

A.I.D. EVALUATION SUMMARY - PART I

74005

- 1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
- 2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE

IDENTIFICATION DATA

<p>A. Reporting A.I.D. Unit:</p> <p>Mission or AID/W Office <u>Education & Training</u> (ES# _____)</p>	<p>B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?</p> <p>Yes <input checked="" type="checkbox"/> Slipped <input type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY 85 Q 2</p>	<p>C. Evaluation Timing</p> <p>Interim <input type="checkbox"/> Final <input checked="" type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/></p>
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D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
519-0295	Education System Revitalization	1985	12/90	\$37,600	\$37,600

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director Action(s) Required	Name of Officer Responsible for Action	Date Action to be Completed
1. Advise the MOE to dissolve the semi-autonomous separate project management unit and absorb appropriate employees from the unit into regular Ministry Offices.	Patsy Layne	06/30/90
2. Develop a new project designed to build on achievements and capitalize on lessons learned from this project in regards to relevance and quality of basic education.	Patsy Layne Maureen Dugan Claude Boyd	07/31/90
3. Enter into a policy dialogue with the GOES on matters relating to MOE management, systems, policies, objectives etc., which will encourage the MOE to take steps to improve its institutional capabilities.	Patsy Layne USAID Managmt.	07/01/90 (ongoing)

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: (Month) 9 (Day) 12 (Year) 89

G. Approvals of Evaluation Summary And Action Decisions:

	Project/Program Officer <i>Patsy Layne</i> Patsy Layne, OET Claude Boyd, OET	Representative of Borrower/Grantor Cecilia de Cano Minister of Educ.	Evaluation Officer Karen Freeman, DPP	Mission or AID/W Office Director John Sanbrailo Mission Director
Name (Typed)				
Signature	<i>Cecilia de Cano</i>	<i>John Sanbrailo</i>	<i>Karen Freeman</i>	<i>John Sanbrailo</i>

ABSTRACT

1. Evaluation Abstract (Do not exceed the space provided)

When the Educational System Revitalization Project was designed in 1984, the primary U.S. policy interest in El Salvador was to support consolidation of the democratic government. The purpose of the Project was to assist the Government of El Salvador to restore effectiveness and accessibility of its primary educational services to near pre-conflict levels. The Project was implemented by the Ministry of Education (MOE) with substantial assistance from two A.I.D. contractors. This final evaluation was conducted in 1989 by the Institute for International Research with a team composed of U.S. and Salvadoran professionals and the participation of seven full time senior Ministry of Education (MOE) officials assisted by a Salvadoran support staff. The evaluation team visited schools nationwide to measure accomplishment and impact, and determine lessons learned from design and implementation. Principal findings and conclusions are:

- o All Project accessibility targets were met: 2,800 classrooms were constructed new or reconstructed; 3,800 were furnished with desks and equipment; in-service training was provided to 15,000 teachers; tool kits were distributed to 2,255 communities and training provided to 2,777 schools and 1,100 community leaders; more than 3.5 million textbooks printed with World Bank funds were distributed and teachers trained in their use under the 0295 Project; and teachers were trained in their use. Nevertheless, at PACD the educational system was not employing standardized achievement testing to determine effectiveness of primary education, so the stated purpose of the Project in regards to improving effectiveness was not measurable.
- o Support systems for teachers and communities need to be strengthened if the existing primary school resources are to yield a full return to achieve all Project purposes, including effectiveness.
- o Considering the investment of time and funding required for institution building, vis-a-vis the emergency situation in El Salvador, the Mission and the Ministry of Education made a conscious decision to give first priority to restoring education access and to achieving immediate impact on the classroom (through provision of materials and teacher training) rather than to strengthening the Ministry of Education. Accordingly, Project management and procurement were organized to favor expeditious implementation over institution building. However, many individuals within the MOE gained expertise through experience with the Project, and buildings and equipment were provided at national and regional MOE centers.

C O S T S

Evaluation Costs

1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Professionals, Institute for Intl. Research	Affiliation	PDC-1109-I-00 7120-00, Delivery Order No. 18	\$112,354	Project 519-0295
Professionals, Ministry of Education		N/A	\$10,000 (210 W/D)	Counterpart from 0295 Project Staff
MOE employees plus support staff		N/A	\$3,000 (90 W/D)	Counterpart
Region/Office Professional Staff Person-Days (Estimate) <u>15</u>		3. Borrower/Grantee Professional Staff Person-Days Estimate:		

A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)

Address the following items:

- | | |
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| <ul style="list-style-type: none"> • Purpose of evaluation and methodology used • Purpose of activity(ies) evaluated • Findings and conclusions (relate to questions) | <ul style="list-style-type: none"> • Principal recommendations • Lessons learned |
|--|--|

Mission or Office: Education and Training	Date This Summary Prepared: May , 1991	Title And Date Of Full Evaluation Report: Evaluation: Education System Revitalization Project
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PROJECT PURPOSE AND DESCRIPTION: When this Project was authorized in 1984, the educational system in El Salvador was in a state of ruin after more than five years of civil conflict. The purpose of the Project was to assist the Government of El Salvador to restore the effectiveness and accessibility of its primary educational services (in grades 1 through 6) to near pre-conflict levels when it was considered one of the best in the region.

The Project focussed on: (1) construction or reconstruction and repair of classrooms; (2) establishment of a preventive maintenance system for schools, which would depend largely on mobilization of community support; (3) furnishing of the Project classrooms plus another 1,000; (4) in service training for teachers; (5) printing and distribution of texts; and (6) training of teachers in textbook use.

Construction and major renovations were to be carried out by private contractors, and minor repairs assigned to the Directorate of Construction and Maintenance (DCM), a permanent unit within the Directorate of Education and Maintenance (MOE) assigned to the Project's administration unit (APRE), a semi-autonomous, temporary unit established within the Ministry of Education (MOE) to manage and coordinate Project activities. In the interest of rapid implementation, major construction, procurement and some training were handled by two A.I.D. contractors. The component for school maintenance was designed to involve direct participation of the communities to motivate school directors, teachers, students and parents to assume responsibility for preventive maintenance of the schools. Activities included training for supervisors, teachers and community leaders on performance of basic maintenance requirements to be reinforced by providing each school with an illustrated basic repair instructions manual and tool kit. Procurement of school furniture, included desks for 152,000 students and 3,800 teachers, equipment such as blackboards, storage cabinets, and such basic supplies as chalk, pencils and notebooks. As originally designed, printing and distribution of a new series of textbooks and teaching guides for primary schools would be developed with World Bank support and the Project would provide in-service training for teachers in use of the texts. Fortunately, the IBRD project completely covered printing and purchase of the 3.5 million books, leaving Project funds available exclusively for training.

PURPOSE OF THE EVALUATION AND METHODOLOGY: The purpose of this final evaluation was to measure Project accomplishments and impact and determine lessons learned. The evaluation was carried out by the Institute for International Research during a one-month period. The 22 member evaluation team consisted of seven U.S. and eight Salvadoran professionals contracted by the Institute, plus the full-time participation of seven senior officials from the Ministry of Education and part-time support staff. Field research and data collection was carried out by four functional groups in teaching, school administration, school construction and community development. The teams visited over 130 schools selected at random nationwide, excluding only areas in active conflict. Data was collected by interviewing officials of participating government agencies, contractors, school administrators, teachers, students, parents and community members.

S U M M A R Y (Continued)

FINDINGS AND CONCLUSIONS: APRE, the temporary, semi-autonomous Project administration unit, was assigned a vaguely defined "coordinating" role, which left much of the responsibility for Project implementation to the MOE, and the two AID contractors. After a disastrous first two years, however, most implementation functions gravitated to APRE, and from APRE to the AID contractor for construction.

Output targets (classrooms, equipment, textbooks, manuals, and teacher training) were met or exceeded within budget and before the PACD implementation. After a slow start, the construction/renovation/repair elements of the first component concluded at an accelerated rate, due in part to contracting management of the construction component with the University of New Mexico (UNM), and the innovative modified FAR (Fixed Amount Reimbursable) contract award system developed by the UNM supervising engineer, permitting the selection of private contractors from a pool of pre-qualified firms which greatly reduced the possibility of corruption and greatly accelerated the contracting process. .

System-wide corrective maintenance activities were implemented by the DCM taking maximum advantage of the DCM's technical potential in design, construction and supervision and in selection, qualification, budgeting and contracting of small community based construction firms designated "microbusinesses." These microbusinesses were composed of members within the community who joined together to carry out low cost minor repair and construction projects (1,200 classrooms in 300 schools). The DCM's role was to select the beneficiary schools and elaborate the design and budget specifications. Although not implemented strictly as set forth in the Agreement, significant achievements were obtained, namely: The DCM placed at the UNM's disposal a group of around 50 MOE professionals, from engineers and architects to master craftsmen and journeymen, for training in corrective maintenance techniques developed by the University; and the "microbusiness" system allowed the program to extend its benefits to include community members in the contracting of minor repairs for the schools. Although established late in the Project, collaboration between the UNM, APRE and the DCM and the community groups which formed the "microbusinesses" was an important Project accomplishment.

The basic tool kits, which were distributed to participating communities, were determined to be the most effective element of the preventive maintenance program. This pilot program was designed to test the feasibility and effectiveness of a community-based strategy, which, if effective would be expanded. Although distribution of the kits motivated communities to carry out school maintenance, substantial further investment will be required to establish the concept of community-based preventive maintenance in El Salvador. The program was basically successful with 85% of the targeted schools performing preventive maintenance and 88% of schools that received tool kits using them to some degree; however, only 60% of the targeted schools had received the accompanying basic repair manuals and not all were using them properly. The effectiveness of the training and manuals was hampered by poor communication and lack of follow-up due to budget constraints. (More than 97% of the MOE budget is earmarked for teacher salaries, with inadequate funding for supervision, follow-on training, maintenance and materials.)

During the first years of the project the procurement function for school furniture, equipment, and supplies was carried out by RONCO, the AID procurement contractor, whose extensive use and training of private sector Salvadoran counterparts was laudable. However, although RONCO met all numerical targets, confining the procurement to a contractor denied the MOE a chance to develop the important procurement capability. Later in the project procurement was carried out by the UNM Contractor team in collaboration with the APRE Special Management Unit. At the end of the project eight key APRE staff were absorbed into the Ministry of Education where they are applying the experience gained by APRE in delivery of furniture, equipment, and supplies, as well as in accounting and project management.

The World Bank (IBRD) collaborated with the MOE in the preparation and publication of textbooks. APRE distributed the texts and provided training in their use text to virtually all teachers who would be using them, however, too many schools were found where books were stored rather than used due to teacher concern for loss or damage of "accountable assets." And, although 80% of teachers interviewed said that they were using the texts, a majority of school directors felt that teacher performance had not improved significantly because of the texts and training. Also, the distribution and training systems took so long to develop there was no time to measure impact. Follow-up is needed to establish proper textbook use, teacher counseling and supervision. Teachers need assurances from the MOE that their performance will be judged favorably rather than negatively by wear and tear on textbooks.

PRINCIPAL RECOMMENDATIONS:

- In view of AID's substantial investment already, AID should consider follow-up financing to consolidate and build on Project achievements in order to improve the quality and effectiveness of primary education.
- Separate project management units should be avoided unless the short-term advantages of the situation outweigh the long-term disadvantages, as was the case with this project.
- AID and the GOES should take further measures to establish and support textbook use, including: stronger training with more teacher input, counseling and supervision at the regional level, clear-cut MOE policy encouraging maximum use of textbooks and eliminating teacher liability for lost and damaged books, and assurance of textbook availability in the future.
- The GOES should take measures to consolidate and strengthen community-based preventive maintenance systems by distributing more tool kits, carrying out more training and improving and integrating the manuals into all types of training. Follow-up capability should be strengthened.

LESSONS LEARNED:

- The long-term institutional goals of this Project were sacrificed to the immediate achievement of education access targets. Project designers and implementors need to consider the consequences and relative importance of emphasizing achievement of targets that meet immediate needs over longer term development objectives.
- The active involvement of the MOE in all aspects of the evaluation, especially in the implementation phase, was an important element in obtaining their commitments to address the shortcomings noted in the evaluation findings.

- The tool kits, manuals and textbooks were all provided without adequate training and follow-up to ensure proper and sustained use. Project designers need to consider provision of adequate training, and follow-up along with commodities, equipment or new technologies which are made available to Project implementors and beneficiaries. Planners underestimated the effort required to develop new behavioral patterns, especially when they run counter to cultural patterns. Secondly, coverage was emphasized and project time constraints prohibited necessary pilot-testing as well as follow-on and budget support.

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EVALUATION REPORT: EDUCATION SYSTEM REVITALIZATION PROJECT
No. 519-0295

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

This was an end-of-project evaluation and was completed satisfactorily, meeting the scope-of-work. The Mission was very pleased with the evaluation process, which involved local higher education institutions and key Ministry of Education staff in the data collection, giving them the opportunity of getting to know their own system, and laying the groundwork for more meaningful planning and project management on the part of the MOE. In general, USAID/El Salvador concurs with the findings as stated in the report:

- (1) The project initially had a troublesome and non-productive couple of years.
- (2) Following the first interim evaluation, changes were made in contractor TA team management and implementation procedures. The project, while not without problems, proceeded with increasing effectiveness and more than achieved its purposes.

The evaluators reported that the project succeeded in meeting the targets at the cost of institution building. The Mission agrees that this project did not substantially strengthen the Ministry of Education as an institution, which was noted several times as a negative comment in the evaluation report. However, the Mission comment is that institution building was not the priority for this project. The project was to respond to the emergency situation in El Salvador by getting as many classrooms into use as possible, buying and repairing desks, distributing textbooks, and orienting teachers to their use. As a concomitant to implementing the project, however, the MOE as an institution was strengthened. Many key staff were trained, and also benefitted from practical experience and on-the-job training, working with the implementation contractor TA team.

The evaluation report also points out that there were personality and communication problems among AID and implementation contractor team staff. However, in spite of reportedly acrimonious interchanges and breakdowns in communication that appear to have occurred among key personnel, the job was completed successfully, providing classrooms for an additional 120,000 primary age children, desks for an additional 40,000 and texts and training to 15,000 classrooms. The Mission recognizes the high quality of work, and dedication of the UNM Technical Advisory Team, which on the whole, performed in an exemplary fashion under difficult circumstances.

A third moot point is the advisability of creating a special management unit, or any other ancillary entity specifically for the purpose of carrying out a project. Conventional AID wisdom is that this is not a good thing, since it lessens the pressure to accomplish project objectives by working through and presumably strengthening the parent institution. The evaluation team notes several times in the report that creating the APRE unit was not a good thing, since at the end of the project, that unit no longer existed. However, Mission view is that the creation of that unit was essential to successful accomplishment of this project's purpose...to get 120,000 more children back into school as soon as possible. The first interim evaluation indicated that the project was in serious trouble and recommended that some such measure be taken. The Mission believes that correct decisions were made in that regard.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

Any Mission planning a project must weigh the need for immediate impact against the cost in time and money that is often required when working through existing Ministry channels, with existing staff and procedures, giving as much weight to institution building as to the accomplishment of the target goals...in this case quickly getting the school system to functioning at near pre-war levels. In some cases, as we are convinced was the case in El Salvador, the emergency nature of the need outweighs other considerations.

The decision of whether to create a special management unit must be decided on a case by case basis, in the view of USAID/El Salvador.

An important lesson for project designers is that behavior change requires significant investments over time. Training and persuasion must be followed by reinforcement over an extended period of time. One-shot training and provision of materials will not produce sustained changes in behavior patterns. Community groups needed follow-on visits, rewards, and recognition for exemplary implementation in school maintenance, the opportunity to share ideas with other communities, and refresher courses.

The Mission's current basic education project builds on this project, reinforcing skills previously introduced and introducing new skills in parent participation and cooperation.

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EVALUATION
EDUCATION SYSTEM REVITALIZATION PROJECT
No. 519-0295

TO: Office of Education and Training
USAID/El Salvador

Prepared by The Institute for International Research
under provisions of Indefinite Quantity Contract No. PDC-1109-1-00-7120-00
Delivery Order No. 18

April 25, 1990

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EVALUATION

EDUCATION SYSTEM REVITALIZATION PROJECT 0295

ACKNOWLEDGEMENT

The people, mostly Salvadoran teachers, students, administrators and community members, who contributed to the evaluation are far too numerous to mention. Our particular thanks, however, go to the Vice Minister of Education, Sra. Cecilia De Cano, for contributing generously the time and energy of herself as well as the seven senior members of her staff who served full time on the evaluation team, and to Mel Chatman of USAID/El Salvador who likewise gave full commitment of his time and energy to the design and implementation of this evaluation, and without whose complete support it would not have been feasible.

DICTIONARY OF ACRONYMS

AID	United States Agency for International Development
APRE	Administración del Proyecto de Revitalización Educativa (Education Revitalization Project Administration)
CASALCO	Cámara Salvadoreña de la Construcción (Salvador Association of Construction Firms)
CONARA	Comisión Nacional de Reforma Agraria (National Commission for Agrarian Reform)
DCM	Dirección de Construcción y Mantenimiento (Construction and Maintenance Division of MOE)
DIIE	Directorate of Infrastructure and Educational Information (of MOE)
GOES	Government of El Salvador
IBRD World Bank)	International Bank for Reconstruction and Development (The World Bank)
MOE	Ministry of Education
ODEPOR	Oficina de Planeamiento y Organización Regional (Regional Planning and Organization Office)
PACD	Project Activity Completion Date
PIL	Project Implementation Letter
PLANALIBRE	National Schoolbook Program (of MOE)
PP	AID Project Paper
PPMS	Program for Preparation of In-Service Teachers (of MOE)
RONCO	A private U.S. procurement service firm
SETEFE financing	GOES Finance Ministry office for coordination of foreign financing
UNESCO	United Nations Educational and Scientific Organization
UNM	University of New Mexico
USAID/ES or USAID	AID Mission to El Salvador
USIA	United States Information Agency

were lacking for distribution and teacher training; funds for school desks, equipment and supplies were also scarce.

