015, 025, and 029, have the necessary safety features. They were designed and built to resist seismic forces. All of the buildings visited demonstrate excellent durability and require a minimum of maintenance. Butler buildings, although designed as provisional facilities, if properly maintained, are durable structures that can be used for an estimated 30 years as school buildings in regions where the climate is cool, such as in the highlands.

The combination of concrete block walls reinforced with concrete elements, a steel roof structure, and asbestos-cement corrugated sheet cover, is one of the most economic and efficient systems available for school buildings. Due to the simplicity of the system, it is easy to construct and supervise and is, therefore, specially suited for construction in rural areas.

The latrines built in the schools financed under Loan 025 lack an adequate ventilation system. This makes them very inefficient. This problem was corrected with the installation of a vent pipe in the schools built under Loan 029. The problems with latrines are further exacerbated by an almost universal lack of proper maintenance. This is due mainly because few teachers or building custodians have been provided with adequate information about the correct use and maintenance of latrines and their advantages. This is especially critical since in many cases the one place where the children can learn the advantages of using latrines is in the school.

AID school construction programs have shown an excellent capacity to improve designs over time, learning from previous experiences, and to correct mistakes or omissions. The last design of Loan 029, in this sense, shows the advantages of accumulated experiences. With few exceptions, all of the buildings visited as part of this evaluation are of very good quality and have been executed according to the specified design. Again, these school building designs have been adopted by the GOG in other construction programs.

Use of Equipment and Facilities. In some of the regional schools inspected, the multi-purpose/manual arts facilities are not being used efficiently. The same is true for the equipment for manual arts, home economics, and agriculture. This was observed mostly in the regional schools financed under Loan 025. In general, the use of equipment for manual arts and agriculture in the satellite visited schools also was quite inefficient.

The furniture provided to the schools of Loans 015, 025, and 029, and the Butler buildings, was of good quality and most of the desks are still in excellent condition.

Unfortunately, no GOG agency has at this point in time an active maintenance program for school buildings. The maintenance "programs" in the schools are limited to superficial cleaning of classrooms done by the school children. In few cases does the school have a budget permitting it to pay for a janitor.

In the two normal schools built under Loan 015 and expanded under Loan 025, there is a budget for maintenance but it is very small. The equipment provided to these two schools, and the installations that must serve a resident student and teacher population, require a high level of maintenance that is not being provided.

Based on the 46 primary schools inspected, few if any of the teachers seem to be properly informed about maintenance procedures that could easily be executed to prevent further deterioration of the school buildings. Neither are the schools being provided with tools for maintenance.

National impact. The impact of the AID-sponsored school construction program since 1969 has been positive and dramatic. The construction projects built or reconstructed over 500 rural primary schools and two large normal schools for the training of rural teachers. These buildings are still in good condition, in spite of the fact that the GOG has not yet implemented a maintenance program to service rural school buildings. Further, the construction designs succeeded in enhancing curricular reforms, especially when the project exercised control over the site selection as was the case with 015. The next section, Curricular Reform, discusses some of the successes and failures of specific reforms.

2. Rural Primary School Education

A. CURRICULAR REFORM

Background. The vision of the first loan designed to effect curriculum change (015) was to transform the widespread practice of rote memorization into a practical, problem-solving learning environment where students worked often in project-oriented groups. The three key curricular areas targeted for this approach were agriculture, industrial arts, and home economics. Through problem-solving projects such as building wastepaper baskets for the classroom or growing vegetables in the school garden or helping the community build a sewage system, the students would learn basic concepts in other subjects such as mathematics and language arts as well. This methodology is pedagogically sound but the techniques are difficult to put into practice. The problem-solving techniques taught by the project are still very modern and were at the time totally novel to Guatemala (and to most classrooms everywhere). They require training and teacher enthusiasm to implement. Did this innovative methodology "take"? It is now 15 years after this ambitious project began. How did it turn out?

Methodology. The evaluation team identified 106 of the schools where the teachers had at one time or another been trained in the problem-solving methods and attempted to visit 15% of them. (There may have been other schools but these were all the team was able to identify.) The procedure used to select the schools was to group them by loan number (Loan 015 [13 schools], Loan 025 [34 schools], Loan 029 [59 schools]) and to then select a half dozen schools from each category. The first attempt at selection identified every other name from lists of Loan 015 and Loan 025 regional schools. The lists then were presented to USAID/Guatemala for the necessary security clearances (there were guerrilla hostilities in some highland regions). Visits to many sites that had been selected randomly were not approved. A second selection was made to replace inaccessible schools. The selection of Loan 029 schools largely was one of convenience: the sites were within a two-hour drive from the capital. The day before field work was to begin, a coup d'etat caused further schedule alterations. The most intransigent limitation on the number of sites selected was the fact that only three weeks were available for field work outside of Guatemala City.

Although the original design for a stratified, randomly selected sample was eroded by political and practical exigencies, the selected sites do include schools large and small, regional and satellite, close and distant. While the generalizability of the team's findings is affected adversely by the erosion in the selection process, even an eroded stratified random sample is better than a sample that never participated in such a design. Naturally, caution must be exercised in generalizing from this sample, especially the subsamples categorized by loan type. Sixteen percent of the identified universe was successfully sampled, including cases from each of the three loans: 015 (n=7

visited sites), 025 (n=5), and 029 (n=5).

Team members interviewed 17 school directors, about 70 teachers, examined teacher plans for specific problem-solving projects, and reviewed the projects in operation or recently concluded. The team did not interview or test students to determine achievement levels. Schools were graded from one to five according to the following criterion:

1. None of the problem-solving techniques were being employed by any of the teachers.
2. A few teachers (but less than a third) of the teachers were applying the techniques.
3. More than one third, but less than half, of the teachers were using the techniques.
4. Most teachers were using the techniques.
5. All, or most, teachers were using the techniques and were using them especially well.

Whether a school was "applying" the problem-solving methods was determined through on-site observation of an on-going project or evidence that one had been executed during the previous six months. The projects were easy to observe as all involved something tangible (e.g., a garden, an article of clothing, a chair). Whether the teachers were using the techniques "especially well" or not was determined through teams of expert judges who examined the projects and the accompanying lesson plans for integrating various academic content into the projects and who interviewed the teachers. The ratings of the individual team members (usually three or four per site) were averaged to obtain a mean rating for each school visited.

Findings. The overall rating obtained by the schools (n=17) was 3.1 out of a possible 5.0. Regional schools were doing especially well, with a mean score of 4.0 (n=6), followed by satellite schools with a mean of 3.7 (n=6). The most frequently observed project was a vegetable garden, followed by industrial arts projects such as making simple furniture. The least frequently observed projects involved home economics.

The schools that had received training first (i.e., the Loan 015 schools) were using the techniques substantially more than were the later trained schools (i.e., Loans 025 and 029), with mean evaluation ratings of 3.8, 2.8, and 2.4, respectively. This suggests that either teachers in the Loan 015 schools were more carefully selected, more motivated, or better trained than were those comprising the target populations of the latter two loans, or that the frequency with which teachers use these problem-solving techniques is directly associated with the length of training time: those trained the longest are using the methods most frequently. On this point the evaluation team cannot draw any hard conclusions given the small subsample size, although the criteria for selection of participating Loan 015 teachers was more rigorous than for the other two loans. (A list of the schools visited is provided in Annex 2.)

The general impression of the team charged with evaluating this aspect of the three loans (the team was headed by Seelye and Lux de Coti) was that some evidence of the planning and deployment of problem-solving techniques within the previous six months was readily available in most schools visited, and in many 015 schools all the teachers had used the technique at least once during the specified period. The application of problem-solving techniques in 025 and 029 schools was limited to a minority of teachers. There were opportunities to exploit the problem-solving methods that were ignored almost universally. These missed opportunities involved usage of equipment which had been supplied to the schools by the loan funds--manual arts tools and kitchen utensils, for example. In another sample of 30 regional and satellite schools visited by one team member, the civil engineer (Figueroa, 1983), there were only three instances where the sewing machines were being used. They were typically under lock and key. (The general impression registered by Figueroa in his visits to examine 48 construction sites was that there was less use of problem-solving techniques in the schools he visited than that which was reported by Seelye and Lux de Coti based on their sample. This probably was due to Figueroa's focus on equipment-related techniques.)