The project design focussed on: construction of reconstruction of 2,800 classrooms; establishing a school maintenance system which depended largely on mobilization of community support; furnishing of the 2,800 classrooms plus 1,000 more; and printing and distribution of texts, and training teachers in their use.

The project design included a project implementation unit attached to the Ministry of Education, but with better qualified and better paid staff than was feasible under regular GOES auspices and separated from the GOES bureaucracy. In the interest of rapid implementation, all equipment procurement was to be handled directly by AID and all construction by private firms.

The inter-agency cooperation allowed starts and defaulting or disappointing contractor performance. Evaluation results indicated a large measure of the strength of the implementation, and the need for improving coordination among implementation agencies.

PRINCIPAL FINDINGS AND CONCLUSIONS

Response to Interim Evaluation: The response to the interim evaluation was indeed, rather than reduce the ambitious construction targets, as was recommended in the interim evaluation, the original targets were met on schedule. The recommendation to distribute furniture to project schools received excessive emphasis, sometimes for reasons unrelated to the project. For preventative maintenance, the decision was made to emphasize the role of communities over regional MOE offices. APRE staff was substantially strengthened. Implementation letters programmed PL480 local currencies for specific project activities.

Although there was substantial improvement in implementation planning, the response to recommendations to improve cooperation and coordination among implementing agencies was less than satisfactory. Similarly, recommendations directed at training in project administration and otherwise maximizing project experience and expertise left behind by expatriate contractors were not fully responded to. Consequently, institutional development suffered significantly. The automation of MOE management information systems has not progressed well, but this was scheduled for increased emphasis during the project extension period.

A more detailed summary of the response to the interim evaluation recommendations is contained in Annex 3.

Compliance With Project Contracts and Agreements: This evaluation is not a compliance audit. Overall, we were much impressed by obvious efforts in project implementation to keep project documentation and practice in conformity with each other. RONCO's procurement performance, in particular, appears to have been exemplary. While we heard the usual complaints of delay in contract processing, they did not relate to failure to provide resources.

Impact Relative to Effectiveness and Accessibility: In terms of schoolrooms and their furnishings, maintenance tool kits, text books, equipment and supplies, the project produced results that were substantial, nationwide and on schedule.

Lot.

Through outstanding efforts by many people in the various implementing agencies, ~~all numerical objectives were achieved or exceeded.~~

However, the project agreement and authorization defined the purpose of the project as helping to restore the effectiveness and accessibility of Salvadoran primary education to preconflict levels. The Salvadoran education system has not employed standardized achievement testing to determine its effectiveness. As to access, the conflict has enforced massive migration of populations toward urban areas from rural zones of conflict. ~~We have difficulty, therefore, in comparing the current status with pre-conflict levels.~~

The construction of 400 new classrooms and rehabilitation of 2418 others, has gone far toward assuring that no student is denied access for lack of school rooms. Our random sampling of both urban and rural schools disclosed no schools at which students had to be turned away for lack of facilities. We did, however, find some schoolrooms in disuse for lack of teachers.

As to effectiveness, in the absence of objective test results, our impression of teacher performance was favorable. Classes averaging 45 students per room approximate historical ratios in El Salvador. Teachers have probably never had stronger logistical support with educational materials, furniture and supplies than they have enjoyed under the project.

Textbook distribution and teacher training systems took so long to develop that there has been little time for measurable impact. Similarly the community based preventive maintenance program has been so recently activated, that their effect on education effectiveness cannot be objectively measured.

~~We doubt whether either program will have its intended impact without substantial~~ Training in textbook use reached most teachers, but without adequate depth. For preventive maintenance, most eligible schools were reached with the combination of tool kits and training and the tool kits have had significant impact. However, the preventive maintenance training has had only a limited multiplier effect because of poor communication within the schools and weak linkages with the communities. The preventive maintenance manuals were not used effectively during training and not distributed widely after training. Both the textbook and preventive maintenance components suffer from the generally ~~inadequate supervision and follow-through within the primary educational system.~~

More Effective Use of Existing Resources: The project investment in new and rehabilitated school rooms, textbooks and maintenance tools, and training for their use, are now joined with other Salvadoran education investments. These investments will only yield their full return if systems for support and supervision of teachers and communities trying to use the new resources are improved. This requires policy measures in professionalization, training of supervisory level personnel, and reform of the administrative system and structure to permit higher compensation for fewer but adequate numbers of personnel.

While the project provided for construction of three regional headquarters to support decentralized administration of the education system, ~~excessive numbers of~~ ~~regional headquarters.~~ Effective decentralization and greater efficiency in management has yet to be accomplished.

For supervisors to be effective, they must be mobile, which requires adequate field expenses, vehicles and maintenance expenses. The textbook content and training suffered from a lack of field input; decentralized supervisory systems should include adequate provision for feedback. The project provided for an automated management information system; much work remains to convert hardware, software and training into effective systems for managing human and material resources effectively.

Project Management and Procurement Structures and Procedures: A private U.S. procurement firm, RONCO, was contracted to procure all school furnishings, equipment and supplies. At AID's insistence, RONCO hired Salvadorans and developed and drew heavily on their capabilities for in-country procurement especially, thus building procurement competence in the Salvadoran private sector, if not in the Ministry of Education.

The University of New Mexico was contracted to provide the technical advisory services for training teachers in textbook use and school and community personnel in preventive maintenance. Eventually the contract was amended to include architectural and engineering oversight for the schoolroom construction and rehabilitation, as well.

A new Salvadoran agency, APRE, within the Ministry of Education, was established to administer the project. Authorized to compensate staff at levels substantially higher than the Ministry of Education, APRE attracted higher calibre staff from MOE on detail as well as from the private sector.

Project management and procurement was organized to favor quantity and speed of project implementation over institution building in the Salvadoran education system. The extent to which the Ministry of Education was cut out of project implementation increased as the project advanced. APRE experienced substantial growing pains, but as its capacity and that of UNM in the field grew, project implementation roles gravitated increasingly toward those two entities, particularly UNM, at the expense of the MOE. APRE was particularly successful in building a capable organization and system for distribution of equipment and supplies to the schools.

Frustrated by slow and cumbersome Salvadoran construction bidding procedures, a new procedure for selection by lot among prequalified contractors, the price to be determined by supervising engineer estimates, was developed by UNM. ~~This procedure became a major construction logic and was instrumental in the timely and generally satisfactory achievement of project construction and reconstruction targets.~~

UNM and APRE collaborated on an impressive system for computerized monitoring of construction progress, which significantly facilitated prompt accurate reporting and strong management oversight of construction activities.

At the same time, the morale and performance of UNM field staff might have been improved by more delegation of authority to the field. Many matters were referred to Albuquerque for decision, or by-passed the UNM field staff completely. UNM's substantial field presence might have been used to improve communications with USAID/El Salvador, and thus minimize tension and misunderstanding between the two institutions.

Design and Implementation Lessons Learned: The project demonstrated that ambitious numerical targets can be achieved when sufficient priority is given to production and speed. But the price of this strategy was a consequent loss of ~~institutional development~~. The MOE, if anything, lost implementation capability by establishment of the special implementation unit. APRE absorbed many of the MOE's best people on detail and was destined to disappear or substantially disband at the end of the project, with its staff reluctant to join or rejoin the MOE because they had become accustomed to substantially higher salary levels.

Project experience further indicated that universities perform more effectively in advisory rather than ~~operational~~ roles. The relative success of UNM in construction supervision derived more from the strengths of individuals than from the institution. In other instances, UNM experienced considerable difficulty in providing strong management for the heavy operational responsibilities assumed under its contract.

Although there has been scant opportunity to test the reliability and sustainability of community based systems organized and equipped under the project, we commend the emphasis on community involvement in school maintenance. We were impressed by the capability and interest in the communities, and believe that careful ~~monitoring~~ will prove the cost-effectiveness of such a system.

PRINCIPAL RECOMMENDATIONS

Construction: While we do not recommend continued emphasis on new construction for the MOE, the GOES should continue to reform the construction contracting system to expedite process and reduce vulnerability to nontechnical considerations.

Preventive Maintenance: The GOES, with USAID assistance, should take further measures to consolidate and strengthen community-based preventive maintenance systems. These measures should include further tool distribution, incorporation of a practical training component, extension of the training program to include teachers as well as school directors, and many more community leaders. The manuals should be integrated into all types of training and distributed to all trainees and to the parents associations. Follow-up capability should be strengthened by providing more personnel and resources.

Textbooks: The GOES should take further measures to establish and support textbook use in the system. Such measures would include deeper training with more teacher input in textbook and training content, counseling and supervision at the regional level, clear cut MOE policy encouraging maximum use of textbooks and eliminating teacher liability for lost and damaged books, and assurance of textbook availability in the future.

~~Against the backdrop of AID's substantial investment already in this activity, AID should consider follow-up financing to realize a higher level of returns.~~ ✕

Administration: For future projects, AID and the GOES should be leery of separate project management units unless the situation be such that the advantages thereof over the short term clearly outweigh the long term disadvantages.

**EVALUATION
EDUCATION SYSTEM REVITALIZATION PROJECT 0295**

I. INTRODUCTION

A. BACKGROUND

Before wrecked by civil strife starting about 1979, El Salvador's education system was considered among the better in the region. With the onset of hostilities, school buildings were destroyed or suffered deterioration from lack of maintenance, teachers and administrators as well as students and their families fled the zones of conflict, and budgetary resources were directed toward the military ahead of education. The education budget as a percentage of the national budget dropped from 21% in 1978 to 16.8% in 1983¹, and dropped in real terms by 55% over that period.

In 1984 the US National Bipartisan Commission on Central America noted the importance of reform to improve access to and quality of education. Constraints identified for special attention included inadequate physical facilities, lack of adequate texts and teacher guides, and training in the use of texts and educational materials.

In responding to the Commission's mandate in El Salvador, AID was not plowing completely new ground. Previously AID had supported a Rural Primary School Program during the years 1979 to 1984. Also the World Bank had under way a \$23.3 million loan for school rooms, texts, and curriculum reform.

B. PROJECT DESCRIPTION

The project attempted to address educational access and quality problems throughout El Salvador with four basic components. The first component included repair and reconstruction of approximately 2,400 classrooms and construction of 400 new classrooms. Factors determining priority among schools included the number of new enrollees to be anticipated and relative state of disrepair as determined by baseline survey, with preference given to marginal urban areas and "Phase 1" agricultural reform cooperatives. Construction and major renovation were to be performed by private contractors, with minor repairs assigned to the Ministry of Education's Directorate of Construction and Maintenance.

The second component, for school maintenance, was to directly involve the schools, their teachers and directors, their students and their parents, and their communities in general, in assuming responsibility for preventive maintenance of the schools. Supporting activities included training for supervisors, teachers and community leaders, accompanied by manuals on how to perform such maintenance, and kits of basic manual tools to be provided to each school.

¹ Such decline has continued to a current level of 13%.

- 1 -

The third component provided for purchase of school furniture, equipment, and supplies, including school desks for 152,000 students and 3,800 teachers, along with blackboards, storage cabinets, etc., even such basic supplies as chalk, pencils, and notebooks. First priority went to schools constructed or renovated under the project, with additional equipment sufficient for approximately 1,000 other classrooms. The total represented nearly 30% of total primary school classrooms.

As originally contemplated, the fourth component, for textbooks, including printing as well as dissemination of a new series of textbooks and-teaching guides for primary schools developed with World Bank support under the National School Book Program (PLANALIBRE). The project component also included in-service training for 15,000 teachers in use of the new texts. Ultimately, publication of all necessary books having been covered within the World Bank financed project, this component was changed to make the funds previously programmed for publication available for training of teachers in the use of the books.

Identified as a fifth component in project documentation was provision for project administration and management. This contemplated establishment of a special management unit "responsible for the management and coordination of project activities." Further description of the initial concept of this unit and its subsequent evolution during the course of the project is detailed infra at Section V.

C. INTERIM EVALUATION

In July 1987, the interim project evaluation reported a classic case of Murphy's Law at work. Virtually anything that could have gone wrong had gone wrong during the first two years of the project. The only exception, and the one component even close to schedule, was the equipment procurement handled directly by AID through a U.S. purchasing services agent named RONCO.

Otherwise, in the area of schoolroom construction, bids had been let and then recalled, the contractor initially retained for baseline studies had failed to perform, the contract then cancelled. Subsequently another contractor had to be discharged for failure of performance. The implementation unit had been established, but, for a variety of reasons including lack of role definition and lack of staff, had not been significantly effective in the implementation of the project.

Among principal recommendations of the evaluation were:

- 1) Reduce the number of classrooms for reconstruction to a figure more realistically feasible within the project implementation period.
- 2) Re-examine the roles of regional offices relative to the communities in devising a more realistic plan for institutionalizing school maintenance.
- 3) Prepare a management plan for the special management unit addressing

requirements of technical components and provide needed additional staff, including a procedural expediter.

- 4) Amend the project agreement to allocate PL480 counterpart contributions to specific project activities, such allocation to reflect comparative advantage of such funds relative to grant funds for certain uses.
- 5) APRE, SETEFE and USAID to revise the project action plan format to:
 - a) integrate the five component plans into one document,
 - b) tie disbursements to detailed component action plans, and
 - c) establish a more agile action plan amendment procedure.
- 6) Provide joint training programs to APRE, MOE and SETEFE toward collaborative improvement of project administration including construction contracting and procurement, planning, budgeting, reporting, etc.
- 7) Further foster collaborative implementation and deepen institution-building impact through semiannual workshops for implementing agencies to address jointly project implementation problems.
- 8) Require AID contractors to provide technical assistance and in-service training to appropriate personnel of Salvadoran implementing agencies.
- 9) Integrate the planned management information system with the existing MOE information base and include data capture and preliminary processing at the regional and sub-regional level.
- 10) Accelerate distribution of school furniture, equipment and supplies to existing schools according to priorities to be determined without awaiting completion of project funded schoolroom construction.

The conclusions and recommendations of the interim evaluation were directed primarily at project management since the action components of the project had not progressed sufficiently to provide a basis for many observations thereon.

II. CONSTRUCTION AND MAINTENANCE OF SCHOOLS

A. CONSTRUCTION, RECONSTRUCTION AND REPAIR

Summary of Findings and Conclusions

After the extremely slow start reported in the interim evaluation, the construction/reconstruction/repair elements of the project concluded with a fast finish, substantially achieving or exceeding project targets in all significant aspects within project budget and before project completion date. Four hundred new schoolrooms were constructed and 2418 repaired or reconstructed. Because of the way the job was done, however, there was not much institution/system building development impact on the MOE, or even APRE, in management of construction.

Responsibility for management of the construction component was contracted to the University of New Mexico (UNM) which proceeded to show what an able retired AID engineer with 18 able Salvadoran engineers could do. Due credit must also be given to the many Salvadoran firms who performed satisfactorily in carrying out the construction.

A significant innovation drawn by the UNM engineer from experience elsewhere broke a substantial logjam by speeding up and cleaning up the Salvadoran contract bidding system. The new "sorteo" system selected among prequalified firms by lot at a bid price determined by the engineer's estimate. While varying significantly from the competitive low bid among prequalified firms ordinarily used for AID contracts, the sorteo system proved to be a substantial improvement over the Salvadoran system of negotiating price with the firm selected as having the "best technical proposal".

The UNM's role did not extend to all aspects of construction contracting, however, and GOES participation in contract and payment approvals tended to consume inordinate amounts of time. The MOE generally performed adequately on prequalification of contractors. In that area, however, as in other aspects of contracting, including bidding on PL480 counterpart financed construction (in which UNM was not involved), the MOE was still subject to intervention for political and other non-technical considerations.

1. Findings

a. Design Concept

The basic design concept of component 1 was the construction of 400 classrooms and the reconstruction of another 2,400, to address the space requirements of first through sixth grades, with priority for rural areas. Construction was to be contracted by private construction firms with supervision by private engineering firms. Apart from that, program management was to be the responsibility of the DCM with coordination by APRE.

b. Design Evolution

This design concept followed a construction plan elaborated by the MOE and approved by AID. But, as reported in the interim evaluation, due to lack of organization, the October 1986 earthquake and other complications deriving from the complexity of the project itself, serious hitches developed. The construction component began to take better form when APRE took the initiative in April 1986, a year after the project began, to attack in more direct and technical form the preliminary problems of qualifying firms, inviting bids and selecting contractors. Problems developed in the contracting process, however, in selection and qualification, as well as in the selection of the supervisory firms. To streamline the program and resolve the problems encountered in the first two years, it was decided to contract a single supervisory firm to take charge of program implementation. This led to the decision to contract the University of New Mexico.

The UNM engineering team originally included a chief supervisory engineer and four other construction specialists who in turn headed a team of 34 technicians to determine the construction sites, figure costs and structure program follow-up. Subsequently, for actual execution of construction, the UNM engineering team was made up of 18 supervisory engineers, 4 analysts and 9 design architects.

The UNM engineering team took on a project two years after its inception, with whose antecedents they were unfamiliar, caught between pressures from the MOE on one hand and AID on the other. It was to be expected that, even under the best of conditions, project implementation was going to suffer from various hereditary defects which might appear at any time during its execution. Aside from this, UNM began operations depending on information from APRE until such time as it could operate independently and take technical control of the program. These difficulties were aggravated to some degree by the aggressive and authoritarian style of the UNM engineering team, which gained few sympathizers within the MOE, AID and UNM's Albuquerque home office.

Component 1 of the program, as originally designed, specifically contemplated a broader participation by the Construction and Maintenance Division ("DCM"). To perform such an active role, the DCM was to receive vehicles, tools and funds for local purchase of necessary supplies. We found no evidence that the DCM was involved to the broad extent originally contemplated. Instead the traditional technical and operative capacity of the Division was relegated to a secondary status in support of the operational roles of APRE and UNM.

c. Implementation

(1) Sub Project Planning and Design

We found complete lack of involvement of school personnel during design of the construction sub-projects.

Classrooms were constructed or repaired which today have neither teachers nor furniture and which are now being used as storerooms. We found one school in

which new three classrooms were being used for high school students and not for elementary grades.

With respect to the final decision on the sort of work to be carried out, it would have been more satisfactory had it been conceived in a more utilitarian sense as opposed to eminently technical, keeping in mind that the people who daily attend the school see or suffer the consequences of the problems. As an example, one could point out that a door without a lock can result in more physical and economic damage than a locked classroom exposed to weather.

The lack of perimeter walls (the construction of which seems to have been viewed as a luxury) has been the cause for greatest complaint. 90% of the schools had neither walls nor perimeter fences. Although walls and fences were not included in the project, the high incidence of vandalism, theft and other intrusions for improper use of the facilities make this sort of construction, though costly, an investment to be considered for future programs.

In 90% of the schools requisite importance was not given to water supply systems. Pipes were corroded and obsolete. No effort was made to provide subsurface water by wells, even the manual sort, construction of which could have been undertaken by the community. There are many such wells in the villages themselves.

We noted with concern the frequent elimination of recreation space owing to the construction of new classrooms. With few exceptions adequate recreation space was lacking. In many schools, not even the most minimal recreational conditions existed: 80% of the fields are rough ground and 90% have no recreational equipment whatsoever. Although provision of recreation space and equipment was not included in the project, it is of importance to the design and function of the school as a whole.

The arbitrary 20,000 colones per room and 50,000 colones per school ceilings on reconstruction caused substantial resentment in schools and communities whose needs were much in excess of those amounts. While the ceilings were justifiable under a policy to spread project impact nation wide, they were not adequately explained to the participating communities.

(2) Construction Contracting System

The first and most important step in streamlining the program's construction component was to change the slow and otherwise problematical contract award system to a lottery system. To this end, four categories of contractor (A, B, C and D) were established, qualified in accord with their work capacity, economic solvency, construction experience, mechanized equipment, etc. Once qualified, the companies presented themselves for the lottery drawings. This lottery system was readily accepted by the contractors. More difficult was its acceptance by the GOES, particularly the audit office, the Corte de Cuentas. After two months and numerous go-rounds, the procedure was accepted and the lottery began with the first packets covering 40 new classrooms and 270 classrooms to be reconstructed and/or repaired.

The number of classrooms making up the packets varied between 35 and 70. The duration of the contracts was programmed for 90 days to complete repair and reconstruction work and 120 days for classroom construction.

The base cost for classroom construction was 50,000 colones per classroom. The sum of 20,000 colones per school was fixed for meeting the goals of reconstruction and repair. The per classroom construction cost was originally somewhat high, but, subsequently, the effects of a 25% per year inflation reduced the effective margin to the contractor, thus balancing the cost.

These costs refer to the costs proper for construction and reconstruction of the classrooms themselves, excepting those contemplated in Section 5.22 of the Project Agreement, referring to exterior work to be paid from PL-480 funds. Because the funds originated from different accounts, the contractors' estimate system was complicated, but once payment was ordered, the computers then processed them readily enough.

Another complication which had to be faced in estimating costs and executing the work was the need to differentiate the ineligible costs of improvements and reconstruction for schools which had kindergarten and grades seven-nine classrooms. The project's exclusion of such classrooms posed special problems when these classrooms were located in the same buildings as the one-six classrooms which were included. Following extended negotiation between MOE, UNM and AID, this problem was finally resolved by compensation. Some contractors were generous enough to contribute without additional cost their work on areas of the school excluded from the contract.

The estimate process was acceptable because the estimates were adjusted to take into account the distances and degrees of difficulty involved in going from San Salvador to the work zones (road conditions, water crossings, etc.). Final values fluctuated between 39% to 46% above base cost, including a 15% minimum for utility costs, 10% for administration, 9% - 16% for material and equipment transportation costs and 5% for contingencies.

The El Salvador Association of Construction Firms (CASALCO) took an active part in the modifications of the bidding system and collaborated with the UNM in its approval, thus opening the way for its associates to go ahead with work which had been nearly paralyzed.

(3) Payment System

A satisfactory payment system was also established. Advances to the contractors were not allowed, but an initial payment equivalent to 20% of the packet's total was paid out for start-up costs. A system of penalties for delays and premiums for timely completion was created. The premium consisted of preferred status in another construction packet lottery.

The antiquated existing system of auditing and control did cause substantial delays, however. APRE would approve the estimates provided by UNM, which in turned handed them on to AID for authorization. Once returned to APRE, they

were then submitted to the Corte de Cuentas and from there to SETEFE, then returned to the Corte, and so on, respectively. A matter of a few cents attributable to rounding of long decimals could slow the entire payment process. On some occasions SETEFE's rejection of estimates for overages of this sort delayed payments by months, frustrating the contractors, UNM and AID. These nickel-and-dime considerations resulted in losses of time costing thousands of dollars.

Our interviews with contractors and responsible officials in San Salvador indicated that the delays in account payments of up to two months justified contractor work suspension and consequent failure to meet construction deadlines.

(4) Contractor Performance and Construction Supervision

There were contractors who failed to complete contracted work and obligations, but fortunately for the project, these were rare exceptions and did not substantially hinder the program.

Our site visits found numerous examples of lack of thorough and continuous supervision, with contractors left free to operate without sufficient presence of the supervising authorities. The formal delivery of the work was substantially delayed on various occasions. This situation is not surprising, however, given the magnitude of the program with respect to the number of classrooms constructed or repaired, and the wide ranging locations of the job sites within the national territory.

In general, while construction supervision suffered from some such defects, they were of such nature as to be pardonable considering the dimension of the project and its short execution time. Overall UNM and its group operated conscientiously and well satisfied reasonable expectations.

For the following observations, we emphasize that they are drawn from visual inspection of the current state of construction sites at the moment of observation. The observations below reflect comparison with the strict specification standards followed by the IBRD and AID "Alliance for Progress" programs. There was a deliberate policy decision to apply less strict specifications to this program. The factors of timing and difficult operating conditions influenced the contract specifications as well as the supervision. Also the specifications understandably varied according to the nature and amount of the investment.

(a) Classroom Construction

Foundations. Although foundations were not uncovered for an examination of their physical condition, the general absence of cracks in the walls and supporting columns indicated there were no irregularities and allowed the inference that the foundations were secure.

Walls. The finish on some 10% was found to be rough, with the remaining 90% found to have acceptable finish.

Doors. These are of laminated metal, of which 20% were of less than solid construction, but generally acceptable. The locks were defective in some 80% of the doors, primarily because of rough usage since installation. Such rough usage should be taken into consideration in future construction. Doors were found to have only one coat of anti-corrosive paint. Deficiencies were found in some 60%. Anti-corrosive finish is particularly important for the coastal zones, given the high level of airborne salt and humidity there.

Wood Folding Panels. The construction of wood panelled partitions or folding doors between rooms left much to be desired owing to their varied designs and their construction defects. The quality of the wood, the angles, wheels, guides, etc., was variable and often deficient. Some of these doors were unhinged, stored or useless. Where such failure had led to removal, the lack of the wall resulted in noises from one room interfering with activities in the other.

Windows. These are wide and of adequate height. We found lack of uniformity in the quality of screening used, which should have been "Cyclone" screen. For the price paid, however, the screening can be considered acceptable.

Floors. Owing to use, some defects in leveling and some skirting damage was found, but the quality and workmanship were adequate.

Roofs. Both the covering and ridge coping are of asbestos cement (Duralite) but are nonetheless well constructed. Current policies recommend the use of fiber-cement, which should be taken into account in future projects.

Metallic Structures. These are well designed, but with a deficient metallic paint, inappropriate for use in coastal zones. The use of wooden beams would have been advisable in coastal zones especially.

Electric Systems. 90% adequate in their installation. 10% proved deficient in the coastal zone because rust attacked the contacts, be it in the switch or the outlet. 90% of the bulbs were burned out or missing.

Exterior Painting. This was 100% adequate. Oil based paint was used on the lower part of the walls and water based on the upper.

Coordination of Construction and School Activity. Work was carried out during school hours, resulting in mutual interference among the contractors, teachers and students. In their haste to finish, some contractors showed little consideration. For example, playgrounds were used for cement mixing platforms and not cleaned after construction was complete. Teachers complained that some contractors used school furniture as scaffolding.

(b) Construction of Sanitary Services

Water. Deficiencies existed in the municipal supply systems and construction inadequacies in the existing systems, problems to which special attention

should be paid in the future. The new systems connected to the old are suffering the consequences.

Lavatories. Well constructed. All showed some design defects, such as the absence of lids, which can be corrected in the future. Overall, ventilation could have been better designed, in some cases by inclusion of windows or ventilation tubing. The filtration of effluent in the septic tank is to be checked in the future. We found one school in which the toilet facilities had been closed off because they were badly located on low ground lacking drainage.

Storm Drains. Fifty per cent of the concrete conduits were deficient; they had gradients inadequate to serve their purpose.

Waste Incinerators. 70% of the schools visited had not received an incinerator. For those which had them, 30% of the fire screens have not been installed or have been stolen.

Exterior Painting. In 90% of the schools, the water and acrylic based paints were adequate. In 10% defects occasioned by use or defective construction were apparent.

(5) Program Completion

At the time of the evaluation, in September 1989, the construction program was practically over and the final payout to contractors in process, to be extended for one month after September 30, 1989, the project's original termination date. Project reports, as verified by our spot checks, indicated that 400 classrooms on 97 sites were constructed, and 2,418 classrooms on 307 sites were reconstructed or repaired, for a total of 2,818 classrooms on 404 sites benefiting from construction, reconstruction and repairs.

2. Conclusions

1. The setting of priorities for work to be done in the schools in many cases did not conform to the schools' necessities, and would have benefitted from more school and community involvement in the decision making.
2. New classrooms without teachers suggest inadequate planning studies and/or a lack of adequate communication and coordination between APRE and MOE.1.
3. Although construction supervision was adequate, especially in view of the difficult conditions, the coverage could have been more effective.

3. Recommendations

a. Planning

1. Construction work should be programmed as much as possible during the months in which school is not in session. During this period, school or community activity should be limited to permit the contractor to carry out the work. In any event, effective coordination between the school administration

and the contractor should be instituted so as to minimize the interference of the construction with the academic program.

2. Because of the problematical nature of the water supply systems for the majority of the schools visited, we recommend that future projects include investigation of the possibility of constructing wells, be they pump operated (deep wells) or manually operated (wells to a depth of 33 feet). The cost of this is not high and the community itself can carry out the work. There are inhabitant-built wells in many of the communities visited.

3. Appropriate measures should be taken to address the shortage of land for school construction. One such measure would be to improve the legislation and procedures for public taking of land for school construction.

4. Future programs should implement construction only after thorough study of necessities and priorities, which study could commence immediately.

5. The DCM, ODEPOR (Office of Planning and Regional Organization) and others with their technical and construction elements should become involved in this effort, offering their experience and investigative capacity.

6. Included in such study should be the problems of the schools constructed by others (communities, women's groups, farm owners, the reform sector, etc.) including rented facilities, which have received no construction assistance whatsoever from this and other programs.

7. Arbitrary, across the board per school ceilings on construction/reconstruction investment should not be favored, given that the necessities of each school are different.

8. Consideration should be given to more local involvement in the planning of school construction projects, to include a listing of necessities and priorities prior to design.

b. Building Design

1. Consideration should be given to the practicality of the folding wooden partitions since they seem susceptible to defective construction and excessive cost, and are a source of potential inconvenience to teachers and students when the partitions fail.

2. Consideration should be given to the provision of semielevated water tanks of some two cubic meters, with cisterns for rain water, for the gathering of water for hygienic services, and of other tanks for general cleaning services and for food preparation, thus eliminating the need for transport of water by students.

c. Construction Supervision

1. Construction supervision should be effected with greater care and attention to detail to enforce compliance with specifications.

2. Consideration should be given to designation of resident supervisors who cover a given area, providing in this manner a greater flexibility, better knowledge of the area and its problems, more observation time and more immediate response to problems posed by the contractors, school occupants or neighbors.

d. Payment Procedures

1. More emphasis should be placed on rapid payment of estimates. Such emphasis should include devising a more simple and effective mechanism, eliminating time consuming steps of marginal utility.

B. CORRECTIVE MAINTENANCE

1. Findings

a. Design Concept

The project design posited that one significant means of restoring the "effectiveness and accessibility of primary education services in El Salvador" would be improved corrective maintenance.

The Project Agreement provided that:

"i. School repairs, which normally are the Ministry's responsibility, would be undertaken by the Division of Construction and Maintenance of the MOE.

"ii. The Project will improve the capacity of the Division of Maintenance of the MOE to attend to these repairs and maintenance necessities.

"iii. Under the Project, the Division of Maintenance of the MOE will receive vehicles, tools and repair materials.

"Cooperation and coordination with the DCM shall be established on the basis of the APRE-DCM pact, which sets guidelines for technical assistance, materials, etc., given that APRE is charged with responsibility and may not transfer vehicles, materials, etc. to the DCM."

Thus the DCM was designated to play an important part in the repair of schools to the extent that the Project provided to it the specified resources.

The rationale for improving the capacity of the DCM was that by doing so, indefinite and prolonged maintenance could thus be guaranteed and would go much further than the temporary measures effected by APRE, given that the DCM, a longstanding entity, offered characteristics of perpetuity (which would exist so long as the MOE existed) and would require only resource allocation for its effectiveness.

b. Design Evolution

UNM was contracted to work with APRE in the execution of the Program of Corrective and Preventive Maintenance. However, maximum advantage was to be

taken of the DCM's technical potential in design, construction and supervision, in the selection, qualification and contracting of the firms which would make up the so-called "microbusinesses," as well as in the elaboration of the corresponding budgets and agreements.

The role played by the "microbusinesses" within the maintenance program must be emphasized. These were groups formed by members of the community who joined together to undertake small repair construction projects at low cost, to a maximum of 2,000 colones per classroom. These microbusinesses undertook corrective repairs of approximately 1,200 classrooms in some 300 schools, for a sum of approximately two million colones apportioned by APRE. Taking into account the cost of vehicles, mechanical equipment and purchase of material, the sum of the investment in this sub-component was approximately seven million colones.

Within the microbusiness program developed by APRE, the DCM contributed by selecting the schools to be served, and elaborated the repair projects (design, construction specifications, budgets, etc.) and job supervision.

The UNM has recognized that the role played by the DCM in this aspect was invaluable, since the UNM's technical capacity for this component was very limited. It also recognized that APRE emphasized the preventive maintenance component, which unequivocally had the greatest attention in the overall maintenance program. In spite of not being able to count on its own financial resources, and not having command authority, the DCM turned out to be an element of fundamental support within the program, bringing to the program the DCM's valuable experience. The DCM earned recognition for having fulfilled its duties.

c. Implementation

Although the ideas set down in the agreement did not come to pass in practice as was envisioned, the DCM played an important role in the development of corrective maintenance.

The DCM placed at the disposition of the component's coordinator (a UNM representative) 50 or more persons, a group made up of architects, engineers, topographers, master craftsmen, carpenters, masons, electricians, welders, etc., to be trained in the techniques of the corrective maintenance system.

Although in many areas corrective maintenance was confused with preventive maintenance, partly because the UNM advisor was the same person, there were differences in form, training procedure, sophistication of equipment and in the type of personnel at whom this training was directed.

In the first place, the education level of the personnel trained and the type of training provided should be emphasized. For corrective maintenance the more experienced and skilled personnel had to teach less skilled personnel in construction procedures, the use of electronic equipment, soldering, carpentry, masonry, etc. But initially the "teachers" themselves lacked experience in teaching, and many of them were not familiar with the management

of some of the equipment provided such as to be able to train in its use. The preventive maintenance program on the other hand, typically communal in character, trained members of the community and parents associations how to use the tools for preventive maintenance so that they could carry out minor tasks in the school and community.

Training in corrective maintenance was given strong support by the regional branches of the DCM, which offered to the UNM representative their workshops, offices, office personnel and time to carry out their commitments. The training process was principally carried out by the regional offices and subsequently carried on in the communities.

APRE, which assumed control of vehicular equipment, offered help subject to limitations of its own needs. This created some logistic problems when an entire block of trained personnel had to be mobilized to reach the work zones. APRE's needs were understandable, but it would have been better for UNM to count on its own mobility.

APRE also financed direct costs of corrective maintenance through payment of personnel, fuel and other costs.

APRE complied indirectly in the handling of minor repairs, an area previously in the hands of the DCM, giving the DCM a secondary role with consequent wounded sensibilities. However, although the construction capacity of the DCM did not improve, its technical capacity in new fields did improve, particularly with an eye toward a national training plan.

Likewise, it should be noted with respect to APRE's contribution, that four modalities for corrective maintenance repair work were put into practice: APRE-community, APRE-DCM, DCM-community and microbusinesses.

2. Conclusions

- a. The program certainly extended its benefits to include minor repairs for the schools.
- b. The concepts for addressing corrective maintenance needs were not applied in practice exactly as envisioned in the Project Agreement.
- c. The innovative "microbusiness" system was successful.
- d. Although the corrective maintenance project did not go beyond limited coverage, considering the sum of necessities in some 3,300 schools, and the fact that corrective maintenance problems continued to arise daily with the same severity as always, the repair of 2,400 classrooms had a considerable impact, particularly as it demonstrated the capacity of the UNM and DCM to administer and execute projects of this type.
- e. The success of the constructive maintenance program resulted from the combined actions of the UNM, APRE and DCM, along with the community groups forming the microbusinesses, whose efforts should not be undervalued.