Teachers in the Loan 015 and Loan 025 schools had been trained, typically, off and on through 1981 by specialists from USIPE. Teachers in the Loan 029 schools had been trained only since 1979, typically for a week or two. Still, the incidence of training is more complex than this implies. In one regional school in Solola (Santa Lucia Utatlan), for instance, of the 12 teachers present, only two had been directly trained by USIPE personnel but when the team asked how many were using the problem-solving techniques all raised their hands. Since, under the circumstances, this was suspect, the team audited each teacher's "project." The teachers were, in fact, using the problem-solving techniques to excellent advantage. The teachers had learned the techniques from the other teachers under the encouragement of an enthusiastic director who had himself learned them from other teachers. The team found this informal peer-teaching situation to be a common occurrence in the schools visited. It was also common for technicians from the Dept. of Agriculture to instruct teachers in problem-solving methods relevant to growing food. Further evidence of the spin-off effect was found in the University of San Carlos where several teachers included problem-solving methods in courses of pedagogy.

One problem-solving technique which had been taught through the loan efforts, however, was only rarely used. Namely, the identification of a community rather than school problem and the subsequent resolution of the problem. Of the 14 schools where the evaluation team asked whether a community-oriented problem-solving project had been implemented during the previous two years, in only two cases (7%) had there been such a project.

To support this major effort in curricular reform, teachers were trained, teacher curricular guides printed, adequate school construction provided to many schools, and textbooks that had been

developed previously as a joint effort (ODECA/ROCAP) with other Central American nations were printed and distributed, although not all rural areas by any means received these interventions. (Two of the three loans, 025 and 029, did not plan or attempt national distribution.) The next sections will examine these support areas in more detail.

B. TEACHER TRAINING

Background. The institutionalization of teacher training in problem-solving techniques and other modern methods rests mainly in three institutions: USIPE and in two normal schools, one in Monjas, Jalapa, and the other in Santa Lucia Utatlan, Solola. Almost all the inservice training realized to date in these techniques has been done by USIPE under one of three AID loans (015, 025, 029). Since the target schools have changed under each succeeding loan, and since USIPE has had limited funding for these tasks, USIPE has not been able to carry out a continuous training to all the interested teachers.

The two normal schools mentioned above were created expressly to train rural preservice teachers who would, in turn, change the tradition of rote learning prevalent in most rural schools. This change was to be accomplished through the application of modern pedagogical techniques by highly motivated teachers who themselves came from rural areas with backgrounds similar to those of their students. These two normal schools, where students board for five years at government cost, represent the only institutions in Guatemala where young future teachers are so prepared. The school in Santa Lucia Utatlan has the additional challenge of preparing bilingual Indian students to teach basic concepts in one of the 23 Mayan languages spoken in the highlands. Both schools were built with AID assistance (approximately $1.5 million for Monjas alone).

Methodology. To gain an idea of the current practices with regard the teaching of problem-solving methods in the two normal schools, the evaluation team spoke with eight of the faculty members at Santa Lucia and with most of the faculty at Monjas. In addition, about 40 students at each institution were interviewed in groups of five.

Findings. How are these schools doing in accomplishing their revolutionary tasks? The answer is mixed. Santa Lucia has had five graduating classes, and Monjas one. There have been two previous evaluations of Santa Lucia (Molina, Guzman, Escobar, 1976; Seelye and Fineberg, 1979) which have pointed out many weaknesses in the training. For example, the 1979 study noted that "despite near unanimity on the part of faculty and students concerning the value of the problem-solving approach as a teaching tool, it has not been adequately integrated into the various academic fields by the faculty, generally due to lack of training." The current evaluation team did not notice any evidence that either of the two previous reports had been read by those in charge of the education in Santa Lucia. Directors and faculty change, of course, diminishing the institutional memory

and, perhaps, its sense of mission.

The comments of interviewed teachers and students were in remarkable agreement. The general response (based on 80 interviews with students) to the question of whether they were being taught the problem-solving methods was: Yes, they have been taught the techniques in the seventh semester but not all students have learned them well enough to feel that the techniques are applicable in all rural schools. The students indicated that they have not been given any written materials on the techniques (see next paragraph) although they have seen the curricular guides. (Annex 3 contains a more detailed composite of the student views on these and three other related topics.)

The reason for the absence of written materials about the problem-solving methods involves a decision that was made by the early and most subsequent trainers. The early promoters of these techniques rightly were reacting against the misuse to which the somewhat uninspired texts of the day were put. Not wanting to produce yet another text that teachers would have their students memorize, the advocates of the new problem-solving methods insisted that teachers be taught to creatively develop projects that fit into their own learning contexts. The decision was a mixed blessing. This non-textual approach has obvious strengths. It also has two weaknesses. First, since training was done with large groups of teachers at a time (often 40 or more teachers), the trainers tended to use examples that often did not strike a spark with many of the teachers. The remoteness of some of the illustrations was exacerbated because the trainers emphasized the abstract principles behind the problem-solving methods so the teachers could then apply them to their own situations. Sometimes this training approach worked, sometimes it did not. The second weakness was that knowledge of the problem-solving techniques rested, in the absence of written guides and examples, in the oral memory of those who had been trained. Sometimes this memory served well, sometimes it did not.

There was and is a pressing reason to create several boarding schools where students from poor rural areas can study to be teachers at the expense of the government. The reason relates to the many serious difficulties which the typical teacher faces when providing educational services in a rural community in the highlands or in the Oriente (East). The rural teacher is often the only "outsider" in the community, the only one who does not speak the local language, understand the local customs, or feel comfortable in the climate. The teacher is often the only teacher in an ill-equipped school. After school hours there is nothing to do for entertainment. There are community development tasks such as adult literacy, but the teachers generally feel that these tasks are beyond the scope of what they are paid to do. (The promotor bilingue, on the other hand, has these tasks as part of his/her job description.) If the teacher has personal ambitions, university studies require the teacher to leave the community to take courses. Most teachers leave the community weekends to visit friends and relatives who live in the teachers' home towns, and

some teachers leave the community after school each day.

In practice, living in an isolated agricultural area, where communication with other adults is at best difficult, where there are none of the conveniences of urban life (e.g., bathrooms, electricity), no opportunities for study, no friends or family, day after day, is a debilitating experience for many rural teachers. Alcoholism, absenteeism, listlessness and apathy, are correlates of this experience. In about ten percent of the small schools visited by the evaluation team the teacher had not arrived that da It is not uncommon for teachers to arrive Tuesday morning, ach for a couple of hours a day through Thursday, then ride a bus or a moto to his home town or the city for a long weekend. The actual number of hours that rural children are receiving classroom instruction is much smaller than the theoretical contact time.

To ameliorate in part this situation, selected students (about 180 per year since the mid 1970s) from poor rural areas are given scholarships to attend the regional normal school in Santa Lucia Utatlan (Western highlands) or Monjas (East), whichever is closest. These students, since they are from the same rural areas that need teachers, and since they are not educated in an urban setting, can be expected to live in the rural communities where they are assigned teaching positions and to teach without suffering a sense of alienation.

While the cost of preparing a normal school graduate prepared to teach in a rural school has been about what was anticipated (see next paragraph), the cost of preparing a graduate who actually does teach is enormously more expensive than has been anticipated. The rest of this subsection will explain why this is so.

First, how much does it cost to prepare a graduate? The cost of training (including room, board, teacher salaries, and building maintenance costs, but excluding construction and land purchase costs) is somewhat over $400,000 per year. Extrapolating the training costs over a 20-year period, without considering inflation or the rising cost of goods and services, suggests that the cost in 1983 dollars for operating each normal school will be $8 million. If one assumes that 10 percent of each incoming class will either drop out before completion of the five-year program or will not be awarded a degree for academic reasons, and that another 10 percent will not choose to enter teaching after graduation, the anticipated number of preservice graduate teachers each year would be expected to number about 73 persons in each of the two normal schools (90 students - 10% attrition - 10% selecting non-teaching careers = 72.9). Over the course of the institutions' first 20 years, each normal school should be able to produce approximately 1095 rural teachers (73 graduates X 15 graduating classes). This calculation enables one to estimate the cost per normal school graduate who may be interested in teaching to be $7,306 (1095 interested rural teachers produced by each normal school/ $8,000 000 = $7,306 per graduate teacher). The

anticipated cost and the real cost remain in sync largely because both normal schools have succeeded in admitting and, to a lesser extent, retaining over the years about the same number of students.

If the anticipated cost of preparing a graduate from either of these two normal schools who is ready to teach in rural primary schools is $7,306, has this acceptable cost been approximated when measured against the number of graduates from these two normal schools who are actually placed in teaching positions?

Over the past five years (1979-1983), the Ministry of Education has created annually between 320 to 900 new rural teaching positions; the average yearly number across the five years is 640 new positions. (The average yearly number of new urban teaching positions for the same years is 153.) Of the 80-odd graduates of Monjas' first graduating class last year, two were placed in teaching positions by the Department of Personnel. The placement record of the first five graduating classes from Santa Lucia is better but not good enough.