3. Recommendations

- a. The objective of improving the corrective maintenance capacity of the system should be maintained.
- b. The equipment, vehicles, tools, office equipment and furnishings, etc., presently held by APRE for corrective maintenance, should be turned over to the DCM so that it may continue with corrective maintenance under more appropriate conditions.
- c. Owing to the success of the microbusiness program, it should be continued within the corrective maintenance program of the DCM for the present, but with consideration given to further privatizing the corrective maintenance function in the future.

C. PREVENTIVE MAINTENANCE

Summary of Findings and Conclusions

The effort to build a system of school maintenance based on community participation included (1) delivery of appropriate tool kits, (2) preparation and dissemination of practically oriented manuals on simple maintenance and construction work and techniques of community mobilization, and (3) training for school directors, teachers and community leaders in preventive maintenance and community mobilization in support thereof.

With USAID figures indicating that already tool kits had been delivered to 2,255 communities and training provided for 2,777 schools, the 90% coverage goal was expected to be achieved by September 30, 1989. In addition, about 1,100 community leaders will have been trained by the end of the project. With regard to manuals, however, our sample indicated that only 60% of participating schools had received them.

The impact of project activity in promoting maintenance is difficult to ascertain, since many communities were already active in maintaining their schools. We credit project intervention with significant effect in less than half the participating schools, with the tool kits the principal factor. The effectiveness of the manuals and training has been hampered by poor communication and lack of follow-up.

Activity thus far has been just a first step in establishing the concept of community-based preventive maintenance in El Salvador's system of education. To realize the potential long term return on the investment already made will require substantial further investment.

The numbers and type of people trained are not yet sufficient to achieve the necessary critical mass. Training has been limited mainly to school directors and is rarely transmitted effectively to teachers or to the communities. In addition, supervision and follow-up are too weak to provide the support and guidance needed to develop and sustain effective community-based planning and action.

The manuals, despite generally appropriate format and content, have not been a significant factor because of very limited awareness of their existence, let alone content. The manuals must be integrated into the training programs more effectively and given substantially broader distribution and publicity. Since the marginal cost of the manuals following preparation and initial printing is relatively minor, broader distribution to all trainees and to the parents' associations should substantially enhance the return on this significant investment.

1. Findings

a. Design Concept and Evolution

For this component the design concept set forth in the Project Paper (PP) and Project Agreement included two basic elements: a system-wide preventive maintenance program for primary schools (with initial emphasis on the ones built under this and the previous AID project), to be implemented by the Construction and Maintenance Division (DCM) of the Ministry of Education (MOE); and a pilot test of a preventive maintenance program for primary schools involving their local communities (in approximately 10 schools) to test the effectiveness of a community-based strategy. If proven effective, community-based preventive maintenance would then be extended to all MOE primary schools over the life of the project.

The means set forth to create a preventive maintenance consciousness in school directors and teachers--who would in turn be responsible for involving the students and community--included (1) preparation of a simple "how to" maintenance manual to be distributed to all MOE primary schools, (2) special seminar training for directors and supervisors in how to use the manual and in organizational techniques to involve the teachers and community and (3) distribution of a "maintenance kit" of basic tools to each primary school as a supplement to the manual.

As described in the PP and Agreement, school directors would be individually responsible for materials and tools provided to the schools and for submitting to the DCM a semi-annual report on the condition of the school and the maintenance work completed. The DCM would be responsible for inspecting the maintenance work completed, advising on future maintenance requirements, and for maintaining an updated file on each school. The DCM would also identify repair needs beyond the capacity of the school and community so that these could be included in the DCM's schedule of work. The Project as originally designed provided for upgrading the DCM's capacity to implement a system-wide preventive maintenance program by providing vehicles and funds for locally procured tools and repair materials.

The 1987 Interim Evaluation Report indicated that as of March 1987 only seven employees had been assigned to the preventive maintenance operation from elsewhere in the MOE, and only three promoters had been hired. UNM/APRE estimated that about 214 people would be needed to run the proposed nationwide preventive maintenance system (another estimate put forth by APRE staff was

closer to 400); however, GOES Decree 11--a hiring freeze--was applied to deny the staffing needs called for to implement this system, which the GOES considered unrealistic. Currently, preventive maintenance staff assigned to APRE (23 supervisors and promoters, 21 of which are assigned to the three regional offices) are carrying out all the functions relating to the preventive maintenance program. Support staff (drivers, warehousemen, secretaries, etc.) are shared with the corrective maintenance function discussed in section II.B. above.-

The Interim Evaluation recommended that a decision be made as to whether the impact of Component 2 would come primarily from community-based preventive maintenance or from distribution of greater resources to MOE regional DCM offices to support corrective maintenance. The decision made has been to rely entirely on community-based preventive maintenance rather than on DCM interventions. The role of the DCM is limited to corrective maintenance. Because of GOES limitations on hiring the required staff, the nationwide preventive maintenance system under the DCM was never developed as originally envisioned. Accordingly, the remainder of this Preventive Maintenance section will deal with the implementation experience of the community-based system.

At the time of the Interim Evaluation little progress had been made on preventive maintenance. Serious delays had been experienced in receiving funding under the approved Action Plan, which was not approved by SETEFE until March 1987. Delays were also experienced in testing the feasibility of the community-based maintenance scheme through an initial pilot project, which was to have been completed by February 1986. However, after many problems, a pilot project including 25 schools was completed in mid-1986, which led to the conclusion that school maintenance programs based on community participation and self-sufficiency could be viable. An initial version of the maintenance manuals had also been completed.

b. Implementation Experience

(1) Training and Promotion

(a) Training of Promoters

The process of extending this community-based preventive maintenance approach to MOE primary schools throughout El Salvador did not really get started until 1987. Starting in February 1987, promoters and regional supervisors (6 in the Eastern Region, 8 in the Western and 7 in the Central Region) were assigned to the program. The original target was to have 10 promoters for each region, or 30 in all. Initially, 28 promoters joined the program, but some have since left. The promoters were teachers or social workers seconded from other departments of the MOE and subject to recall by them. Only the regional supervisors were contracted by APRE. The inability of the program to hire promoters has been a problem, since their work has sometimes been interrupted by sudden recalls by their original departments.

Training for the promoters has continued throughout the project period; following the initial orientation and training seminar there have been about five or six additional seminars, lasting for periods of between three days and two weeks.

(b) Training of School and Community Leaders

The first training seminars for school and nuclei directors (or their designated substitutes) began about August or September of 1987, in all three regions. According to APRE reports, about 3,200 schools throughout El Salvador will have received training in preventive maintenance by September 30, 1989, which is considered virtually complete coverage of eligible schools.

To date, 15 four-day training seminars for directors have been held in the Eastern Region, with one more planned for September 1989, for between 40 to 70 persons each. In this region, 897 schools have had someone trained; remaining to be reached are 42 schools, according to regional staff. According to figures provided by USAID, 851 have received training and 129 remain (87% coverage). Calculating precise figures is difficult because, although there are nominally 1,100 schools in the region, 215 are currently closed due to the conflict, including some which had already received training and tools. Therefore, nearly all the functioning schools in this region should be reached by September 30, 1989. In addition, one-day seminar for 20 community leaders was held and four more are planned, to include an additional 100 community leaders. (It should be noted that who is defined as a "community leader" appears to vary in practice, although APRE defines the term as an active member in the Parents' Association.)

In the Western Region, 701 school and nuclei directors have been trained in 11 seminars which, according to regional staff, covers 100% of the eligible schools in the region. According to the USAID figures, 570 schools have been reached and 87 remain (87% coverage). In addition, 597 community leaders have been trained in 23 one-day seminars, mainly in 1989. Another 15 seminars are planned to train approximately 375 more community leaders.

The Western Region is the only one to have held practical training sessions in maintenance skills. To date 47 half-day sessions have been held at the nuclei level, in which 558 persons have been trained in masonry, electrical and plumbing skills using hands-on methods. The persons trained are usually teachers charged with maintenance functions; the trainers are technicians and skilled workers seconded to the program by the Regional Office of the MOE and DCM. An additional 10 practical training sessions are planned, to cover approximately another 150 people.

In 1987 and 1988, 697 schools in the Central Region received training for their directors or other personnel (APRE figures for August 1989). According to a regional supervisor, in 1989 alone, 14 five-day seminars were held between June 13 and September 8 for 728 schools, for an overall total of 1,425. Regional staff consider this to be virtually complete coverage of eligible schools, given that 65 schools have closed during the current year and 39 schools have failed to respond to repeated invitations to training

seminars. The figures obtained from USAID state that 1,356 schools have been reached (87%) and that 207 remain to be trained. With a large number of school seminars just now completed, there is no time left to develop training seminars for community leaders, according to APRE personnel; and they are unable to commit funds to this type of training because it cannot be completed by the September 30, 1989 end of project.

The foregoing program data indicate that training goals have been largely met or will be by the end of the project. The reasons given by regional staff for non-participation by some schools include failure to receive invitations "convocatorias", the timing of the seminars, the fact that trainees were not paid "viaticos" or, simply, lack of perceived need or interest. A regional supervisor indicated, for example, that out of the 39 schools in the Central Region which failed to respond to repeated invitations for training, 26 were in the metropolitan area. Since the training sessions for this area were only given in the morning, some schools did not attend because they only operate in the afternoon. Most, however, were simply not interested or had had their physical maintenance and repair needs met by post-earthquake assistance programs.

Data from our random sample of schools do not diverge widely from program figures, indicating that, overall, 82% of the schools visited had received training--87% of schools visited in the Eastern Region, 83% in the Western and 75% in the Central Region. (See Annex 2 for sample survey data.)

The training seminars for directors and community leaders are conducted by the promoters in each region working as a team. Seminars are held in each of the Departments in each region to facilitate access. In the Central Region a team from PPMS "Perfeccionamiento Permanente de Maestros en Servicio", in charge of in-service training, helped on a part-time basis with 11 of the 1989 seminars for school directors.

There was no opportunity for any of the team members assigned to this component to observe a training seminar, so no specific comments can be made about training content and process. From the general comments made both by the trainers and trainees, the content appears to have been focussed primarily on how to motivate and involve the community, rather than on how to carry out specific maintenance or repair activities. The seminars for community leaders were designed primarily to motivate them to collaborate in maintaining the schools. They deal with relatively high rural illiteracy rates by minimizing the use of written materials.

As noted above, in the Western Region hands-on training in preventive maintenance for teachers and directors has been done in nuclei schools. Regional staff expressed a desire to extend this type of training to parents or others in the community as well, indicating that teachers had said that this would be useful. The data from our sample also corroborated the demand for practical training. When asked what type of further training would be useful to them, a number of informants mentioned technical training in how to build structures or make repairs, or in specific skills such as masonry or electrical work.

A number of respondents also suggested that all the teachers should attend the regular training seminars, not just the directors, and a few suggested that more people in the community should be trained as well.

(c) Use of Manuals

With regard to school director training, the original project design put considerable emphasis on the role of the preventive maintenance manuals, considering them to be the primary tool for motivating and guiding preventive maintenance activities by the schools and communities. The training seminars were supposed to teach directors how to use the manuals, how to encourage teachers to follow the schedule of maintenance activities contained in them, and how to involve the community as well. "In this way", the PP states, "teachers and supervisors will be familiarized with the manual and will be made aware of their responsibilities."

Actual practice is somewhat different. In the Eastern Region, according to both trainers and trainees, the manuals are not given out until the seminar closing, together with the diplomas. Three pamphlets (mainly on community promotion and organization) are given to trainees and used as teaching materials during the seminar. In the Central Region, apparently some use is made of the manual on community promotion and organization, but little, if any, of the one on conservation and maintenance. Pamphlets are also given out and used as teaching materials. In the Western Region, according to regional staff, the manual on community organization is used in training seminars for school directors and the manual on conservation and maintenance is given out at the end of the seminar. The latter is also used as a resource for the practical training sessions for teachers. No manuals are given to the community leaders trained. Supervisors and trainers in all regions noted that they emphasize during the seminars that these manuals and pamphlets belong to the school and are to be used by the director, teachers, students or parents as needed.

Among the sample schools, however, we found that informants (normally those who had actually attended seminars) in only about 60% of the schools which had received training reported receiving manuals or pamphlets, even though program figures indicate that all those trained have received them. We are unable to fully explain this discrepancy; some of it may be due to delays in delivery of manuals (not everyone got one at the training seminar; some were delivered later) and some may be due to the fact that the persons who received the training and the manuals were not available to be interviewed in all schools visited and no one else knew about them. Most of the time these manuals or pamphlets are kept in the home of whoever received the training; even when they are kept at the school, few people beyond those who attended the seminars are familiar with them. While in about 70% of the schools which reported receiving manuals or pamphlets, at least one teacher who did not receive training knew that these manuals existed, parents' knowledge of these resources was much lower--less than 10% of the parents interviewed knew that there were manuals. Even teachers and parents who knew that there were manuals were rarely able to describe their content. Only about a fifth of the schools which had manuals reported that they had been used, and that is

probably an overly generous figure; these statements were usually not very specific. Regionally, the schools we visited in the West indicated greater use of the manuals, followed by those in the East, with the Central Region showing the least use.

The major factor impeding use of the manuals appears to be insufficient knowledge of both their existence and their content, due to lack of use of them in the training program and to inadequate communications in the schools, and to their very limited distribution (one set per school). Delays in delivery of manuals to the regions has contributed to their lack of use in the training sessions to some degree, and thus indirectly to their lack of use by recipients. Another contributing factor (although we have no measure of it) may be a certain lack of utility of the conservation and maintenance manual due to inaccurate or inadequate content. A regional supervisor pointed out, for example, that many schools no longer use the type of electrical connections illustrated in the manual; and a school director said he had tried to use the manual to remove and repair toilet tanks, but that the drawings were inaccurate.

(d) Communication Weaknesses

The situation with regard to the manuals is indicative of a larger problem, the lack of communication regarding the preventive maintenance program both within the schools and between the schools and the parents or the wider community. The concept underlying the training program for school directors is that they in turn will pass on the knowledge they gain to teachers, students and the community, thus multiplying the training input and involving others in the preventive maintenance program. Based on our sample, however, this is happening only to a limited degree. In only about half of the schools in which someone was trained did others corroborate that they had gotten any information about the training content from the trainee, and usually the information conveyed was limited. An indicator of this lack of communication is the fact that in over a third of schools which had received tool kits, teachers did not know about the tools. In nearly 60% of them parents interviewed (in most cases those serving on the directorate of the Parents' Association) did not know about the tools. In general terms, we determined that in nearly 40% of the schools which had received training there was a serious lack of communication between the director and the teachers, and in even more there was a similar problem of deficient communication between the school and the Parents' Association with regard to the maintenance program. Regionally, these problems appear to be most prevalent in the Central and Eastern Regions.

Lack of effective linkages with the parents and larger community is of particular concern, since a community-based maintenance system can only survive and prosper if the communities are effectively reached and integrated into the system. To date, the impact of the program has been much greater at the school level (participation of teachers and students) than at the community level; many parents are simply not aware of program resources, nor has there been sufficient effort to motivate them to participate in maintenance or take any initiative. Clearly, more effective participation by

parents and others in the community could occur if these deficiencies were remedied.

(e) Community Planning

The effort in training seminars to promote planning of maintenance projects and activities has also had mixed results. Trainees are asked to present a plan for a project during the seminar, or sometimes afterwards when the tool kits are delivered. However, among our sample less than a fifth of the schools which had sent someone for training had developed a maintenance plan (other than their regular yearly plan submitted to the MOE). The planning information provided by APRE in the manuals and posters, including a poster calendar for planning preventive maintenance activities, is not getting much use. While posters were observed or reported in about 40% of the schools visited, respondents reported actually using them in only about a quarter of the schools in which they appeared. Generally their main function seemed to be to decorate the classroom. In one school we observed them being cut up to make cardboard decorations for the independence holiday; in another they were folded and stapled to make heavy duty filing folders.

On the other side of the coin, about 12% of the schools visited did report planning and actually carrying out planned projects, though the degree of formality of the plans varied. The schools in the Western Region were the most likely to have done this. Very few cases of joint planning by directors, teachers and the Parent's Association were found.

Part of the reason that not much planning is being done may be that promoters did not always adhere to the program's requirement that trainees present a maintenance plan either at the seminar or at the time the tools are delivered. Many informants knew nothing of such a requirement.

The difficulties noted above may be due in part to factors within the training program; however, it is not possible to determine whether this is the case since we were not able to observe the training or obtain sufficient information about it. Certainly failure to use the manuals during training makes it less likely they will be used later.

There appears to be a desire among many of our informants for more technical content and for training which reaches beyond the directors to include more teachers and parents or other community members. The fact that in the Western Region more community leaders received training than in the other regions, and that there has been some practical training there, may have contributed to the more favorable situation in that region.

(f) Lack of Follow-up

A key factor is certainly the absence of any significant level of follow-up after the training. Only with adequate follow-up can problems such as inadequate communication and multiplication of training and non-use of important resources such as the manuals be overcome. Only about 12% of the

sample schools which had received training reported any follow-up visit by program staff, with the greatest incidence of reported follow-up in the Western Region (20%) and the least (4%) in the Central Region.

The lack of follow-up is inevitable, given the very small staff with which the program is operating. A system is in place to make an evaluation visit to each participating school and administer a questionnaire on the condition and use of the tools and manuals and whether the school has carried out its planned project(s). However, with only 6 or 8 people to cover large regions (in addition to conducting training and delivering tools), the task is clearly impossible. In the Eastern Region, for example, the promoters have only been able to make a follow-up visit to 45 schools. Performance in the Western Region has been better, in part because the region is smaller, less affected by war, and has a greater number of promoters (8). Even there, however, they have had to opt for providing one-time follow-up to only a sample of the schools (20% in one stage and an additional 20% in another), including use of a questionnaire and also meetings with directors, teachers, parents and community leaders to discuss progress and problems.

The transitory nature of APRE and its staff, borrowed from other departments, has also worked against development of an effective follow-up system. APRE cannot hire more staff nor expand its follow-up capabilities because it is a temporary organization; but at the same time, it has assumed implementation responsibility and has therefore to some degree obviated the need for other, permanent departments to take on the follow-up task.