While 85% (n=67) of Santa Lucia's first graduating class of 1978 were placed in teaching positions (although only 48% were assigned to regions that spoke the graduates' native language), only 25% (n=20) of the second graduating class were placed in teaching positions by the Department of Personnel, and only 11% (n=8) of the class of 1980, 18% (n=12) of the class of 1981, and 6% (n=4) of the class of 1982 were assigned teaching positions.

This five-year performance record established for the placement in teaching positions of the graduates of the normal school at Santa Lucia Utatlan provides a fair base for extrapolating the number of graduates that may be placed in teaching positions over the next 15 years. Using a linear regression trend analysis, the total number of placed graduates by the year 1992 is estimated to be about 139. The estimated cost of producing each of these 139 graduates trained during the institution's first 20 years would be $57,554 ($8,000,000 / 139 = $57,554), or $50,248 over the acceptable cost of $7,306 (see above) for training each placed graduate. (This extrapolation is somewhat statistically unstable, as evidenced by a moderately high standard deviation of 25.73.)

If policy decisions do not increase the numbers of future Santa Lucia Utatlan graduates who are given Ministry of Education teaching positions, their training costs will be prohibitively expensive.

(Annex 4 presents more detailed data about the placement of Santa Lucia graduates.)

Tragically, whether the Santa Lucia and Monjas students are being trained adequately in pedagogic methodology, and whether they will return to rural areas as highly motivated teachers, are merely academic issues. Few of the graduates are given the

opportunity to teach.

To add insult to injury, the average amount of time between graduation and being named to a teaching position or the commencement of teaching (whichever came first) for those few graduates of Santa Lucia who have received teaching positions is approximately 27 months. (This figure is based on a review of 37 Santa Lucia graduates from the classes of 1979, 1980, 1981.) This delay of over two years makes it harder for graduates to maintain their enthusiasm for teaching and their sense of mission.

The Department of Personnel has been the bottleneck responsible for the wastage of millions of investment dollars as well as the agency responsible for the dashed hopes and aspirations of almost 400 normal school graduates to date. This is not to say that the graduates who did not receive teaching positions received no benefits as a result of their normal school education. It is to say, however, that rural classrooms did not receive any direct benefits from the training. Further, the educational benefits that may have accrued to the non-placed graduates can be provided more economically in an institution other than a normal school since normal schools require an additional year of practice teaching which is wasted on students who do not then get a job teaching.

The evaluation team does not have any first-hand data to explain why this bottleneck occurred. The team posed the question to teachers and administrators in both normal schools, and to administrators in several branches of the Ministry in Guatemala City. In all, about 50 educators were asked for their opinions. All of the responses were variations on the same theme: political considerations impeded the placement of graduates from the two normal schools. Some claimed that political backing was what got young people their teaching assignments. Some thought there was fear in some levels of the Ministry that giving assignments to Indian graduates would result in a politicization of rural indigenous areas. (This writer has made many evaluation visits to the normal school in Santa Lucia over the past five years and sees little to support the idea that the student body is "radical" or even very "political." The importance of the "leftist" student demonstration by Santa Lucia's second graduating class may have been blown way out of proportion by some Ministry officials.)

A word about the 1982 teacher examinations, applied at a national level to job aspirants. A "standard" test score is not nearly as relevant a criterion for the placement of rural school teachers as three other criteria: (1) whether the teacher has been trained to teach in rural schools using modern methods; (2) whether, for the highlands, the teacher speaks the language of the children; and (3) whether the teacher is willing to live, rather than just to visit, in the community where s/he is assigned.

C. REGIONAL/SATELLITE SCHOOL CONCEPT

Background. The first two loans (015, 025) attempted to institutionalize teacher training in yet another fashion. Certain schools were designated as "regional" schools, while smaller nearby schools within a five kilometer radius were designated "satellite" schools. (Often the "five kilometers" ignored considerations of terrain--rivers, mountains, etc.) The idea was for regional schools to contain all of the primary grades, preschool through sixth, while the satellite schools would offer preschool through third or fourth grade, feeding upper elementary students to the regional schools. The regional teachers, favored by more frequent inservice training, would then share their training with colleagues teaching in the satellite schools. Four of the 28 regional schools of Loan 015 also were designated "pilot" schools, as demonstration and inservice training centers of broader geographic influence.

Methodology. To ascertain the present status of the regional/satellite school concept, one evaluation team (headed by Seelye and Lux de Coti) visited two of the four pilot schools, four other regional schools, and six satellite schools; another team member (Figueroa) visited another 30 regional and satellite schools. Both teams employed a stratified random selection procedure that was eroded by circumstance. (These procedures were described earlier in this report.)

Findings. The teams discovered that the pilot school concept had fallen into disuse and that the regional school concept is by now employed weakly if at all. In 66 percent of the 17 schools visited by Seelye et al, there was no current professional relationship between regional and satellite schools; in only seven percent of the schools visited was there a good working relationship. This finding was replicated by Figueroa's sample of 30 regional and satellite schools where the regional-satellite school relationship was judged to be nonexistent or poor in 87 percent of the cases.

The satellite schools have evolved into independent schools which meet with the larger regional schools mainly for cultural events (e.g., soccer meets). The tendency is for the satellite schools to offer all the preschool and primary grades, although the satellite schools count with fewer resources. The abandonment in 1981 of the regional/satellite concept was confirmed by the USIPE official in charge of school training. The on-going loan (029) does not designate its target schools as either regional or satellite. (The National Planning Council is, however, considering resurrecting the regional school concept in a project that is on the drawing board.)

Why was the regional/satellite school concept abandoned by the Ministry after the termination of Loans 015 and 025? Apparently not because of any adverse judgment concerning the concept's effectiveness but rather because the concept was not institutionalized by the Ministry. Administrators and teachers in

015 and 025 regional schools stopped being inserviced after the loans ended, then eventually the Ministry stopped using the official designation of "regional school." (USIPE still uses the term but does not have either funds or a Ministry directive to continue to help schools implement the concept.)

Another reason for the concept falling into disuse may relate to the psychology of satellite teachers who sometimes may have tired of sending their best third grade students to the regional school. This suspected motivation is, of course, speculative. But the fact is that the satellite teachers frequently expanded the grade levels of the satellite schools to include preschool through sixth grade, rather than maintain a preschool through third grade school as the regional/satellite concept envisioned. Another psychological reason was suggested by a half dozen of the satellite teachers interviewed. Namely, that in some cases they grew tired of always being in the position of recipient of the good will and expertise of the regional school staff. Some of the satellite teachers said they knew as much as the regional teachers who inserviced them.

At any rate, the regional/satellite school concept may have worked reasonably well but it is difficult at this point in time to reconstruct the picture accurately. The concept appears to be worth another try.

D. TEXTBOOK PRINTING AND DISTRIBUTION

Background. One component of the three basic primary education loans (015, 025, 029) provided rural primary teachers with textbooks and curricular guides.

Methodology. Evaluation of this objective of the loans was done in the same 17 schools and by the same teams that examined curricular reform (see above section on curricular reform for a description of the sample). Checklists or other systematic means of gathering data were not employed, however. The findings presented below that pertain to the use of classroom texts are the result of the impressions of the evaluation team. The figures pertaining to the number of textbooks printed and distributed were provided by the Ministry of Education.

Findings. Through Loan 015 financing, 2,361,100 texts and curricular guides that were printed and distributed. Loans 025 and 029 made possible the printing and distribution of an additional 1,565,000 texts and guides. (These textual materials were the ODECA/ROCAP publications authored under a previous international effort.)

The evaluation team was unable to reconstruct the distribution patterns of the materials produced under Loan 015. An examination of a sampling of the text distribution patterns of Loans 025 and 029 suggests that between the two loans some schools in most provinces (19 of 22) received texts. The only schools where the distribution of complete sets of texts were planned,

however, were the loans' target schools, generally schools that were accessible by road.

An obstacle to getting needed supplies to rural teachers was the Bodega (the Ministry of Education warehouse). Once the books left the Bodega, USIPE had some success in distributing the books to the schools that were designated "regional schools" by Loans 015 and 025 for later redistribution to the satellite schools. A wider, national distribution of the texts was thwarted by a problem that was outside the scope of the loan: the wherewithal to get the texts to isolated teachers who were not in schools being serviced by one of the loans. School material piled up, aging, in the warehouse year after year while countless classrooms went without enough texts.

The national distribution of texts that was foreseen in Loan 015 (but not in Loans 025 and 029) was weakened by a bottleneck in an area of the bureaucratic infrastructure that was excluded from consideration in the loan objectives (i.e., the Bodega) and by the lack of will or resources to accomplish it through the two succeeding loans.

That the Bodega was a major stumbling block was a well known fact as Minister of Education came and went. Nothing changed until January of 1983 when the powers decided to distribute the then aging materials of the Bodega.

All of the 17 schools where the evaluation team made inquiries regarding textbook use had copies of the ODECA/ROCAP texts printed through the efforts of the aforementioned three loans. In fact, these texts were almost the only textbooks the evaluation team observed in the schools visited. Unfortunately, in the schools visited by the evaluation team one of two conditions usually prevailed. There were either not enough texts to go around or there were plenty of texts but they were not used. Typically, there would be texts for a about a third of the students at any given grade level. In one satellite school visited, there were 10 copies of the same reader which were used by all the children (30) in all the grade levels, first through sixth, since it was the only textbook in the school. Not infrequently, new, unused textbooks would be seen neatly stacked in the school storeroom when students went without texts. (The texts themselves are predominantly urban-oriented, and, at this date, somewhat traditional.)

E. SUMMARY: IMPACT OF CURRICULAR REFORM

Fundamental change has occurred in the rural primary school curriculum that would not have been effected without AID help, although some remedial concepts advanced by the three AID loans failed, and other concepts have since fallen into disuse.

Some of this change has been hard won. For example, the introduction of complex, problem-solving techniques into a hundred traditional rural schools that previously had emphasized rote

memorization (the 015, 025, and 029 target schools). These modern techniques are taught through extensive teacher training that has not yet been economically feasible on a national level. There has been, however, an observable spread effect: many teachers using these problem-solving techniques learned them from other teachers who had been trained. The evaluation team was not able to estimate the total number of schools nationally that may be using problem-solving techniques through this spread effect.

The two normal schools constructed with AID assistance do train (to varying degrees of success) its graduates to use problem-solving techniques but few of the graduates are offered teaching positions by the GOG's Department of Personnel.

The printing and distribution of primary school textbooks appears to have been moderately successful. The most geographically accessible schools, including those directly targeted in the original loans, have received copies of the texts and these are practically the only books found in the schools. On the other hand, many of the 17 schools visited presently do not have an adequate supply of the texts and many teachers do not seem to use the ones they have. They may not find the texts useful, perhaps because they have not been trained to use them. It is difficult to generalize from this sample, however. The comments regarding textbooks are more of an impression than the interpretation of systematically gathered data from an adequate sample.

One attempt at reform failed from the onset. Classroom equipment--slide projectors, sewing machines, and to a lesser extent, industrial arts tools--were never used much. To give one example, the evaluation team did not discover anyone who knew how to operate the slide projectors that were provided to all of the regional schools. Two conditions are prerequisites to using the equipment: knowing how to use it and being resigned to having it eventually wear out through use. Neither condition occurs frequently in rural Guatemala, where training is infrequent and where the replacement of equipment is even rarer.

A concept that apparently served adequately throughout the course of the first two loans (Loans 015 and 025) but later fell into disuse was that of "regional" and "satellite" schools. Inattention to the long term, continuing support needs of these schools as staff and local conditions changed brought this about after the loan effort had tended. Since the concept was perceived by AID and the Ministry to have limited relevance to the main purpose of Loan 029 (i.e., to reconstruct schools damaged by the 1976 earthquake) it was not incorporated into the fabric of 029 schools.

In short, the pilot programs in curriculum reform and teacher training achieved substantial accomplishments in spite of some failures. Some of these gains (e.g., use of the problem-solving methods) have diffused beyond the schools targeted in the original three loans, other gains (e.g., textbook deployment) fell short of

their projected goals.

The two main reasons for failure to achieve targeted curricular reform objectives are that bureaucratic bottlenecks (e.g., the Department of Personnel, and the Bodega) were allowed to develop and thrive, and that the continuing need for inservice training was underestimated or was not institutionalized by the Ministry, usually because of funding constraints. The schools that most successfully accomplished basic curricular reforms tended to be those where USIPE controlled the selection of participating teachers and those schools that received the most concentrated treatment package--school construction, new instructional materials, and training that was intense and long-term.

3. Non-formal Education

Background. The team member who served as the principal investigator of non-formal education activities was Micheline Morel, and this section of the report will draw from her conclusions (Morel, 1983).

Methodology. Morel focused on the two non-formal education projects receiving AID assistance. She reached her conclusions after reviewing project documents and previous evaluations, and after interviewing dozens of people working in non-formal education in Guatemala. In addition to visits to various agencies in the capital, she visited the non-formal education center in Quetzaltenango and several nearby field locations.

Findings. The two AID-sponsored non-formal education projects have created an infrastructure designed to coordinate inter-institutional efforts in the area both at the local and national level. This is especially crucial since so many governmental agencies are involved in some type of non-formal education activities. Unfortunately, the level of GOG funding for non-formal education is small and the infrastructure apparently has become overly centralized (the national Secretariat office employs over 50 people).

The non-formal education regional office in Quetzaltenango has succeeded over the years in coordinating programs at the community level mainly through personal contacts and the fact that grass-roots government technicians and field workers have recognized that it is to their advantage to cooperate. Coordination is occurring also at the national level among GOG ministries with non-formal education programs although these efforts need to be further strengthened.

The research done during the first AID-sponsored non-formal education project (Loan 551, Basic Village Education), begun in 1973, established that radio can be an effective, low cost medium for the dissemination of non-formal education messages to Guatemala's rural population, and that its effectiveness (and

cost) is increased by supplementing the broadcasts with personal visits from trained promoters. Morel, assessing the impact of this project seven years after it had ended, found that several governmental agencies currently are producing radio programs with national coverage (duplicating in part each other's efforts), continuing the general direction of the original loan effort.

Soon after the original project (Loan 551) had ended, the GOG continued the program using the same content as during the pilot years, mainly agriculture, without the need for outside technical assistance. Several noteworthy changes have been made in the original design, however. First, the non-formal education content has expanded to include many areas other than agriculture, such as literacy, health, civics, cooperatives, and ecology. (Agriculture occupies relatively little time now.) Second, since the radio coverage is now perceived to be national rather than local, program content is decided by the central office without the benefit of systematic listener feedback from the affected areas. The language of the broadcasts is predominately Spanish (with only occasional broadcasts in Mam and Quiche), rather than in the Mayan languages that are the principal means of communication in the rural highlands. Third, the radio broadcasts are not supplemented by live promoters. These changes may have contributed to the diminished audience that now tune in to the programs. The second non-formal project began after the first had ended, but the second project did not take full advantage of the findings of its predecessor project, apparently because of rivalry between some of the administrative personnel of the first and second projects and the concomitant lack of coordination.

AID has played a significant role in assisting the GOG establish a national non-formal education system. During the past dozen years, AID has contributed $6.3 million in loan funds and $586,000 in grant funds, while UNICEF has donated $1.1 million in equipment and UNESCO has provided $250,000 in technical assistance. Neither UNICEF or UNESCO are planning any substantial future financial aid to Guatemala in this area. AID, on the other hand, is planning a $3 million loan and a $860,000 grant to support the improvement and expansion of Guatemala's non-formal education system. A particular strength of this planned effort is their coordination with other potential international donor organization to avoid duplication of effort.

National impact. AID assistance provided the necessary information and infrastructure to allow the GOG to increase the efficiency of its non-formal education system. This assistance also provided a cadre of trained promoters and technicians to carry out subsequent efforts. Unfortunately, it is especially difficult to coordinate national programs in non-formal education because of the many agencies that provide widely disparate services for rural people who themselves differ even in the languages they speak. Perhaps this accounts for the overly centralized structure currently in operation. Much of the pertinency of the non-formal content has been dissipated in the last several years by programs that have been developed by people

who may have lost contact with the subsistence farmers who are their clients.

4. Bilingual Education

Background. The on-going Bilingual Education Project is, conceptually, similar to the generally successful bilingual preschool program (castellanizacion) in that Spanish is taught as a second language and most subject-matter concepts are taught in the students' home [and usually only] language. The AID-sponsored project will allow bilingual education to be extended from preschool through the second grade in rural highland schools where the majority of the children arrive at school speaking a Mayan language. The bilingual preschool program began in 1965; the Bilingual Education Project is in its third year in developing the prototypes for bilingual instructional materials in Spanish and in the four Mayan languages spoken by the majority of the Indigenous population.