However, even taking all this into account, it is also apparent that not all the field staff have always followed the procedures with regard to training and follow-up which they were taught in their own training. Not everyone has effectively communicated and applied program requirements (such as the maintenance plan mentioned above), especially those pertaining to participation by parents.

(g) Effect of the Conflict

It is essential to remember, nonetheless, that some of the problems encountered are clearly beyond the scope of the program to resolve. The social and economic consequences of the conflict, both to the country as a whole and to individuals, have certainly affected their ability to collaborate in such efforts. For example, the whole premise of the training program is to encourage and reinforce leadership, both within the schools and the communities, in taking responsibility for organizing and carrying out preventive maintenance activities. In a situation of great economic and social instability, however, not only are the physical, emotional and economic resources which people might contribute to such efforts curtailed--people are sometimes simply afraid to behave like leaders, to stand out from the crowd and be visible. The accomplishments and problems of the program should be viewed, therefore, in this context.

(h) Community Support

In spite of the problems encountered, however, it is abundantly clear that communities do provide a great deal of support to their schools, even where means are severely limited. They know that they are unlikely to receive much help from the MOE or other external sources.

In almost all the schools visited, for example, we found that parents provide voluntary monetary contributions (over 90% of the schools) and in almost as many they provide labor for maintenance or improvements, or help with activities to raise funds for the school. In about a third of the schools funds to pay for labor for maintenance (including pay for janitors) or improvements comes from the parents or through community activities; over 20% of the schools also use community funds to pay teachers.

It is noteworthy that a great deal of this parental support comes from mothers, who were reported to be the primary collaborators in nearly half the schools visited, both through monetary contributions, direct services and help with school events and fundraising activities. In nearly 40% of this group of schools, the reason cited for the greater participation of mothers was the high number of women-headed households in the area. In the remainder of cases, the reasons cited were that men were away at work or, in some cases, that mothers were generally more interested and responsible with regard to their children and the school.

Schools also receive some help from sources other than parents, both through fundraising activities among people generally in the community, and direct contributions of money, labor or, more often, materials. The most common source of such help cited in our sample (by over half the schools) were local authorities, usually the municipal government or military command. Nearly as many mentioned help from various government agencies, particularly for materials and sometimes provision of foremen to supervise community labor. About half as many mentioned receiving some contributions from various kinds of welfare or community development organizations, and from private businesses--and somewhat fewer from private individuals or families in their communities. A few received some help from cooperatives, particularly agricultural cooperatives in the rural areas.

(i) Impact

It is clear that community participation in school maintenance and improvement exists to some degree almost everywhere we went. What is much less clear is the degree to which it can be attributed to project training and promotion interventions. As noted above, the rough measure of this which we were able to make is based on whether the training was shared with others in the school and/or community and whether others in the school and parents interviewed were aware of the project resources distributed (manuals, posters, tools). Based on such measures, it appears that it may be possible to attribute an effect on participation in preventive maintenance activities to these interventions in somewhat under half the schools visited; however, even within these schools, we cannot be certain that participation would not have occurred anyway, as many reported activities predated program interventions. What can be said is

that these interventions have provided some additional focus and impetus to involve people in preventive maintenance and school improvement projects, but that lack of follow-up has made these interventions less effective than they might otherwise have been.

(2) Tool Delivery and Use

(a) Tool Delivery

The impact the tools have had is clearer. Instead of a "supplement" to the manuals, as the PP described them, the tool kits have become both the most visible and the most valuable element of the program for the beneficiaries, both within the schools and the communities.

According to available records, about 2,255 tool kits have been distributed to schools throughout the country, with 945 still to be delivered (according to USAID, 135 are in the San Miguel warehouse and 810 kits are still to be procured). All schools which have had someone trained are supposed to receive a kit of basic tools (see Annex 3). Our sample data indicate that over 80% of the schools which have sent someone for training already have their tools. For example, in the Western Region regional staff informed us that tools have been delivered to 99% of the participating schools, with only 22 schools still awaiting delivery of tools, and our sample data closely approximate this figure (93%). Delivery to the remaining schools in all regions is in process, according to the regional offices.

The delay in delivering tools can be as long as several months, according to some informants. According to one promotor, originally the tools were to be delivered at the time of training, but there was a delay in getting the tools due to some problems at RONCO. He said that delivery at the time of training was definitely preferable because it eliminated the notification problem the regional offices have often experienced. Getting out the word to schools about delivery (as well as about the training seminars) is done through the nuclei directors, and apparently does not work very well, since many schools have claimed they never received notices.

The procedure to be followed for handing over the tools is spelled out: a meeting is called to bring together at least the director of the school and three parents (and usually others as well) to take delivery of the tools. This is supposed to ensure that the parents are aware of receipt of the tools, the composition of the kit and what they are to be used for and by whom. This procedure may not be adequate, however--or may not always be followed--since parents interviewed were aware of the existence of the tools in only about 40% of the schools in our sample.

(b) Tool Use

The tools are usually under the control of the school director, although in some cases the teacher responsible for a specific function has custody of them. Usually they are kept at the school itself, but in some cases they are kept in the home of the director or of a member of the directorate of the

Parent's Association, mainly for reasons of security. Occasionally this has caused problems with regard to access to the tools. Another phenomenon which was noted was that some directors are reluctant to use the tools for fear that something will happen to them and they will be held responsible. This did not appear to be common, however.

Such fears are not entirely groundless. In our sample there were nine cases (about 13% of the schools with tools) in which tools had been stolen or otherwise lost. The most interesting incident occurred when some teachers lent the school facility to a circus to put on a performance from which the school would supposedly benefit, and someone from the circus (a clown was mentioned by several informants) stole the tools and a number of other items. The teachers responsible were supposed to replace the items, but still had not done so after the better part of a year.

The APRE program makes no provision for replacing ruined, lost or stolen tools; it is assumed that the school or community will replace any losses. This does not seem to be happening very often, however. Among the theft cases we found, none of the items stolen had been replaced. There were a few mentions of repairing tools which had deteriorated from use, such as regrinding files and repairing wheelbarrows.

Another problem mentioned by a few informants was the poor quality of some tools, which deteriorated rapidly.

The program stipulates that the tools are for use in school maintenance and improvements and may be used for such purposes by teachers, students and parents. In most cases all these groups did make some use of the tools. Nearly all the schools with tools reported using them (a few had just received them and hadn't had an opportunity to use them yet). Students are the most common users--in about 65% of the schools visited, informants said that students use the tools in repair or maintenance activities such as fixing furniture, painting, cleaning gutters, etc. In three-quarters of the schools they are used by students to maintain school gardens and grounds, most often by cutting back vegetation and hauling away garbage and debris. The most common function for students, however, is keeping the school clean, which usually requires no more tools than brooms and mops. It was not always easy or possible to differentiate between this type of routine cleaning and use of other tools in repair or maintenance activities, so these figures are somewhat suspect.

A useful by-product of student participation in maintenance activities is the positive impact it has on their conduct and their willingness and ability to care for things and take responsibility. Informants in about three-quarters of the schools (both teachers and students) noted this impact. Close to half these informants specifically credited having the tools with creating greater interest and enthusiasm among the students for maintenance activities.

In the schools which had tools and in which parents contributed labor, they also made use of the tools. We did find cases, however, in which the tools were used exclusively or nearly exclusively by the school janitor or some

other person charged with maintenance, and neither the parents nor students used them to any extent (approximately 20% of the schools which had tools).

In addition to the maintenance activities noted above for students, a number of schools reported, and were observed making, fairly substantial improvements through community effort. Insofar as we were able to determine, over 60% of such projects in the schools visited have been carried out using the tools donated through this project. As with the training and manuals, however, supervision and follow-up have been largely lacking. Nonetheless, some schools have carried out impressive projects. Examples include a large wall constructed at one school in the Eastern Region using community labor and materials; a government community development agency provided supervision and skilled labor. This same school also has plans to build a water tank and a stage for performances and civic observances. They received the tools two years ago and have been making very good use of them. Another school is building sanitary facilities using the tools, and has also built an outdoor stove and oven for use by the food program. However, other schools have suffered from the lack of supervision in carrying out community-supported projects. We saw examples of very poorly built and unfinished classrooms and other projects which schools and communities had tried to do on their own, with great enthusiasm and good will but poor results. Nonetheless, the tools are a positive contribution by the project and are being used, albeit with widely varying degrees of effectiveness, by almost all the schools which have received them. They are clearly valued by the schools and are seen by them as substantially facilitating their efforts.

2. Conclusions

The major conclusions reached for this component are as follows:

- a. The sample data collected basically corroborate program statistics which indicate that this component will reach the 90% target set by the PP for training school directors (not teachers) and distributing tool kits, although there are still a substantial number of kits to be delivered to schools which have already received training. Distribution of manuals, however, may not meet this target. According to our sample data, only about 60% of those trained have received manuals.
- b. The second PP target, that 85% of schools will be performing preventive maintenance, could be considered met if use of the tools is taken as the measure. Our data indicate that 88% of the schools which had received tools were using them to some degree. However, details on the type of use are sketchy and the level of use varies widely. Much of the reported maintenance activity is routine cleaning, mainly done by students using nothing more than brooms and mops, or using the shovel and wheelbarrow to dispose of trash, and would probably be done with or without the tools.
- c. The tools, however, were the most effective element in this component. They have facilitated school maintenance and improvement efforts in most cases. The tools have also served as a stimulus to student participation in maintenance activities; both teachers and students reported that having

the tools to work with enhances students' interest and enthusiasm for such activities to some degree.

- d. In some cases inadequate guidance and supervision have resulted in defective community construction projects. School personnel and parents often lack sufficient technical knowledge to carry out effective maintenance and improvement projects.
- e. The manuals are getting very little use, nor is much use made of the posters. Failure to use the manuals during the training seminars and to make the community aware of this resource has undoubtedly been a factor impeding their use--neither the directors nor the community leaders appear to have been taught to use the manuals effectively. Additional contributing factors are the delays in delivering manuals in many cases, as well as some errors discovered in the drawings which may affect confidence in the manuals.
- f. The multiplier effect expected from training school directors has only occurred to a limited extent. In only about half the participating schools was even minimal information about the training conveyed to teachers. Parents have received even less information. Communication within the schools is deficient and linkages with the communities are weaker than they should be. The communities have demonstrated their willingness to help in most cases, but better communications would certainly enhance their collaboration.
- g. The program has not been effective in developing the capacity of school personnel and parents to plan preventive maintenance activities. The planning methods and calendars included in the manual and on posters appear to get little use, in part because APRE personnel have not always followed program guidelines which require presentation of a maintenance plan, prepared with parents' participation, at the time the tools are delivered.
- h. Lack of supervision and follow-up has contributed to all the foregoing deficiencies. Without effective follow-up, it is unlikely that these problems will be resolved. Failure to follow-up adequately is not entirely the fault of program personnel; despite the fact that the project design did not include any real provision for follow-up (since the DCM nationwide preventive maintenance system was never implemented), they have developed and tried to apply a follow-up and evaluation system, but have only been able to reach a small number of schools because of lack of sufficient staff. However, staff have not always followed all the guidelines with regard to training and follow-up which they were taught in their own promotor training courses. It is apparent that not everyone was able to effectively communicate or apply program requirements, especially with regard to parents' participation in the maintenance program.

3. Recommendations

- a. The preventive maintenance program developed by APRE should be transferred to a regular department of the MOE, with its trained and experienced staff kept intact; this is now being planned by the MOE. Additional personnel

should receive the same type of training current staff has had. USAID should provide the resources so this program can be continued and expanded as outlined below.

- b. The tool distribution program should be continued until all schools are covered. In view of our finding that schools are not replacing tools as expected, a detailed study should be conducted a year from now as to whether worn-out or stolen tools are being replaced by schools, the factors influencing replacement, and the cost of replacing tools compared with the value of the maintenance done with them. Based on this study, a decision should be made as to whether the most essential and expensive tools should be replaced by the program as they deteriorate or if they are stolen. The quality of the tools should also be assured, to guarantee a longer useful lifespan.
- c. Training should be extended to cover at least two teachers in each school having six or more teachers, as well as the director, in order to create a critical mass and facilitate more effective communication and action with regard to preventive maintenance.
- d. The number of training seminars for community leaders should be increased substantially to create a common context for maintenance activities and strengthen the linkages and communication between the schools and the community. The types of community leaders to be trained should be defined; they should be selected to further the purpose of strengthening school-community linkages for preventive maintenance.
- e. The training program should be strengthened by adding a component on practical training, similar to the program developed in the Western Region, but extended to parents as well as teachers, in view of the problem of poorly done projects and the demand by our informants for this type of training.
- f. The manuals should be an integral part of all training, whether for directors and teachers or community leaders. They should be used as teaching aids and discussed and applied during the training so that everyone is thoroughly familiar with their contents. The manual on conservation and maintenance should also be used during practical training. Everyone trained should receive manuals and be encouraged to share them with others. Follow-up visits should check on access to and use of the manuals.
- g. The manuals should be thoroughly reviewed with both teachers and parents (facilitated by program staff) at a meeting with the Parents' Association at the time when tools are delivered or during the first follow-up visit after training has taken place. The directorates of the Parent's Associations should receive copies of the manuals, with the stipulation that they be passed on to succeeding directorates.
- h. During training, more emphasis should be placed on planning a regular schedule of maintenance activity, based on the calendar already developed in the manual, as well as planning special projects.

1. A greatly strengthened follow-up capability should be developed which would incorporate the nuclei directors as well as program staff. Sufficient personnel, vehicles and funds should be provided to allow twice-yearly follow-up visits to each participating school by program staff, supplemented by follow-up by the nuclei directors. Everyone involved in the follow-up program should receive orientation or training in supportive supervision and basic principles of community development. Initial follow-up visits should be scheduled within three months of training and should emphasize the application and transmission of what was learned during training; the use of tools, manuals and other resources; and progress in carrying out planned activities.

III. SCHOOL EQUIPMENT

Summary of Findings and Conclusions

The project design included procurement of furniture, equipment and supplies for 3,800 classrooms as well as preventive maintenance tool kits for over 3,000 schools. The numerical project targets were substantially met or exceeded, and on schedule.

The project commodity procurement function was reserved to AID, which in turn contracted a U.S. procurement services agency named RONCO. RONCO performed timely and well, and is to be commended for using Salvadoran counterparts to the maximum extent feasible for local procurement. Apart from the experience gained by such private sector Salvadorans, however, the procurement capability of the MOE or APRE gained nothing from that experience.

APRE did, however, gain a substantial capability for delivery of furniture, equipment and other commodities, including textbooks. The extent that such capacity continues, however, will depend on the extent that APRE's staff remains within the MOE; and, as discussed elsewhere, the prospects for such are not bright.

A. FINDINGS

1. Design Concept

Given the scarcity of adequate furniture, and with the object of improving learning and reducing the number of drop-outs, the "Education System Revitalization Project" contemplated, under this component, the acquisition and distribution of a total of 76,000 two-person student desks for a total of 152,000 pupil-places, in addition to 3,800 desk sets, teachers chairs, cabinets, bookshelves and blackboards. All the above described furniture would be complemented with an adequate supply of supplemental items such as erasers, chalk, notebooks, pencils, maps, posters, graphics, etc., and textbooks.

The main objective of the above described equipment and supplies was to cause an immediate impact, qualitatively and quantitatively, on the existing capacity of the school system to admit and teach the students. The distribution priorities of the equipment were as follows:

a. First Priority

Highest priority was given to complete sets of equipment, including student desks and chairs, teacher desks and chairs, bookshelves and blackboards and other supplemental items, for the 2,400 classrooms to be repaired and reconstructed, and for the 400 new classrooms to be built under the Program. One thousand extra sets were to be distributed to those classrooms that were most in need thereof.

Thus, 3,800 classrooms would be covered, which represented some 28% of the total of primary education classrooms.

b. Second Priority

The second priority was to be the remaining classrooms in those schools which had been reconstructed under the Program. The remaining equipment was to be distributed to those classrooms lacking such equipment.

2. Implementation

c. Purchasing

The process of purchasing school furniture was undertaken by RONCO, a private U.S. corporation, which made its purchases from various Salvadoran school furniture manufacturers. RONCO procured the number required with insignificant delays.

b. Quality

In general, all furniture delivered as part of the project was new, although there were various instances in which repaired (but good condition) furniture was delivered, and a few cases of delivery of used and unrepaired furniture.

In general terms, apart from the "Ara a" [Spider] type of student desk which is the subject of an independent investigation, the quality has been acceptable. However, there are certain details, such as the plastic or metal terminals which tend to come off easily or nuts which prematurely weaken. Also, many teachers suggested that if it were possible, the tops of the desks should be bonded with formica, because this material resists both the pen and pencil marks which mar softer wooden surfaces, and the corrosion from sweat of student forearms which corrodes metal surfaces.

As to design, with the exception of the Ara a type, the student desks, both one and two person, are adequate and functional, although they have to be proportioned for the three different grades (first, second, third) for anthropometric reasons.

c. Distribution

The 1987 evaluation recommended an acceleration in distribution of furniture in accord with priorities to be determined, without waiting for the termination of the construction program. This recommendation was fulfilled, but on various occasions the delivery of furniture was disorganized. In many cases, a quantity of furniture not in accord with what was expected arrived at the schools. New furniture, of different types and dimensions, was delivered to schools with no relation to the previously conceived or discussed necessities.

As of this evaluation, there were still many schoolrooms constructed or reconstructed under the project without their new furniture sets. We were informed, however, that with funds still available from the AID donation, AID would arrange the purchase and the MOE the delivery of the new furniture to satisfy the needs of the newly constructed or renovated classrooms within the program.

Comparing the numerical data supplied by the MOE by way of RONCO with that obtained in the field in the various zones of the country we found a series of discrepancies (detailed below) as to the amount of furnishings (student desks, desks, blackboards, etc.) delivered per classroom.

According to the project design, the distribution standard was to be 20.26 student desks per classroom and one teacher desk and chair per classroom. But at the national level, the distribution standard of student desks and desks has been as shown below:

Student desks

Zone	No. Classrooms	No. Student Desks	Desks/Room
Central	120	2,390	19.9
Western	74	675	9.12
Eastern	190	1,150	6.05
Total	384	4,215	10.98

Teacher Desks

Zone	No. Classrooms	No. Desks	Desks/Room
Central	120	39	0.33
Western	74	22	0.30
Eastern	190	42	0.22
Total	384	103	0.27

Under all headings of furniture distribution the official report shows less furnishings delivered than we found to be the case. For example, on a national level and based on the covered sample (105 schools) there exists, according to RONCO, a total delivery of 2,190 two person student desks, but data obtained in the field indicates a total of 4,215, nearly double that reported.

We have also found that there are schools assisted by the program which do not appear on the list delivered by RONCO. Such is the case of the San Antonio Silva School in the San Miguel district, which according to the director had 80 student desks delivered, although it does not appear on the official list. The same occurred with the Maria Auxiliadora School, which received 200 student desks but was not on the list.

d. Repairs

Traditionally, minor repair of old furniture has been undertaken by members of the community, using school funds obtained by various means (raffles, dances, CONARA, and municipality contributions, etc.). The MOE has not had sufficient funds for the system's needs. These repairs were in many cases only partial since many of the communities are located in areas in which there exists

neither repair facilities nor repair people with sufficient skill and/or equipment.

Our survey indicates that major repairs were undertaken outside the local area. When such furniture repairs were effected through the MOE, the items to be repaired were taken away from the localities requesting them, and in the majority of cases the quantity returned was substantially smaller than that which had been sent out. Usually the difference amounted to between 30% and 45%. The justification given was that many of the articles were in such state of disrepair that they could only be cannibalized for parts to repair others not so badly damaged. There were, however, cases in which the discrepancy was obviously excessive and no satisfactory explanation was given.

Preliminary reports indicated that the implementation of a mobile repair team had been undertaken by the MOE; however, field investigation indicated that the idea was never put into practice. We recommend further study of this proposal, since usually only minor repairs, such as those involving simple carpentry and not soldering and metal work could be carried out on site. Should this mobile team not be feasible, an alternative to metal furniture should be considered. Although wood furniture requires a greater initial outlay, because wood is scarce and costly in country, wood furniture is more simply and economically repaired.

B. CONCLUSIONS

1. The school system at a national level suffers an insufficiency in furnishings which has not yet been fully covered by the program.
2. The insufficiency is due in part to the growing demands of the school population and in part to lack of a continuing program of maintenance and repair of equipment.
3. In general, the program met its objectives as it covered at a national level the distribution of furnishings, although according to statistics the eastern zone has been less favored.
4. Apart from the student desks of the "Ara a" type, there are no major objections to design or quality. The minor problems include small construction details which are readily solvable, and the proportions of the student desks, which must be adjusted to grade level.
5. The Ministry still lacks an adequate control system with respect to the distribution and delivery of furnishings.

C. RECOMMENDATIONS

1. Prepare, as quickly as possible, an evaluation at national level of furnishing needs within the primary school system, assigning priorities, with the intention of creating programs for genuine necessity when financing becomes available in the future.

2. Consider allocation of resources for the creation or improvement of properly equipped furniture/equipment workshops at the national level. Also to be considered are mobile repair units for each zone so as to offer more on-site maintenance and minor repairs to school furnishings. Private enterprise alternatives, particularly microbusinesses, should be included in such considerations.

3. Proportion the distribution and delivery of equipment and supplies in such a way that more uniform coverage is obtained.

4. Consider certain changes in materials and construction details to lengthen the useful life of the furnishings, and redesign the student desks in graduated dimension so that they conform to the student population for which they are intended; for example, three types, conforming to grades 1-3, 4-6, and 7-9.

5. Devise and implement an adequate planning and distribution system for furniture and equipment which includes strict control at all times over inventories, be the furniture in the shop or in the field.

IV. TEXTBOOKS

Summary of Findings and Conclusions

Textbooks were prepared and published by the MOE with the help of the IBRD. APRE, under this project, then distributed the books. Further, APRE provided some training to about 18,000 primary level teachers, virtually all those who would be using the texts.

Since training was completed before our evaluation, we could assess the quality thereof only from lesson plans and interviews with participants. We found that to reach the 18,000 teachers within the time and resources available, wholesale instructional approaches had been used, necessarily of more informative than formative nature. Thus we found too many schools in which books were stored rather than used. Textbook use was still constrained by teacher concern for loss or damage of "accountable assets". Although 80% of teachers interviewed said they were using the texts, the majority of school directors interviewed were not impressed that there was significant improvement in teaching following the training and use of textbooks.

The textbook investment thus far has purchased little more than a "first coat". Substantially more investment in follow up measures is needed to establish textbook use in the system and to realize the full return in the total investment. Such measures would include teacher counseling and supervision, further training in textbook use, and inclusion of such training in the professional education of the incoming teachers. Teachers need a clear signal of encouragement from their supervisors and their Ministry that their performance will be judged favorably rather than negatively by evidence of wear and tear of the textbooks.

A. FINDINGS AND ANALYSIS

1. Design Concepts

The design concept for Component IV in the Project Agreement addressed an essential school need for textbook use in basic education (grades 1-6). The design included a new series of textbooks and teacher guides joined with a program for training teachers in their use. The textbook program had been initiated with financing from the IBRD's Fourth Education Sector Loan starting in 1979. The textbooks and teacher manuals were to be produced by the National Plan of School Textbooks (PLANALIBRE), a unit of the Pedagogical Services of the Ministry of Education.

The IBRD was to finance production and distribution of approximately 1,070,000 books for grades 1 through 4. They had not planned to cover most urban or marginal urban areas, where most of the new classrooms built by the AID project were located, nor were textbooks planned for grades 5 and 6.

2. Design Evolution

The IBRD later decided to assist with restoration of the basic education system and decided to complete the printing of essential texts for grade 1

through 4 and all texts for grades 5 and 6. The texts were to be replaced on the basis of a 15% annual loss rate, 10% increase in enrollment, and a 20% rate of deterioration each year. The availability of that IBRD financing for all textbook publication made more AID funds available for training in textbook use and related activities.

In August 1987, the Grant Agreement was modified to redefine Project Component 4. The PIL provided for technical assistance in the area of curriculum development and for 35 scholarships for post graduate studies. UNM was asked to provide technical assistance for curriculum instruction and to assist with the selection and processing of eligible candidates for out of country graduate studies.

3. Implementation Experience

a. Distribution of Textbooks

The Department of Basic Education of the MOE is responsible for the distribution of textbooks and teacher guides. This involves receiving texts, including preparing the necessary documentation; warehousing them; selecting schools and developing a distribution plan; contracting for actual delivery to the schools; and accounting for receipt of texts by the schools.

The distribution of textbooks encountered a few problems. There were fewer textbooks than needed and fewer guides than teachers. The demand and supply gap has continued and additional books will be needed.

Another problem was the lack of transportation which APRE resolved by renting vehicles until it received its own vehicles. Even the armed forces offered vehicles, but because the MOE would have to furnish gas and oil, this source was used lightly.

A more serious problem was a shortage of manpower for packing and loading books on vehicles, which was resolved when a crew of ten was employed by the MOE. The entire labor force was stretched when textbooks began to arrive at airports and shipping docks, and they were hard pressed to find storage until time for distribution to schools.

Two cases were reported where books strayed from their destination. On one of the few times the armed forces made deliveries, it was said that the soldiers gave books to children in their hometown. On another occasion, some books found their way into some private schools. This was rare, and for the most part the distribution was relatively free of such happenings. To date, approximately 3.4 million books, teacher guides and workbooks have been produced and distributed.

b. Teacher Training in the Use of Textbooks

(1) Textbook Training Program

The program for in-service training of basic education teachers in textbook use was designed by APRE. Technical assistance was to be provided by the University of New Mexico (UNM). The National Plan of School Textbooks (PLANALIBRE) and Program for the Preparation of In-Service Teachers (PPMS) also agreed to provide technical support for the training of teacher trainers.

To establish guidelines for teacher training and policies for administrative and financial support of the program an interagency team was established. The team was constituted of two APRE representatives, a coordinator and assistant, one representative from Basic Education (MOE) and one representative from Educational Technology.

(2) Training of Teacher Trainers

Candidates for teacher trainer positions had to show evidence of competency in the use of textbooks. They also had to possess good communication skills as well as teaching aptitude. Other requirements were maturity, leadership qualities, ability to work with teachers, and some curriculum expertise. They were also required to complete the California Personality Test, a knowledge and aptitude test; write an essay on a pre-assigned educational topic; participate in a micro teaching exercise; and undergo a personal interview. Of the 80 candidates who presented their credentials; 64 made the first cut and 48 were finally selected. To date, 32 of the original 48 remain.

The training program for teacher trainers was rigorous. A total of 320 hours of instruction was given, which is approximately the equivalent of 21 graduate credits, only 9 short of a master's degree. The training program included trips to Honduras, Colombia, the Dominican Republic, and New Mexico. All members of the group made at least one such trip.

(3) Training of Teachers

We must note at the outset of this section that one of the limitations of this essentially end-of-project evaluation was the lack of opportunity to observe training sessions in action. Firsthand knowledge of their operational procedures and observation of the trainers' delivery would have been helpful. One of the team members did visit one training session on Family Studies and some observations appear in Annex 9. Otherwise we rely heavily on the observations of the teachers and their trainers.

(a) Program of Instruction

Four teacher trainers, each representing a specialized area of the curriculum, made up each teacher training team with one serving as coordinator. The teams planned the training program, designed the content, implemented it and redirected the training as needed, then provided evaluations and completed progress reports.

Initially eight teacher training teams were assigned to the various sub-regions, covering the entire country. Later on the teacher trainers were redistributed to form six teams instead of eight.

The training of the teachers themselves did not start until 1986. The training teams worked through the regional, nuclei and school directors to arrange for training sites in schools as well as to identify in-service teachers. Some teachers were given permission to attend training sessions while others remained in schools with the students, which is one of the reasons that some teachers still have not received training.

Working schedules for each team were made up by the APRE coordinator several weeks in advance. The duration of the training sessions was usually from 2 to 4 days; however, six teachers (8.2%) reported that they had received 5 days of training and five teachers (6.7%) indicated they had received 15 days of training, which was unusual. Apparently each team established the duration of the training session with the teachers. Most teachers who had received training indicated that their sessions lasted for 4 hours per day.

Teacher groups varied in size from 35 to 50 and even up to 60, with an average size of 35 to 40. One or two trainers were assigned to the average-sized groups; groups of 50 or more were assigned more trainers. Large groups, however, provided less desirable learning conditions for such different techniques for textbook use.

While by and large, the training went smoothly, some implementation problems were noted. There were frequent delays due to political strife. Transportation of trainers to training sites was a problem until APRE's vehicles arrived. For a while public transportation was used or cars were rented to get them to training sites.

Per diem payments were often late. AID delays affected both vehicle delivery and funding, which interrupted training for a short period of time.

(b) Methodology and Focus

Teachers who had completed the training session reported lecture as the most frequently used methodology along with some group training. About a third thought that although working in groups was better than lecture, it was still not satisfactory in teaching textbook use. Further, teachers attending training sessions indicated that outside of a few posters no audio/visual presentations were included, which might have supported and assisted the trainer's presentations and made them more interesting.

It is difficult to teach teachers a technique by simply talking. It is better to observe a good teacher in a classroom at work with children. It would be even better if the teacher could learn to use the book by using it with children, but this was not the case. Less than 5% interviewed reported a training experience using texts with children. The training program did, however, provide some opportunity for practice in using textbooks with colleagues. Virtually all teachers who had received training reported this

type of training. Teachers felt that practicing with their colleagues was not as good as practicing with students but was better than nothing.

We heard some teacher misconception that the training program was planned to train teachers by grade level, making them feel that special training is needed for teaching at each grade level. If teachers had been trained by cycles -- which might have offered a more global approach to the teaching of textbook use -- or even with teachers from mixed grades, this confusion might not have arisen. Nearly a third of the teachers commented that the training program had no real focus. It should have had a clear focus, such as developing an appropriate methodology in keeping with the progressive structure of the texts, or reshaping the teacher's role through use of textbooks, or developing a more effective strategy such as group teaching, which is effective in meeting the needs of students with a wide range of abilities. (See Annex 8)

(c) Course Content - Responsiveness to Teacher Needs

Most teachers felt that the trainers spent too much time on the philosophy of the textbooks and on analysis of the textbooks' structure. Insufficient attention was given to ways of satisfying curricular requisites while also working with textbooks, pupil evaluation and methodology. Some teachers noted that the topics discussed were not interesting and that therefore attendance was erratic.

Teachers still have some serious concerns about using textbooks. Can they begin to use them if they have not received training for the particular grade assigned? If they are assigned another grade next year, must they be trained again for that grade? Can they begin to use textbooks when all the children have not received a complete set? Must teachers make two lesson plans daily, one to satisfy curriculum requirements and the other for textbook use? May teachers start to use textbooks if they haven't received guides?

Such concerns could have served as the basis for a training program, but there was no prior research design, pre or post test, or needs assessment study to determine what teachers needed, nor were they asked to participate in the planning of the program.

Many nuclei and school directors felt that even after taking the classes, teachers would need more training. About a third thought that more time was needed for training.

As to timing of such training, 20% suggested training for teachers in greater depth during school vacation. Another 20% of teachers felt that training should be given during school vacation or at the beginning of the school year. Most nuclei and school directors interviewed felt that training at the end of the school year was inappropriate. Some indicated they didn't send teachers, or even suspended the training completely near the end of the school year because students had already missed too much school.

Despite their criticisms, most teachers rated the trainers' performance as good to very good (about evenly divided). Less than 20% of the trainees rated

trainer performance as less than good. It must be noted, however, that since this was the first training program of its kind, teachers in attendance had nothing with which to compare the training.

(e) Evaluation of Teacher Performance

Procedures for assessing teacher performance kindle interest in what is being taught. If teachers are not challenged, they may not be as interested as they should be. Their lack of interest could affect many children. It could likewise slow the process of learning to use textbooks well.

Interviews with eleven teacher trainers indicated that they did not use evaluative measures of progress in their training sessions. According to conversations with teachers, at no time were they required to demonstrate their ability in using textbooks. Some suggested that such evaluation by the instruction team would have been useful. APRE felt that since this was the first training program of its kind given in El Salvador, evaluation of teacher performance might be sensitive. However, since there was no provision in the design for systematic visits by trainers to classrooms to assess teacher performance in the use of textbooks, there was no way of judging the effectiveness of the training sessions or even of making needed adjustments. In the absence of evaluative evidence the groups continued to be trained in the original format at the projected rhythm of 120 per team per week without any specific directional changes or adjustments.

(f) Overall Critique

The teacher training program charted a course, stayed on it and achieved its numerical target in terms of training the projected number of teachers, and beyond. Further, this was accomplished with a certain degree of professionalism. Yet the program did not substantially assist teachers with their basic concerns, nor give them the skills and confidence to plan and implement an educational program using textbooks. Furthermore, it made no provision for follow-up training. Arguably, its resources might have been better invested in reaching fewer more thoroughly than sprinkling many with a little training.

The design seemed to lack sufficient pedagogical input. The linkages between APRE, PLANALIBRE and PPMS were not as close as they should have been in the critical early planning stages. They became stronger, however, and provided valuable assistance as the project developed.

Political strife and time constraints affected program planning and formulation; there was a understandable reluctance to take on more than could be managed.

Field input was slighted. The design did not provide for a teacher needs assessment; nor otherwise did the design provide for the collection of information, including teacher perceptions, interests and concerns, which would have been valuable in effective planning and follow-up of the project.

Neither did the design include built-in procedures for continuous evaluation of effectiveness for the purpose of making needed adjustments.

Training relied excessively on lectures. The design did not provide for observational or practical activities for teachers in the use of textbooks. Training in the use of textbooks must go beyond six or eight hours of discussion in a classroom. Teachers must see textbook use in action. They must learn the art by practicing with students. Further, the design failed to provide for the development of instructional materials to support discussions on the use of textbooks by helping clarify and simplify textbook use techniques. Nor did the design provide any significant audio/visual presentations such as a video or slide presentation for teacher observation of textbook use techniques. APRE said that there was no access to production equipment for the development of such productions; there should have been.

Complementary training vital to future continuance of textbook use was omitted. The project design did not provide training for pre-service teachers. This could have been accomplished by providing in-depth training for professors of pedagogy and have them impart such technical training to pre-service teachers. Nor did the design provide training for nuclei and school directors. Their sense of being left out of the in-service training program probably accounts for some lack of enthusiasm on their part for use of textbooks by teachers.

c. Textbook Use

(1) Extent and Manner of Use

Teacher trainers felt that teachers in attendance showed keen interest in the training. They said that teachers carried away a lot of important information from the training sessions about reading readiness, lesson plans, evaluation of pupil progress, group teaching and other methodologies.

One measure of the success of such training would be the use of the books in the classroom. Better yet would be the use of books with evidence of some measured competency gained from the training received. Evaluation team members saw some excellent teaching with textbooks taking place. There were also cases where the textbooks were merely substituting for the work of the teacher, as students just copied the content of the book into their note books. (See annex 8)

Of the sample interviewed, 80% of teachers said they were utilizing the textbooks. On the question of better performance by teachers in use of textbooks, nearly 40% of the directors indicated they noticed better communication between teacher and students. About 1 in 6 school directors noted a new interest in learning by students. About 40% said that classes were more active since textbooks were being used.