Methodology. To assess this on-going project, the evaluation team asked three main research questions: Are the bilingual program children, who are taught principally in a Mayan language, learning as much Spanish as similar Indigenous children who are taught solely in Spanish? Are the bilingual program children learning as much mathematics, natural science, and social studies as non-bilingual program comparison children? Is the bilingual project doing a credible job in developing the prototypes for the vernacular language instructional materials and in developing a cadre of personnel trained in the methods of bilingual education?

The 80 schools currently participating in the bilingual project, 40 as sites for pretesting the bilingual materials developed by the project and 40 as comparison schools, were selected from the ranks of communities that had a bilingual preschool program in 1979. Identification of the 80 target sites were selected scientifically. First, 119 sites were selected from the communities with a bilingual school program, about 40 from each of four provinces, the sites from within the same province speaking the same Indigenous language. All 119 sites met the following criteria: geographical accessibility; dialectal uniformity; at least 90 percent of the population was Indigenous; acceptance of the bilingual preschool teacher; and at least a minimum student population. These 119 sites became the object of extensive study (Seelye et al, 1979) and their descriptive characteristics were entered into a factor analysis. Two major factors were identified: the degree of general community development (e.g., did it have electricity?); and the amount of Spanish spoken there. Once the sites were stratified linguistically, 10 pairs of sites that had similar factor scores on both factors were selected randomly to participate in the current evaluation. Half of the pairs were designated bilingual program schools, the other half as comparison (i.e., traditional) schools.

To respond to the first two of the three research questions

identified above, one pilot school where both languages are used for communication, and one comparison school where all instruction is imparted in Spanish, were selected for each of the four linguistic groups (Mam, Cakchiquel, Quiche, Kekchi). Both pilot and comparison schools had the same or similar factor scores. To measure Spanish fluency, another stratified (by grade level) random sample of 235 students was selected for face-to-face oral testing, using a modified form of the widely used Foreign Service Institute test. To measure subject matter acquisition, five-item criterion-referenced tests were administered in mathematics, science, and social studies at the first and second grade levels. The third research question was addressed by visits to the bilingual education project headquarters in Guatemala City.

Findings. What were the results? The writer will draw from the report prepared by the principal investigator of this aspect of the impact study, Stephen O. Stewart (1983).

Oral Spanish. Stewart (1983) found that children in bilingual schools, where they receive Spanish as a second language but a major part of the academic content of other subjects in the local language, progress in their learning of oral Spanish (at least during the first two years of primary school) at about the same rate as similar Indigenous children in schools where Spanish is the sole medium of instruction.

Stewart found that nearly all parents interviewed (n=220) in the Mayan rural areas (including communities with bilingual or tradition schools) have a positive regard for their schools, but feel that bilingual education is a better way for their children to learn. The children in these communities also indicated (through interviews) a positive attitude toward school. In the long run, however, monolingual Spanish schools may invoke a sense of alienation toward the students' home language and culture by systematically ignoring them during school.

Most rural teachers interviewed (working in both bilingual and traditional schools) ranked the learning of Spanish as a highly important outcome of schooling, but both bilingual and monolingual teachers indicated that they felt that both Spanish and subject matter areas can be learned better in bilingual schools.

Positive parental attitudes and fluency with regards Spanish was found to be important factors associated with high levels of Spanish fluency in their children.

Student achievement. Children in the bilingual schools, where academic content is imparted in the native Mayan language of the children, learn the proscribed national curriculum in mathematics, science, and social studies (as judged by criterion-referenced tests) better than similar children who receive the content solely in Spanish. Students who combine a high level of oral fluency in Spanish with a positive attitude toward their own first language tend to do better in academic achievement.

Some of the differences between the pilot bilingual schools and the traditional comparison schools were marked. For example, 20% more of the bilingual program first graders knew that the quetzal and the monja blanca were patriotic symbols, and 35% more could identify a triangle. When asked to add five plus four, 90% of the bilingual program first graders got the correct answer while only 57% of the comparison children did.

Bilingual materials development and staff training. Stewart, an anthropologist-linguist who speaks several Mayan languages, assessed the newly developed bilingual materials to be "good" although there are some important problem areas in this regards (see Stewart, 1983). (The instructional materials were not independently reviewed by a curriculum specialist as part of this evaluation to determine whether they successfully incorporate the problem-solving techniques developed under the Loans 015 and 025.)

Stewart felt that the linguistic training to date of the heads of the four curriculum development teams has been overly abbreviated and there has not been provided compensatory supervisory input. The language sequence with which the bilingual project cooperating teachers present materials varies widely. Some bilingual preschool promoters were observed to follow the vernacular language presentation with one in Spanish, others used the Spanish language translation which is part of the printed lessons for reading practice, while others assigned the Spanish translation as homework. Subsequent to the visits of the evaluation team, the project administration planned activities to clarify the respective pedagogic roles of the vernacular and Spanish languages.

The research and evaluation component of the bilingual project has to date been weak, but current efforts are being expended to improve this situation.

National impact. Bilingual education for Guatemala's Indigenous sector is an idea whose time has come. To judge by the findings of this evaluation, it should succeed--if the GOG provides an adequate budget for (a) involving rural Indigenous communities in this process, (b) giving inservice training and continued support to rural teachers and administrators, and (c) updating and refining the instructional materials used.

There is another factor that will affect the success of bilingual Indian education in Guatemala: whether the more reactionary elements of the military, especially the officers in charge of rural areas, will allow its implementation (some powerful military officers associate Mayan-language activities with guerrilla efforts). Over the last three years an alarming number of Guatemalan educators and linguistics who have worked in the area of rural development--and bilingual education in particular--have been assassinated.

SPECIAL STUDY: Bilingual "Promoters" vs. Monolingual Teachers

Background. The evaluation team did another study that has relevance to the question of the relative efficiency of bilingual education when compared to traditional all-Spanish education in rural Guatemala. Nelson Amaro (1983c) was the principal investigator of this study. The basic research question asked in Amaro's study was: Does it make a difference in student drop-out rates, failure rates, and promotion rates, whether the classroom instructor in rural Indigenous areas is a bilingual promoter (with a sixth grade elementary school education) who teaches in two languages or whether the instructor is a more highly trained (normal school degree) but monolingual (Spanish) teacher?

Methodology. Amaro probed this question in three ways. First he examined the three performance indicators (drop-out rates, failure rates, promotion rates) across a seven year period in the four provinces studied in the bilingual baseline study by Seelye et al (1979). He took the frequencies for each performance indicator (preschool through second grade) for all the rural schools in the four provinces and compared them with the performance indicator frequencies for those 119 communities with bilingual promoters that were the focus of Seelye's study. Second, Amaro compared the performance indicators over a recent three year period (1980-82) with an earlier period (1969-73) in 21 matched communities that had been included in an earlier similar study (Amaro and Letona, 1978). Third, Amaro identified 20 communities where a bilingual promoter and a monolingual teacher taught different sections of the same grade level. In this comparison, he used an analysis of variance to determine whether there were statistically significant variations in the performance indicators according to the type of instructor.

Findings. The results of all three probes were identical. In terms of the three performance indicators selected, it did not matter whether the instructor was a bilingual promoter with a sixth grade education or a monolingual teacher with almost double the education. (It is important to note that this design did not allow comparisons of the relative efficiency of bilingual promoters compared to bilingual teachers, or between bilingual and monolingual teachers.)

These results imply that bilinguality in the instructor provides an advantage powerful enough to overcome substantial educational deficiencies. Stated inversely, it appears that increased education beyond the primary school is no substitute for knowing the language of the children.

5. Educational Administration

Background. The $915,000 grant provided to the GOG by AID for the inservice training of several hundred Ministry of Education administrators, technicians, and district supervisors certainly focuses on an area of need. Most of the training has

been done in cooperation with the University of New Mexico and the Universidad del Valle de Guatemala. Both universities have demonstrated flexibility in designing appropriate courses of study and in making the necessary adjustments required by a pilot program. The program is accomplishing the short-term objectives it set out to accomplish.

Methodology. Seelye and Lux de Coti studied the project design, interviewed five project administrators, three Universidad del Valle teachers, and six of the 18 participants in the training program.

Findings. This project is a good beginning at improving the administrative skill of selected Ministry of Education personnel. By itself, however, it will not contribute in any measurable sense to the long-term sector goal--improved efficiency of the Ministry of Education and the improvement of services to rural areas. (That the AID funds must impact on the rural poor is mandated by the Foreign Assistance Act of 1973, as amended.) Much more varied types of training will be needed to accomplish this sector goal. The rest of this section of the report will view this project within the context of the beginning of a long-range effort to improve the efficiency of the Ministry of Education's services to rural areas.

Three points of concern were identified by the evaluation team.

First, the selection of participants for the master's degree programs includes a score of professionals quite dispersed throughout the Ministry, although the greatest number came from USIPE. According to an official of the National Planning Council, originally some of the project planners wanted to identify five or so individuals from the same work area in order to develop decision-making nuclei within high priority areas of the Ministry. This did not prove feasible, however, because of the off-the-job time that this training approach would entail. The project was successful in enrolling several key decision makers--the Vice Minister of Education, for example (although he lost his position as a result of the August coup). Unfortunately, in spite of occasional successes, the most critical decision makers often were indispensable to the current Ministry operations and were not, consequently, able to get permission to take the training courses. The selection of people who can make a difference in Ministry operations will continue to be difficult.

Second, more resources need to be budgeted to strengthen the link between the content of the training programs and the requirements posed by the daily Ministry work tasks. Some steps already have been taken by the project to strengthen this link. A first step was to form a coordinating committee composed of Ministry of Education officials (although some of the key members have found it difficult to attend the meetings). An especially commendable accomplishment was to produce a detailed assessment of the dynamics of the Ministry of Education done by the University

of New Mexico (Ulibarri, 1982). This assessment has helped bridge the gap between theory and experience. A third step was to involve an excellent faculty as program instructors (half of the Universidad del Valle instructors involved in the program have work experience in the Ministry of Education). Teachers have made efforts to exploit problems with practical applications but this effort apparently is not evaluated. (The evaluation team interviewed six of the 18 participants in the master's degree program at the Universidad del Valle and found opinion concerning the program's practicality to vary considerably.) To enhance the program's practical applications, continued effort in this direction is warranted.

Totally absent from the project design as it currently stands is any provision to follow the graduates of the training. Two areas immediately come to mind: the valuable feedback that the graduates can provide the university as it continues to refine its program; and the meaningful assistance that can be provided the graduates at their desks back at the Ministry as they attempt to apply what they learned to the daily problems of the Ministry.

Third, if rural education is to be affected, ultimately, by increased administrative training of Ministry personnel, people from the rural sectors themselves will have to be included in the training programs in greater number. (Seventy-eight percent of Guatemalans live in rural areas.) Of the 314 district-level and urban Ministry personnel trained thus far (some of the individuals were involved in several training programs and are counted twice), only 11 are bilingual people from the rural areas, yet 90 percent of the population of rural Guatemala is Indigenous and most speak one of the 23 languages of the Maya-Quiche family. Some participatory methods are being taught in the training program to increase the likelihood that rural education will respond pertinently to rural needs. However, to wait for the benefits to "trickle down" or information to "filter up" without the direct administrative involvement at all levels of that population sector most affected by rural education is to court curricular irrelevance.

National impact. It is much too early to estimate the long range impact of the type of training program initiated by this grant. Future experimentation with different mixes of training programs may identify critical training components that make a difference in Ministry effectiveness. An experimental approach analogous to that used in the Basic Village Project (551) may be well worth the effort. The project is putting hope on the inservice training unit created by the project to work within the Ministry. Whether this unit will act as an expediter of needed training for rural educators or whether it will be just one more layer of bureaucracy--strong on planning and coordination, weak on common sense and timely responses to local needs--remains to be seen.

V. CONCLUDING NOTES

At the start of this evaluation, USAID/Guatemala identified nine issues of special interest. The present study has responded to many but not all of them--collection of field data involved severe constraints of time and circumstance. The conclusions reached by the writer were aided by the reports from other members of the evaluation team (Amaro, 1983a, 1983b, 1983c; Figueroa, 1983; Morel, 1983; Stewart, 1983) and the reader is encouraged to read the individual reports where the topics are discussed in considerable detail.

A brief statement of the writer's opinion on each of the nine issues identified by USAID follows.

1. To what extent did the Government of Guatemala (GOG) and the Agency for International Development (AID) succeed in achieving its project objectives for formal and non-formal education?

The projects were well planned and, on the whole, made impressive gains, although frequently the number of outputs envisioned in the project papers proved unrealistic, often because late project startups increased the cost of the projects, resulting in fewer resources to accomplish the planned objectives. The major project objectives usually were accomplished, however, once allowance is made for overly ambitious projections.

2. What impact did the projects have on the educational gains of the designated target children in rural primary schools in Guatemala? Did the projects have a spin-off effect on the achievement of other children?

Of the eight projects reviewed by this evaluation, four were designed to have a direct impact on the achievement of the target children: the three rural primary school projects (015, 025, and the on-going 029), and the on-going bilingual education project (258).

The evaluation team attempted to measure the impact that the latter project (258) had on cognitive achievement in four villages. Gains in mathematics, science, and social studies for the bilingual program students tended to be significantly greater than those obtained by children attending traditional all-Spanish schools in other villages with similar characteristics. Importantly, the bilingual program students scored as high in oral Spanish as similar students enrolled in traditional schools where Spanish was used as the only medium of instruction.

The evaluation team did not measure the impact of the other three projects on student achievement. It would be desirable to do such a study if comparable treatment/control schools could be identified. (Over the course of the last dozen years many intervening variables provide rival explanations of differential gain in student achievement and the research design would have to

address these rival explanations.)

Although there were some failures, many of the project gains subsequently were diffused beyond the sites involved in the AID projects. Some examples of this spin-off effect include AID building construction standards adopted by Guatemalan government agencies, on-going training in problem-solving methods done formally by individuals in several non-target governmental agencies and informally by individual educators interacting with their peers, the distribution of textbooks to many non-target schools, increased sensitization of Ministry officials and technicians to rural needs, and an infrastructure to implement non-formal education techniques.

While the evaluation team was not able to estimate the frequency with which spread effects reached non-target schools, spin-off effects were frequently observed during the course of the present research. (AID may want to consider doing a study to focus solely on an identification and quantification of the spin-off effects of AID-sponsored projects. This type of project will need considerable time since the attribution of observed Ministry structures, attitudes, concepts, and products to AID instigation will need to be done carefully and many leads will have to be run down through the Ministry labyrinth.)

3. How appropriate was USAID's response to Guatemala's development needs, policies, and priorities, both in content and in cost? Should another donor be encouraged to participate in the expansion of Guatemala's educational system?

All eight projects addressed Guatemalan educational needs of the highest priority and the direct project beneficiaries were almost always the rural poor. Project implementation occurred within appropriate GOG agencies. The funding levels generally were adequate to accomplish important objectives, although beginning the projects late or ending them late, as frequently happened, raised the project costs.

The educational investment dollars over the last 14 years have contributed to important improvements in Guatemala's rural educational system but enormous needs still exist. The yearly expenditure from AID and GOG counterpart funding, across the universe of needy children (rather than the universe of designated target children), averaged only $3.62 per child. Meeting the pressing needs of rural education is well beyond the reach of GOG's current or projected financial ability, and it is beyond the ability of any sole foreign contributor, including AID. Children living in especially isolated villages have not yet, for example, received many benefits from the eight projects reviewed.

The financial and technical assistance of other international donors is much needed, especially if it builds on past GOG gains in rural education and coordinates with other on-going efforts.

4. Were those educational gains that were identified

institutionalized so that continued gains do not depend on continued foreign assistance?

Some were, many were not. The most important GOG attempt to institutionalize the services provided by the AID grants and loans has been through the creation and subsequent efforts of USIPE (a division of the Ministry of Education), although other agencies such as Socio Educativo Rural (another Ministry division) and the National Planning Council have internalized many AID project goals. Educational gains that were not institutionalized include a school building maintenance program, the regional-satellite school concept, and the results of the first non-formal education experiment.

Many of the qualitative project gains require extensive on-going teacher inservice and curricula revision if they are to continue. The GOG seems unable to finance this to the extent needed. An expectation that the GOG is going to be able to continue and to expand the gains would be totally unrealistic: the cost of expansion is beyond the GOG's reach, and the cost of continuing past programs is substantial and often, too, beyond the financial resources of the GOG.

This is sobering but not necessarily depressing. AID assistance has made a difference--quantitatively and qualitatively--in Guatemala's rural education but it is going to take considerably longer than originally anticipated in the project papers to bring about the necessary changes in the way the GOG responds to its horrendous educational needs. There are no "quick fixes." Many of the project gains seem to have been psychologically institutionalized by Ministry personnel even if some gains have not been financially institutionalized. That is, Ministry officials and technicians have increased their sensitivity to many important areas (i.e., those embodied in the AID projects) although the funds to do what is needed are often lacking. USAID/Guatemala seems engagingly optimistic but on the right track in the way it designs its projects jointly with the GOG.