Two simple checks of textbook use were made by the evaluation team. One consisted of checking whether textbook pages had been turned or the books soiled. More than 80% of such checks indicated usage. A final check was to

see if a student had been assigned a book by looking for a student's signature on a card on the bottom cover of the book. This card was a gimmick used by APRE to determine how many students would use the book in a three year projected life period. Nearly half of such checks found student names. The remainder had no names, indicating likelihood that the books were not being used.

Also, to measure reading ability, the evaluation team interviewers developed a simple quick reading test and randomly administered it to 33 students at all grade levels. The words were arranged in rows of ten, ranging from easy to more complex. A rating scale was devised and a student missing one word in ten would be classified an independent reader, two misses indicated a reader at the level of instruction and three misses a reader at the frustration level. Over half rated as independent readers, about a quarter at level of instruction and fewer than 1 in 5 at frustration level. (See reading test at Annex 9)

(2) Continuing Constraints to Use of Books

Some problems are impeding the use of textbooks. Teachers fear that if students lose or destroy a book the teacher will be held liable. Teachers must be relieved of such concerns and freely use the books as intended. Also, there is imbalance between enrollments and books allotted each school. Further, an excess of mandated subjects has crowded the teacher's daily and weekly work plans. They are torn between programs and need guidance as to priorities.

(3) Potential Relief of Constraints

(a) Teacher Supervision and Assistance

In view of the lack of supervision in the schools and inadequate control of the classroom teacher by the school director, the use of textbooks might get worse before it gets better. Nonetheless, teachers have profited in some way from the training and would like to have more, in greater depth.

The teacher training program made no provision for follow-up, and perhaps here lies its greatest weakness. One teacher interviewed described it well when she said "They left us up in the air with training." "Now, they leave us to solve our own problems." This is the case, pure and simple. Teachers have no one to turn to. Unless supervisory services are restored and the technical capacity of nuclei and school directors raised, an effective textbook program is unlikely to survive.

When teachers were asked who would help them with follow-up, about a quarter named the school director. About a fifth mentioned the teacher trainers and nearly a third thought a specialist in textbook use would be most helpful. Only in exceptional cases was the nuclei director mentioned. Many nuclei and school directors would like to raise the level of confidence among teachers in the directors' ability to render technical assistance. They would like to

have their own training program on textbook use, claiming that it is uncomfortable for a school administrator to take classes with teachers.

(b) Textbook Conservation and Replacement

Many teachers are using the textbooks, and, encouraged by their teachers, students are using them out of school as well as in school. The books are deteriorating from constant use and will need to be replaced soon. The prospects for prompt replacement need to be determined before the beginning of the new school year.

Where the books were assigned to students for home as well as school use, some students had improvised book covers, but many had not. The books would have a longer life if they were covered. Teachers must be motivated to promote the preservation of these books, although not at the expense of not having them used. Teachers must be reassured that they are not personally liable for book losses. At the same time cooperation by both teachers and students is needed to get the most out of the books for the longest period of time.

4. Prospects for the Future

In closing, the evaluation team expects that the textbooks will be used and in time will be used better. The basic education system will improve because there is an abundance of educational expertise to move the system forward in quest of this goal. The team witnessed vibrant, young and intelligent students reading textbooks at various grade levels. It is these students who will push the teachers to operate at a higher quality level and it might be just what is needed to bring about maximum benefits to children via the use of this excellent set of modern textbooks.

B. CONCLUSIONS

1. Training

1. The training given teachers was of insufficient duration and depth to provide the competency base to effectively use textbooks. Most teachers need additional in-depth training to help them become more effective users of textbooks.
2. The effectiveness of teacher training was constrained by large class size and lack of audio-visual aids, practical demonstrations and "hands on" experience.
3. Motivation of teacher interest and dedication to learning the complex skill of textbook use was constrained by lack of course content that related closely to teachers' needs.
4. Overall effectiveness of training was limited by failure to gather information on the interests, perceptions and needs of teachers.

2. Supervision and Support

1. Effective use of textbooks has been constrained by the inadequacy of supervisory services.
2. Effective use of textbooks has been constrained by nuclei and school directors' inability to provide teacher guidance and counsel because of lack of knowledge and understanding of textbook use.
3. Textbook use has been constrained by teacher hesitation to accept and build a new role for themselves relative to their students.
4. Effective textbook use has been constrained by teacher uncertainty concerning the priority and utility of textbook use in relation to the many other programs being introduced in basic education.
5. Teacher concern for liability for lost or destroyed textbooks tends to limit textbook use.
6. The intensive training received by teacher trainers qualifies them to render continued training and supervision of teachers in textbook use.

C. RECOMMENDATIONS

1. Content of Textbooks and Teacher Guides

1. That the MOE textbook production staff explore the possibility of developing texts which facilitate revision at minimal cost.
2. That the MOE conduct an evaluation of textbooks before revision takes place to incorporate feedback from teachers and school directors.
3. That the MOE seek feedback from the nation's teachers concerning teaching strategies for use in teacher guides. Some mechanism should be devised to insure a steady flow of such suggestions.

2. Training

1. That the MOE include textbook use training for all pre-service education teachers.
2. That the MOE require that all professors of pedagogy in pre-service education institutions have a high level of expertise in use of textbooks.
3. That the MOE provide training to nuclei and school directors in the use of textbooks.

4. That the MOE consider establishing an in-service program during school vacations for more profound and timely training, with some kind of recognition for professional growth activities by teachers.
5. That the MOE consider video or live television programs presenting step by step sequence of textbook use.

3. Teacher Supervision and Support:

1. That the MOE redesign the distribution system for textbooks and instructional materials to provide more efficient service.
2. That the MOE obtain more precise enrollment data so that textbook demand and supply are in balance.
3. That each school provide for storage of textbooks when school is not in session.
4. That the MOE provide assistance to teachers of grades 1-6 in understanding a new role of guiding students to many sources of knowledge and discovering ways of applying it.
5. That the Salvadoran basic education system provide close and continuous supervision in the use of textbooks until it becomes fully accepted by teachers.
6. That the MOE communicate clearly to teachers that textbooks were provided for use and that the more wear of books the greater the use and benefit received by basic education students.
7. That the MOE assign the present group of trainers to the sub-regions as integral elements of the sub-regional offices in the role of teacher textbook use specialist, to provide technical assistance to teachers and their supervisors and promote the effective use of textbooks.

4. Research

1. That the MOE encourage teachers to do action research in the classroom without the use of complicated research techniques. Technological institutes, regional offices and faculties of education, particularly their graduate should be similarly encouraged to do research in the use of textbooks.
2. That the MOE seek ways (such as a newsletter) to record and disseminate this research to other teachers.
3. That the MOE consider how such a body of research relative to textbook use could be otherwise disseminated and made available for easy access by the entire educational community.

4. That USAID, USIA, IBRD, UNESCO and other international agencies invest a small amount of funding in offering rewards, prizes or special recognition for the best research papers.

5. MOE Policy

1. That the MOE establish a national policy on the use of textbooks by students.
2. That the MOE not hold teachers with such meager salaries liable for textbook losses.
3. That the MOE plan for textbook replacement be made as soon as possible.
4. That the MOE provide assurance to teachers that texts will be provided for all students in the new school year.
5. That the MOE prepare for the task of continuous revision of textbooks.
6. That the MOE include the costs of such revision and replacement in the ongoing budget of the MOE.
7. That the MOE develop as soon as possible a comprehensive system to measure the reading development progress of students at every level.
8. That the MOE establish a curriculum development department which should adjust discrepancies between the new textbooks and national curriculum expectancies and continuously revise curricula and rationalize the basic education programs to facilitate management by teachers.
9. That the MOE consider establishment of a curriculum center where modern sets of textbooks and other instructional materials from many parts of the world are gathered and displayed.
10. That the MOE consider identifying a series of strategically located schools to be used for observation and practical application by teachers in the use of texts with children.
11. Now that the MOE has a modern set of textbooks, instructional materials, and talent to produce supplemental reading materials, that it consider experimenting with early school leavers. "Open door schools" or "catch up schools" could offer programs in late afternoon and early evening. This second chance might assist such students to preserve what they have learned, and move further toward functional literacy.
12. That, since teachers have examined and used the texts, they be encouraged by the MOE to write short stories, poems or even texts.

V. PROJECT ADMINISTRATION

Summary of Findings and Conclusions

For project administration AID and the GOES agreed on the establishment of a separate GOES management unit eventually named "APRE." Arguing for a completely separate unit were two principal factors. Prevailing GOES salary levels were not sufficient to keep ministry staff from working at other jobs to supplement their meager salaries. Higher salaries for the separate unit would likely motivate a higher level of performance from professionals seconded from the MOE and other GOES agencies. Also, apart from such GOES professionals, the higher salaries would attract from the private sector a higher level of experience and expertise than would be available at prevailing GOES salary levels. A second argument for a separate management unit was that operating with grant financing from abroad, it could administer the project with somewhat greater freedom from GOES bureaucratic budgeting and accounting requirements and procedures than could the MOE.

The project design represented a compromise, assigning the special management unit a rather vaguely defined "coordinating" role rather than making it fully responsible for all aspects of project implementation. Substantial project implementation functions were left for the Ministry of Education. In practice, however, under pressure for expedited project execution, particularly over the final two years after a disastrous first two years, most functions gravitated to APRE from the MOE and, for construction most major functions gravitated to the UNM from APRE.

The concept of faster implementation performance lost some validity in practice. APRE itself had to be built largely from scratch, and had major growing pains of its own which were detailed in the interim evaluation. APRE was able to improve its performance substantially over the final two years, but still was often frustrated in its dealing with other Ministries, particularly the MOE, by resentment of higher salary levels and generally preferred status.

While the original concept was that APRE would continue in existence to serve other projects, in fact any new project appears too distant on the horizon to provide continuity for a majority of APRE staff. Although the MOE has offered to absorb all APRE staff, it seems improbable that many will be sufficiently motivated by the substantially lower MOE salaries. Thus, it appears quite likely that most of the experience and expertise gained by APRE over the last four years will be lost to the MOE.

A. BACKGROUND

The special management unit (SMU), Administration del Proyecto de Revitalization del Sistema Educativo (APRE) was originally created out of concern that activities of the project be implemented and resources allocated in a timely and effective manner. The creation of a separate unit to administer project implementation is not new to USAID/ES. Separate management units have been established for projects in water (ANDA), population (SATU),

public works (AMI) and agriculture (OCOPROI). All generally appear to share the same characteristics. They are initially conceived as temporary with a minimal number of personnel who are hired or contracted out of their respective GOES ministries. Salaries and benefits are usually higher in order to attract well-qualified personnel and to encourage them to devote 100% of their time to the job at hand. It is also envisioned that these units will have easy access to all divisions within their respective ministries and that coordination and the flow of information between the units and their respective ministerial divisions will be facilitated.

As originally planned in the Project Paper, APRE was to enable the project to effectively achieve its goals and purposes through time-phased implementation plans, budgets and management of project inputs. Project administration, however, was to be the responsibility of the Ministry of Education (MOE) Department of Construction and Maintenance (DCM). Technical assistance would be provided by a USAID-contracted firm for consulting and training services to the DCM. Both APRE and USAID were to have oversight responsibility for the contractor. Annex 14 indicates the specific functions of APRE as contained in the Project Paper.

Following approval of the Project Paper, a Grant Agreement was signed which charged the MOE through APRE with implementing an effective regional supervision system in order to maintain constant supervision of the repair and maintenance activities. APRE would also have a professional and support staff including technical specialists, such as engineers, architects and a controller and or accountants to maintain administrative and financial records. The major objective of the management unit stated in the project paper was to "enable (the Project) to effectively achieve its goals and purposes". Its responsibilities and functions covered the entire range of the implementation process including time-phased implementation plans, budgets, and the management of project inputs in accordance with approved plans. Additionally, APRE was to be responsible for all Project funds and for monitoring and reporting project activities.

The Grant Agreement indicated that supervision of the construction and restoration work would be performed by a qualified supervisory engineering firm. Eventually, pursuant to implementation letter (PIL) No. 31, A.I.D. contracted with project funds the University of New Mexico to supervise all construction and reconstruction activities including exterior works. Thus, the project administration and construction supervision services which were originally the responsibility of the DCM, were transferred to APRE and the UNM respectively, and the DCM's responsibility in the Grant Agreement was changed to attending to repairs beyond the capacity of the schools and to manage the preventive maintenance component including updating an inventory system to be used for work scheduling purposes. To carry out those responsibilities, the DCM would receive vehicles and locally procured tools and repair materials to carry out the system-wide school preventive maintenance program.

The UNM's original role was advisor to USAID/ES, MOE and APRE. UNM was awarded the contract on a non-competitive basis; its original Chief of Party worked directly under the Director of OET and was physically located at the USAID/ES. The evolution of the problematical contractual relationship between

USAID/ES and UNM is discussed under separate cover. For purposes of considering project management more generally, it need only be noted here that the UNM contract became the convenient place to turn for additional services, be they advisory or, as in the case of construction, operational. The one exception being procurement services which USAID/ES contracted from a U.S. procurement services agency, RONCO.

UNM's involvement in project implementation as distinct from an advisory role resulted from USAID/ES continuing concern for "numbers" and the realization on the part of USAID/ES and the UNM that APRE did not have the necessary expertise or institutional agility timely to fulfill the project objectives under Component 1. Thus, AID contracted with UNM for the project implementation role under Component 1 and UNM began soliciting bids and contracting with local construction companies.

Given the above brief background sketch, this paper will now examine the management role of APRE within the above context to determine what management procedures and skills were developed and implemented during the project implementation period that could be integrated into the GOES framework, especially in a follow-on project. This examination of the management component is not intended to provide an in-depth look at all areas associated with management; that was accomplished during the mid-term evaluation and the recommendations of that evaluation are part of the basis for the SOW of this evaluation.

This evaluation looked at 10 key areas within the management of the project, all of which relate to the purpose of this evaluation. These are:

- Organization
- Supply & Logistical Support
- Planning
- Management Information System
- Implementation
- Personnel
- Coordination
- Information
- Supervision
- Finance

In addition, at Sections II.A and VI.A we have examined in some detail the role of the University of New Mexico in Project implementation.

B. ORGANIZATION

1. Findings

APRE was originally conceived as a management unit that was to deal with procedural and compliance requirements necessary to carry out technical activities. As was mentioned in the interim evaluation, however, once project implementation begins, the emphasis often changes from how a management unit will proceed to what is to be accomplished, and the project focus narrows to view only the outputs as pressures mount to disburse funds locked into a tight

time frame. Thus, APRE which was originally conceived as a management unit with access to specific technical support, became transformed to a traditional internal administrative support role.

APRE has become an almost entirely independent unit from the MOE and is regarded enviously by different divisions within the MOE as an "island" or "little ministry". Under the previous government, APRE experienced continued interference from senior officials who occasionally used the project to gain political advantage. Add to this the lengthy delays APRE experienced with USAID/ES with regard to action plan approval, delivery of computers and tool kits, and one can appreciate the difficulties it experienced in trying to develop an effective management capability.

APRE's organization has undergone many changes since the inception of the project; but its most recent organization chart (Annex 15) developed during this evaluation is not unlike that presented during the mid-term evaluation of 1987. It comprises Technical and Administrative components with APRE Regional Offices remaining integrated into the implementation focus of the technical components, again with the exception of Component 1, which although not indicated, falls under "Obras Civiles".

There is regular communication among the different units and divisions within APRE with weekly staff meetings taking place that include the APRE Regional Offices. Improved communication between the units has led to stronger coordination among the functional units.

There is not, however, a "Manual de Funciones" nor a Procedures Manual. Instead of the latter, APRE uses the different Project Implementation Letters (PILs) issued under the Grant Agreement. APRE staff are knowledgeable about PILs as well as AID Handbook 11.

In line with the reorganization of APRE, is the regionalization that has taken place with the establishment of MOE Regional Offices in San Miguel, Santa Ana and Santa Tecla. The regional offices comprise a main building, a warehouse and a multi-purpose unit that may be used for training sessions. These offices have allowed greater facility of access to resources for the rural school principals, and school officials and community members who look to them as the source of material and human resource assistance.

There is insufficient communication between APRE and the different units of the MOE. This is understandable given the privileged status of APRE personnel earning higher salaries than their MOE counterparts, having sufficient quantities of materials and equipment -- including vehicles and fuel -- to carry out their work and one can appreciate how envy turns into resentment and communication ceases to exist.

Project implementation was unnecessarily hindered due to the "island" status of APRE. The communication breakdown affected all components and the delivery of services, including training, maintenance and distribution of materials.

2. Conclusions

- a. Creation of the special management unit to assume responsibility for project implementation created resentment on the part of the corresponding ministry resulting in breakdown of communication, lack of coordination and conflict between the existing Ministry units and the "special" one.
- b. The absence of a personnel management system and the lack of personnel records including job descriptions and procedures has hampered project administration.

3. Recommendations

- a. Where feasible, USAID/ES should consider ways to assist already existing management units for implementation and oversight purposes rather than establish additional ones.
- b. USAID/ES should assist the MOE in establishing personnel systems.

C. SUPPLY AND LOGISTICAL SUPPORT

1. Findings

a. Contractors

With the assistance provided by the UNM, the project was able to meet all of the quantifiable objectives. The procurement agency contractor, RONCO assisted the various components through the purchase and storage of commodities. On occasion RONCO was assigned responsibility for distribution of commodities with authorization of USAID and approval by APRE. RONCO did not provide technical assistance and in-service training to APRE in the area of procurement although this was a recommendation in the interim evaluation.

b. Transportation

According to USAID/ES 67 vehicles were made available under the Project. Two of these were reported stolen and a third was burned. Insurance payments have been received for two of the three vehicles and the third claim is being processed. At present vehicles are assigned as follows:

- 46 - APRE
- 19 - UNM
- 2 - USAID Contract Personnel

The contract personnel are awaiting the necessary approval and documentation to turn the two vehicles over to the MOE. UNM has already delivered 10 vehicles to the MOE. APRE has a Transportation Department which controls the assignment of vehicles, fuel, mileage, maintenance and trips. Fuel is purchased locally using "coupons". The person in charge of transport

maintains a meticulous account of all vehicle services provided. The vehicles are checked regularly by a contracted garage. In general, the Transportation Department is reputed to run a tight ship with regard to vehicle use and provide excellent support to APRE as well as to the MOE.