5. To what extent did the GOG implement a maintenance program for the schools constructed under loans 015, 025, and 029?

Building maintenance has gone little beyond the effort teachers expend in getting students to clean up. Especially deficient is the maintenance of latrines. The GOG does not have an active maintenance program for its rural school buildings although it has in a number of cases added needed buildings to a school complex built with AID help. Still, most of the schools built with AID financing have held up well over the years. This suggests that extensive maintenance programs may not be a dire necessity if teachers were better informed and equipped to handle routine care.

6. What, if any, are the GOG plans for expanding to other schools the problem-solving curricular emphasis introduced through

the above three loans?

USIPE currently is training those teachers involved in Loan 029 schools to use problem-solving methods, the normal schools at Santa Lucia and Monjas continue to train preservice teachers in this methodology, and the Department of Agriculture extension technicians are teaching the concept. Some Socio-Educativo Rural technicians also teach the problem-solving techniques to rural promoters and teachers. These efforts seem to have evolved naturally by diffusion. The evaluation team in the limited time available did not identify any concrete GOG plans to extend this curricular emphasis but there may well be such plans.

7. What was the quantitative and qualitative impact of the textbook component of the three loans?

The three loans directly concerned with textbooks (015, 025, 029) succeeded in printing and distributing 2.3 million texts (over 30 titles) to hundreds of schools, especially the more geographically accessible ones. These textbooks are practically the only ones present in rural primary schools today, although more often than not they exist in inadequate numbers and many teachers do not use the texts they do have, perhaps because they have not been trained in their use.

The qualitative impact of these textbooks was not evaluated by the team. Although the effectiveness of instructional materials is certainly a central issue, Loans 015, 025, and 029 apparently assumed rather than tested the effectiveness of the textbooks they printed and distributed. At this juncture, it would be nearly impossible to identify experimental or quasi-experimental conditions to measure the impact of the textbooks on student learning. To gauge this impact through inferential statistics would be a major undertaking, since many relevant variables would have to be identified and quantified, field sites selected, instruments adapted or developed, data collected, and rival hypotheses examined. Prior to the revision of the textual materials currently in use, it would be desirable, minimally, to interview teachers and students concerning their experience with the texts.

The three big current questions are: Are the textbooks currently relevant to rural Guatemalan school needs, and if not, what changes need to be made? Do the teachers have the textbooks, and if not, why not? Are teachers trained in their use, and if not, why not? Before future funds are committed to further reprinting of the ODECA/ROCAP textbooks these issues should be examined.

8. What success has the regional-satellite schools concept had?

The concept apparently worked reasonably well during the implementation of Loans 015 and 025, but fell into disuse later. In practice, the concept is still implemented informally (and

rather weakly) in some former 015 schools. To have survived intact, the concept needed to have been fine tuned (some of the satellite schools were too inaccessible) and to have received continued nurture in the form of teacher training and Ministry support. There is some evidence that the Ministry is considering reactivating the regional school concept in a program planned for future implementation.

9. What lessons can be derived from the findings for future programs and policies? What new development opportunities were created or identified?

Design. Project objectives tend to be unrealistically ambitious in terms of the number of outputs, time/cost estimates assume more system efficiency than often is justified, and the projections of GOG ability to continue the gains realized by the projects tends to underestimate the resources needed to accomplish this. This may "puff up" the attractiveness of the projects to some people, but subsequent program evaluations are forced to note "failures" that are spurious. In spite of these weaknesses, the projects are well designed, usually with substantial input from many GOG officials in numerous agencies. The real accomplishments of most of the AID-assisted projects are sufficiently impressive to anyone who knows the obstacles to change that are prevalent in the third world. These projects do not need "pie in the sky" objectives to justify themselves.

Implementation Delays. So many projects are plagued by late startups and extended terminations--both of which add considerably to the project cost--that a special study is recommended to analyze the causes of this. A study of many projects should expose a number of recurring problems that are improvable.

Bottlenecks. Two of the most critical objectives of the primary school reform projects reviewed in this evaluation were affected adversely by two bureaucratic bottlenecks: the difficulty in getting textbooks out of the Ministry of Education warehouse and the Department of Personnel's extreme reluctance to offer teaching positions to the graduates of the two normal schools constructed with AID assistance. In neither case was the bottleneck anticipated although the units involved were critical to successful accomplishment of the project objectives.

Since USAID/Guatemala has not been successful in removing the bottlenecks in anything approaching a timely fashion, this writer suggests including a provision in future loan agreements which outlines a procedure for dealing expeditiously with unanticipated bottlenecks situated in any GOG agency, whether or not the agency is written into the loan or grant. The procedure should have teeth and AID should not hesitate to invoke the necessary provisions.

Overlooked Details. No one can anticipate all of the little things that can make a qualitative difference in a project. There needs to be, however, a willingness to address small issues. This

willingness often is missing.

For example, after expending over $3 million dollars to build two normal schools to train teachers who were to teach in isolated rural areas, the student-teacher supervisors were not provided with motorcycles to visit the practice teachers. The supervisors were limited to bus transportation--a very cheap but time-consuming way to travel in rural Guatemala. Providing the supervisors with motorcycles would have enabled them to at least triple their visits to practice teachers. Another example: Three AID-sponsored projects spent $2.7 million to provide textbooks to poor rural children, but while pencils were provided, the students were not given tablets to write on that cost a few cents. Still another example: After spending millions of dollars on school construction, and a small amount on the development of a simple, illustrated manual for building maintenance, funds were not provided to print and distribute the manual to school personnel. A final example: Rural teachers in especially isolated areas cannot seem to get <u>any</u> supplies within a year of request. (They have a hard enough time getting paid.) The educational infrastructure lacks the wherewithal to redress small oversights. These oversights are ultimately, and in the aggregate, important. The educational system would be well served by a humane mechanism staffed by people who really care about the plight of every rural teacher and school-aged child.

This writer recommends the creation of an Ombudsman's Office within the Ministry of Education with authority and a budget to cut through red tape and to take actions that make common sense. This office should be staffed with personnel who understand the rural scene and who care about helping teachers and children. A study of the solicitations received by the ombudsman over a couple year period could provide the basis for making the Ministry more efficient <u>and</u> more humane. AID could fund this office, along with its evaluation, out of grant money for several years to get it started.

AID has developed over the years a good, apolitical reputation in Guatemala for caring about the quality of rural education. Important reforms have begun.

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ANNEX 1

PRINCIPAL CONTRIBUTORS

ANNEX 1: PRINCIPAL CONTRIBUTORS

Nelson Amaro Victoria received his licenciatura in sociology from the Universidad Catolica de Santiago de Chile in 1967, his master's degree in sociology (with a specialization in urban and regional studies) from a joint Massachusetts Institute of Technology/Harvard University program in 1971, and a Ph.D. in developmental sociology from the University of Wisconsin. Dr. Amaro, a Guatemalan citizen, has worked on numerous projects for the World Bank, UNESCO, the Banco Nacional de la Vivienda (Guatemala), the Fundacion Salvadorena para el Desarrollo y Vivienda Minima, CEPAL. PNUD, CDPPP, Instituto para el Desarrollo Economico y social de America Central, Instituto Centroamericano de Poplacion y Familia, and Centro para el Desarrollo Economico y Social para America Latina.

Roberto Figueroa is a civil engineer with degrees from both Guatemala and the U.S. He is a Guatemalan citizen with wide experience evaluating AID school construction programs.

Otilia Inez Lux Garcia de Coti received her degree as secondary school teacher from the Universidad de San Carlos de Guatemala in 1975, her licenciatura in pedagogy from the Universidad Rafael Landivar de Guatemala in 1981. Her thesis was on the Normal School of Santa Lucia Utatlan where she has served a faculty member. Mrs. Lux de Coti teaches full time at the Instituto Nacional de Educacion Basica. She has worked on many projects, including the PEMEP and the Bilingual Education projects. In 1981 Mrs. Lux de Coti was presented with the Gold Medal of the Francisco Marroquin Order as best teacher of the year.

Luis Antonio Menendez earned his teaching certificate from the Instituto Normal para Varones de Occidente in 1961, his licenciatura in pedagogy from the Universidad de San Carlos de Guatemala in 1969, and a master's in educational administration from the University of New Mexico in 1982. He has also studied in Mexico, Argentina, and Germany. Mr. Menendez has worked on many educational projects in Guatemala, including 025. He has taught on both the primary and secondary levels, as well as at the Universidad de San Carlos, Universidad Mariano Galvez, Universidad del Valle de Guatemala, and the Universidad Rafael Landivar. He is author of Educacion en Guatemala, 1954-1979 (Piedra Santa, 1980).

Micheline Morel received a master's degree in economics and sociology from the University of Heidelberg, West Germany in 1975. Her overseas experience includes technical advisor to

non-formal educational programs for four years in Africa, United Nations program officer for a broad program in rural development three years in Guatemala, and agro-industry specialist for two years attached to a Guatemalan program of rural development.

H. Ned Seelye received his master's degree in Latin American Studies from the Universidad de San Carlos de Guatemala. Additional post graduate studies include two years in anthropology at Tulane University and one year in social psychology at Northwestern University. His 28-year teaching career includes appointments at the Colegio Americano de Guatemala, Instituto Guatemalteco-Americano, Universidad Rafael Landivar, Universidad del Valle de Guatemala, Ursinus College, Northern Illinois University, George Williams College, Loyola University of Chicago, University of Hawaii, University of Miami, Pontificia Universidad Catolica del Ecuador. For the last seven years he has directed a social science research firm. Mr. Seelye is the author of over 50 published articles and books and is listed in the Directory of American Scholars (American Council of Learned Societies, 1974), National Directory of Latin Americanists (The Library of Congress, 1971, 1983), and in Who's Who in International Education (Cambridge, England, 1980).

Stephen O. Stewart received a master's degree in linguistics from the University of Colorado in 1972, and a Ph.d. in anthropology and linguistics from the University of Colorado in 1978. He has taught in the Universidad de San Carlos de Guatemala, Universidad Rafael Landivar, and the Universidad del Valle de Guatemala. Mr. Stewart has done extensive research throughout Guatemala and his many publications include a text on the Kekchi language. In addition to many years experience in Guatemala, Mr. Stewart has taught English in France and has served for several years as a consultant to rural agricultural projects in Nepal.

ANNEX 2

SCHOOLS VISITED BY SEELYE AND LUX DE COTI
TO EVALUATE QUALITATIVE CURRICULAR REFORMS

ANNEX 2: PRIMARY SCHOOLS VISITED BY SEELYE/LUX DE COTI TEAM

1. Santa Lucia Utatlan, Solola
2. El Novillero, Sta. Lucia Utatlan, Solola
3. El Carmen Chitatul, El Quiche
4. Monjas, Jalapa
5. La Campana, Monjas, Jalapa
6. Sta. Apolonia, Chimaltenango
7. Las Mejoranas, Sta. Apolonia, Chimaltenango
8. Escuela Urbana para Ninas, Sumpango, Sacatepequez
9. Escuela Urbana para Varones, Sumpango, Sacatepequez
10. Los Mixcos, Palencia, Guatemala
11. Los Tecomates, Palencia, Guatemala
12. Sta. Cruz, Balamya, Chimaltenango
13. Pixtup-Chitatul, El Quiche
14. La Puerta, Chitatul, El Quiche
15. Tecun Uman, La Nueva Barcena, Guatemala
16. San Jose del Golfo, Guatemala
17. San Felipe de Jesus, Antigua, Guatemala

ANNEX 3

COMPOSITE RESULTS OF INTERVIEWS WITH NORMAL SCHOOL STUDENTS AT SANTA LUCIA UTATLAN AND MONJAS

COMENTARIO ESTUDIANTIL DE SANTA LUCIA Y MONJAS

¿ESTA RECIBIENDO CAPACITACION EN ESTA ESCUELA SOBRE LA UTILIZACION DE LOS METODOS DE RESOLUCION DE PROBLEMAS Y TECNICA INTEGRADORA PARA APLICARLO EN ESCUELAS PRIMARIAS?

Sí, están recibiendo capacitación para desarrollar el método de resolución de problemas y técnica integradora a través de un curso teniendo como auxiliar las guías curriculares, y de proyectar los conocimientos a las escuelas primarias sin hacer uso de las técnicas tradicionales. Por lo general, la capacitación no la reciben de todos los profesores y solamente se los imparten en el séptimo semestre; por lo cual, algunos no se sienten satisfechos con lo aprendido en los pequeños proyectos que han realizado durante este tiempo no es suficiente para aplicarlo en un 100% sino sólo de un 60 a un 75% en las escuelas primarias.

¿HASTA QUE PUNTO SUS CATEDRATICOS ESTAN APLICANDO ESTA METODOLOGIA EN EL DESARROLLO DE SUS PROGRAMAS?

Se están aplicando este tipo de metodología en una mínima parte, ya que solamente se los imparten del quinto al octavo semestre; además, hay catedráticos específicos en la enseñanza y desarrollo de esta metodología, pero no todos los catedráticos se preocupan en desarrollarlos algunos usan todavía técnicas tradicionales; pero los pocos que desarrollan esta técnica si se esmeran y de ellos han aprendido no mucho pero si lo suficiente para aplicarlos en la escuela primaria; además, únicamente se desarrolla el método de resolución de problemas en el curso de desarrollo comunal y la técnica integradora sólo en artesanías, educación para el hogar y artes plásticas; así como también en la práctica docente.

¿HASTA QUE GRADO CONSIDERA USTED QUE ESTE TIPO DE METODOLOGIA PUEDE MEJORAR UNA ESCUELA O UNA COMUNIDAD?

Se puede considerar hasta un grado bastante aceptable dependiendo el énfasis que el maestro le dé y de los recursos con que la comunidad cuente, para ayudarlo a desarrollar cultural, social y educativamente, dependiendo al tipo de necesidades y de proyectos de la comunidad; así también como la colaboración de la misma comunidad, a la forma de aplicación, al grado de capacidad, entusiasmo e interés de los educadores, así como también los miembros de la comunidad; así el niño a través de esta metodología no sólo aprende teoría sino también lo práctico, siempre y cuando se oriente debidamente al magisterio en general para la aplicación efectiva del método y que haya una supervisión constante y consciente por parte de los supervisores.

¿QUE RECOMIENDA USTED PARA MEJORAR EL SISTEMA DE ENSEÑANZA-APRENDIZAJE QUE PROPORCIONA LA ESCUELA NORMAL REGIONAL?

Que todos los maestros estén deibdamente capacitados para el desarrollo de cierta metodología y que haya un maestro específico y consciente por materia para cumplir con eficiencia la filosoffa de la escuela y que sea supervisado contantemente para que el proceso enseñanza-aprendizaje sea efectivo; además, que todos los maestros que imparten las didácticas hagan énfasis en la aplicación de los métodos de resolución de problemas y técnica integradora, que realicen un proyecto como ejemplo para tener una idea bien clara acerca del método, agregar otros contenidos adecuados, prolongar el tiempo para la realización de la práctica preparatoria para poder conocer los problemas de la escuela y la comunidad.

¿LE HAN PROPORCIONADO MATERIAL DIDACTICO RELACIONADO A LA METODOLOGIA DE PROYECTOS TECNICA INTEGRADORA Y RESOLUCION DE PROBLEMAS? COMENTARIOS.

Definitivamente no, y si se los proporcionan se los dan de una forma muy limitada y la mayor parte la misma naturaleza les proporciona, de acuerdo al conocimiento del uso adecuado de los recursos naturales. Conocen algunos documentos, también las guías curriculares pero se puede decir que en una mínima parte, consideran necesario que se les proporcione material didáctico para faiclitar el trabajo docente.

ANNEX 4

FIVE-YEAR PLACEMENT RECORD OF GRADUATES OF THE NORMAL SCHOOL AT SANTA LUCIA UTATLAN

DATOS ESTADISTICOS DE ALUMNOS EGRESADOS DE LA ESCUELA NORMAL DE STA. LUCIA UTATLAN Y NOMBRADOS POR EL MINISTERIO DE EDUCACION

	Primera Promoción		Segunda Promoción		Tercera Promoción		Cuarta Promoción		Quinta Promoción	
	1978		1979		1980		1981		1982	
	No.	%	No.	%	No.	%	No.	%	No.	%
1. Número total de inscritos.	90		92		93		92		94	
2. Número total de graduados.	79	88%	80	87%	76	82%	66	72%	62	66%
3. Ubicados y en servicio hasta agosto / 1983.	67	85%	20	25%	8	11%	12	18%	4	6%
4. Ubicados correctamente en el área lingüística adecuada.	38	48%	17	85%	8	100%	12	100%	4	100%
5. No ubicados hasta agosto / 1983.	12	15%	60	75%	68	89%	54	82%	58	94%
6. Ubicados incorrectamente (el maestro no conoce el idioma de los niños monolingues de idioma indígena o de habla española).	29	37%	3	15%	0.0	0.0%	0.0	0.0%	0.0	0.0%
7. Total no ubicado o mal ubicado.	41	52%	63	79%	68	89%	54	82%	58	94%