This latter point, however, was disputed by the DCM which indicated that although requests for vehicle assistance were made on repeated occasions, it was only in a few instances that APRE complied with the requests. It should also be noted that during this evaluation the teams used APRE vehicles for their trips to some 125 rural communities over a four-week period. In not one instance was there recorded by the chauffeur, information relative to the places visited or distances covered, nor was a request made by the chauffeur for a team member's authorized signature following daily use of the vehicle.

c. Inventories

Inventories of supplies and equipment are maintained by each project component; however APRE does not maintain a master list of all inventory.

The ostensible reason for changing warehouses from the MOE to those of the procurement specialist was insufficient space at the MOE; however the decision to change was made when it was learned that MOE personnel were receiving kickbacks on the warehouse leases. New MOE warehouses are in the process of completion.

d. Purchasing

Smaller items for APRE's administrative needs are purchased by APRE without involvement of the MOE. There is no purchasing manual; all purchases are made according to GOES procedures. Major commodity procurement, such as vehicles was handled by the purchasing contractor, RONCO, or for UNM's initial use, by UNM..

e. Distribution

Except for some distributions made by RONCO at specific request of AID, all distribution of supplies and equipment to schools and other Project activity sites was carried out for all components by APRE. Performance of the distribution system, particularly as to accountability, is discussed in detail at Section III supra.

The MOE is sufficiently competent to assume the responsibilities formerly carried out by RONCO as there are well-qualified personnel with ample experience in the MOE.

2. Conclusions

- a. Neither APRE nor MOE have maintained adequate inventory of equipment and materials received under the project.
- b. Distribution controls were lacking and procedures for distribution were not always followed for distribution of school furniture.

3. Recommendations

- a. The MOE should ensure that the effective supply and logistical systems developed by APRE be installed where necessary in related units of the MOE.
- b. APRE and MOE should also ensure that a complete inventory of all project materials and supplies be conducted prior to acceptance by the MOE.

D. PLANNING

1. Findings

a. Project Planning

There is widespread agreement that the project design was improvised under heavy time pressure, and that, combined with the failure of performance of the original base-line study contractor, led to the project not being planned according to real needs for the quantity of financial support available. The project was hurriedly designed by USAID/ES with insufficient involvement of Salvador in an attempt to respond to needs of El Salvador's political as well as educational systems. As a result of this hurried planning and, more importantly, the improvised implementation which followed, the majority of the schools which benefitted from the project are located in urban areas and not in rural areas. They are also concentrated in two departments (Morazan and La Paz) in El Salvador.

There still remains for the MOE real and urgent educational needs throughout the country even though the project has met its objectives in terms of classrooms constructed or rebuilt.

b. APRE Administrative Plan

APRE has still not developed an Administrative Plan. This was recommended in the interim evaluation in 1987. Since then, in spite of additional staff incorporated into APRE as well as changes in job functions, there is still no Plan.

c. APRE Management Plan

The interim evaluation also recommended that a management plan be developed which considered the requirements of the technical components. This

comprehensive action plan for the four technical components and a specific management plan for the fifth was to be compiled in a single document and would show how the various components would integrate implementation activities within a given time frame. The comprehensive action plan has not been fully implemented and the attempt to do so falls short of meeting the need.

There have been occasional delays in the review and approval of Action Plans by the Corte de Cuentas and USAID/ES.

Originally, the plans were envisioned as incorporating not only the ideas and expressed needs of the system as seen by project personnel, but those of the directors of the nuclear schools, school principals and teachers, Parents Associations, the Directorate of Infrastructure and Educational Information (DIIE) and the Directorate of Primary Education as well. The evaluation found few nuclear school directors and no school principals or teachers who were asked to participate in planning activities.

d. Lack of Communication and Follow-up

APRE would have had greater success if it had more contact with the various units in the MOE and if there had existed a better communication. Most importantly, chances for success would have been greater had there been designed from the initial stages, a follow-up system for the activities undertaken through the project.

As mentioned previously, working groups including USAID/ES, APRE, MOE and UNM were established based on a recommendation in the previous evaluation. These very likely could have played an important role in the planning process had they been continued.

2. Conclusions

- a. USAID/ES did not involve various levels of the MOE as well as the target population during the planning process.
- b. APRE has failed to incorporate previous recommendations concerning an Administrative Plan and a General Action plan into its management system.

E. MANAGEMENT INFORMATION SYSTEM

1. Findings

The contract between USAID/ES and UNM specified that technical assistance would be made available to develop, establish, and make operational, practical computer-based applications for education program management, control and decision making. The technical assistance was to include also assistance to APRE and the DIIE to learn the skills for maximizing the utilization of all available hardware and software. The interim evaluation recommended that the

MIS effort be integrated with the existing information base of the MOE in order to ensure MIS survival following the PACD and cited the DIIE as the necessary linkage to assure long term viability of the MIS.

According to a final report from the MIS technician, (Annex 16) work with the DIIE of the MOE began in February, 1987 although USAID/ES endorsement was not given until the last quarter of 1988. The technician took the responsibility of "making a contribution" himself by providing technical assistance without USAID approval. This clearly points to a lack of oversight and direction on the part of the UNM's chief of party, although as mentioned elsewhere in this report, project direction was dispersed among USAID, the senior staff at the MOE and the UNM representative in Albuquerque. Staff felt both a lack of direction as well as an unusual degree of freedom in doing what they saw as necessary. This was particularly true for the MIS.

APRE received training from UNM in the software, MS-DOS, OFFICE WRITER and LOTUS 123; training was not given, although it is indicated as having been in the above mentioned final report, in the software, Superproject Plus, and the STEP Modeling System.

The training was carried out over a 45 days period during May and June, 1988. A second course was given during September/October to the heads of the various sections who, in turned trained their personnel. Instruction was two hours per day. APRE rated the quality of training as very good and indicated that a UNM representative was present every day. UNM also assisted APRE in computer-related problems especially in resolving the matter of decimals in Component 1. APRE would have liked longer training in, UNIX, VENTURA and MULTIPLAN, which are more difficult to learn.

The Department of Infrastructure and Educational Information (DIIE) is the information processing unit of the MOE. It has units concerned with documentation, inventory, statistics, infrastructure and computers. It has two NCR and WANG CPU'S and eight terminals. It processes data from practically all the units in the MOE including Statistics, Human Resources and Finance.

DIIE received one day of talks on computer software and some training upon receipt of the NCR equipment in December, 1988. The training was in the software, INGRES, UNIX and "C" Language. Training consisted of 1.5 hour sessions, twice weekly and the presentations were regarded as good. The scheduling of training sessions was haphazard, however. There was no plan for the training nor a schedule the DIIE could follow. The training was regarded by DIIE as incomplete with insufficient follow up.

The MOE's Education Technology office has 1 computer. Its staff received computer training within a general training program which involved members from a variety of agencies. The computer training lasted 42 days from February 12 to July 15, but there was no computer available. When the computer arrived, the 36 students attending were divided into nine groups of 4 persons each. Each person had about 30 minutes per week of computer time. For some students the training was complemented by study at UNM in Albuquerque. The training was said to be well delivered but there has not been any follow up.

The Education Technology office has requested more training from UNM, but has not received a response to its request.

ODEPOR, the planning unit, experienced difficulty in getting UNM to train that office in the STEP. UNM eventually provided a technician whose purpose was to assist ODEPOR in developing a plan. The technician spent four months at ODEPOR but no plan has been developed.

The UNM developed a regional system in Santa Ana and coordination with the main system will either be done by modem or will be transported by disk.

Presently there are three MOE personnel being trained at UNM in computer programming and maintenance. Upon their return they will be responsible for implementing a model for a system to be used within the MOE.

2. Conclusions

- a. UNM staff were directed from USAID, senior management at the MOE and their head office in Albuquerque. As a result of this confused leadership, staff occasionally took it upon themselves to go beyond the requirements of the contract and to provide assistance to those units or individuals they considered in need.
- b. The UNM contractor's assistance in MIS was not well planned and was delivered to units of the MOE, particularly the DIIE, in a haphazard and incomplete manner with insufficient follow up.

3. Recommendations

- a. USAID should see that Action Plans define more precisely the objectives of technical advisory services.
- b. UNM should review and revise its policy of project management to provide more precise objective definition and closer oversight for technical advisory personnel.

F. IMPLEMENTATION

1. Findings

During the first two years of project implementation there were innumerable delays due to a variety of causes. Some involved lack of personnel, others lack of flexibility on the part of USAID/ES concerning funding procedures, failure on the part of one of the first technical assistance contractors to complete a baseline data survey, a lack of decision making on the part of USAID/ES and AID/W whereby it took one year to receive an answer concerning bidding procedure, and too much improvisation in implementation activities. Added to these were the bureaucratic steps involved in a project financed with external funds including reviews and approvals from local agencies, such as

SETEFE and Corte de Cuentas and their refusal to accept documents due to minor errors that resulted in many instances in substantial delay of payment either to APRE or to the local contractors.

The mid-term evaluation made recommendations that could have contributed to the flexibility of Component I.

UNM assumed implementation responsibility for Component I when it became apparent that without such reinforcement, APRE would not complete the project within the specified time period. The departure from the traditional manner of contractor selection to a lottery system has gained favor among practically all those involved.

Project implementation was facilitated with the installation in APRE of various representatives of the Corte de Cuentas whose purpose was to expedite the processing of payment and liquidation documents.

Given the recommendation in the mid-term evaluation to employ more staff using PL480 funds, APRE attempted to do so but was prevented from doing so by SETEFE which, given the GOES hiring freeze, insisted that any additional personnel be seconded from units within the MOE.

Distribution of furniture and other school materials was carried out in accordance with information supplied by the APRE supervisory engineers and confirmed by school principals. However RONCO is reported to have distributed numerous pieces of furniture on its own prior to the 1989 President Election.

Preventive maintenance kits were distributed by stages following training of those who would use and be responsible for them. However, as of this evaluation there are schools that have still not received maintenance kits.

Project implementation was also characterized by the involvement of MOE senior management in making decisions of a technical and political nature. For example, political intervention led to prequalification of a contractor who was not capable; selection of project schools according to proximity to politician's home bases, and replacement of participant training nominees proposed by MOE staff by others who lacked technical backgrounds. Neither UNM nor USAID/ES objected to such decisions if the selections met certain minimum standards.

2. Conclusions

- a. The project completed its construction objectives.
- b. AID/W delayed project implementation during the initial stages and over the past two years application of political "criteria" interfered with project implementation. This resulted in improvisations which were not included in the Action Plans.
- c. The quantity of school furniture delivered by RONCO is not known to APRE.

G. PERSONNEL

1. Findings

APRE experienced an increase in personnel following the mid-term evaluation although a hiring freeze (Decree 11) limited the number to be employed. There continued to be need for additional personnel in the Finance Department where the shortage has had serious consequences: (see Section V.K *infra*) While there was an increase in administrative personnel there was also simultaneously an increase in the demand for administrative services. Thus the demand for administrative services still exceeded the supply. The interim evaluation also discussed the need for oversight personnel to assure that procedures and regulations of those agencies involved in the various requirements of the project be adhered to. This has been accomplished by the installation of additional personnel in the administrative areas as well as that of representation de Corte de Cuentas.

At present there are 193 personnel, 46 of whom are appointed GOES employees and the remaining 147 seconded from the MOE. The Personnel Office of APRE also provided another count of 223 personnel. APRE personnel are organized in accordance with the organizational chart (Annex 15)

By Presidential Order to the Minister of Education, the Vice Minister of MOE under the previous GOES was named as project administrator and together with the project director, coordinated the role of decision making.

As there were no regular personnel evaluations carried out among the various staff levels in the project, the actual capabilities of the personnel were unknown as were their achievements. Some of the personnel selected to work in the project as trainers were not really qualified to fill that role according to teachers and principals who had been trained through the project. Staff development and motivation of staff were undertaken by way of study tours to the U.S. Some of the participant selection, however, was not based on merit so much as on political factors of concern to MOE senior management.

Training of project personnel as well as to staff of other MOE units was carried out by UNM either directly or through the projects' participant training component. Some personnel received Masters' Degrees in Education or Public Administration while others attended courses in Pedagogy, Planning, Preventive Maintenance, Construction, and Computer Science. While this training was beneficial to the individuals involved, many who were trained will not stay with the MOE following the PACD.

Training for Project personnel in project implementation and administration was carried out by SETEFE. Specifically, they were trained in accounting, Regulation 1204 which concerns GOES rules governing financial transactions, planning, and expense vouchers and reporting. This training was carried out during the first part of 1988.

The project benefited personnel of the MOE with the unplanned construction of regional offices. With destruction of the entire Ministry of Education

building in the earthquake of 1986, the GOES was forced to rent many offices in San Salvador as well as in the eastern and western regions. The new regional office buildings provide sufficient space for some units of the MOE and will save the GOES the costs of renting space.

The MOE has the human resources necessary to develop a project of the same nature and could do so with short-term, outside technical assistance.

2. Conclusions

- a. Personnel administration is not efficient. Personnel lack specific knowledge about their job responsibilities, and personnel evaluations are not carried out.
- b. USAID/ES neglected its oversight role with regard to participant training. In some instances, selection of personnel for training was based on political considerations and resulted in many persons trained in education whose training will not be utilized following PACD.

3. Recommendation

- a. USAID/ES should be more watchful of participant training selection in seeing that project needs are met.

H. COORDINATION

1. Findings

As noted above, APRE ended up providing virtually all the management support necessary for the project components although there existed within the MOE certain departments and staff with the necessary skills and experience. These departments included the DCM, the legal and education technology offices. As project implementation continued and APRE assumed more and more project support, APRE distanced itself from the units intended to coordinate with the project. Insufficiency of communication between the Project and SETEFE, Corte de Cuentas and USAID/ES led to significant delays in project support.

Within APRE, adequate coordination was provided through weekly meetings with the component directors and their subordinates. During these meetings problems were discussed and decisions made, objectives were reviewed and goal attainment measured in terms of available resources. Further, the weekly meetings provided the mechanism for revision of the Action Plans. Each component director also held a weekly meeting with his staff to review the corresponding Action Plans and goal attainment.

Coordination outside the Project was mixed. There did exist coordination between APRE, UNM, USAID/ES, SETEFE and the Corte de Cuentas and the Vice Minister of MOE following the mid term evaluation. As discussed under

separate cover, however, relations between USAID/ES and the UNM were strained for an extended period of time.

There was not sufficient coordination or communication between the schools served and the project. This is evidenced by the lack of knowledge on the part of the school principals and teachers concerning the role of APRE. As mentioned previously, coordination with the other MOE units was also lacking although it did take place when APRE began the feasibility study regarding the use of texts. At that point APRE did consult with the Primary Education Division of the MOE.

Coordination was also lacking between SETEFE and the DIIE and information that should have been made available to SETEFE and APRE was delayed by up to 12 months because DIIE had not updated the information.

2. Conclusion

a. There was inadequate coordination between APRE and the MOE units.

I. INFORMATION

1. Findings

APRE publicized the program through the news media by way of school inaugurations, etc. Thus, information about the project was made available to those directly connected with the project's implementation and efforts at relating the project to the public were carried out. However, not all the public shared the same experience and the extent to which project information was absorbed at the rural population level is questionable.

School principals and teachers had only a superficial knowledge about APRE and that concerned only the assistance they received. The principals presented their needs to the directors of the nuclear schools who more often than not failed to respond to their requests.

There never was carried out a pilot project in data collection, and opinions regarding the collection of data for use in APRE ranged from "dispersed" to "way behind schedule" to "not useful for anything". As an example, the DIIE is currently processing data that was collected in 1995. The MOE Primary Education Division found that data collection was highly centralized and disorderly and that it had never received technical assistance in this area. And APRE stated that its data collection system was inadequate although it did receive technical assistance in data collection from UNM. ODEPOR indicated that it has not used the hardware received under APRE, and DIIE also stated that it was not using the hardware as it had not received training.

Personal memories play an important role in data collection. According to DIIE, Primary Education and APRE, neither they nor the MOE nor the UNM are working with reliable information but rather with preliminary data derived largely from the memories of their staff.

Another area affected by the lack of information is the School Inventory. APRE is carrying out its own computerized inventory and the MOE another. DIIE knows of an existing inventory, but is not certain that it contains project information. The evaluation team's sample of less than 5% of the official list of 3000 odd primary schools came up with two schools which did not exist.

At the school level, the principals and teachers indicated that they do include in their inventories the materials received from the project. Coordination of information between GOES agencies is lacking. According to the Oficina de Delegacion de La Corte de Cuentas, there is no coordination whatsoever between the Corte de Cuentas and the Inventory Office of the MOE. The equipment and supplies currently available under the project will soon be delivered to the MOE.

APRE's activity is guided and monitored by Action Plans which also serve as follow-up mechanisms for work completed. It should be pointed out that these Action Plans are necessary for budgetary and funding purposes as well as for planning the work within each of the project components. The extent to which they are being used for project implementation was not assessed.

2. Conclusions

- a. Internal communication among the various levels of APRE has been adequate.
- b. There exists between APRE and the MOE duplication and multiplicity of statistics resulting in substantial confusion and inconsistency of information.
- c. Lack of coordination between APRE and the Inventory Office of the MOE will likely produce significant accountability problems, particularly with the transfer of inventory following PACD.
- d. Communication with the target population, i.e. school principals, teachers, etc. is deficient, with very few communities informed about the project and consequently community participation is lacking.
- e. The multiplier effect that was envisioned as taking place through training offered under the project has produced few results due mainly to a lack of follow-up.

J. SUPERVISION

1. Findings

School construction and the reconstruction of schools have responded in great part to a real need of many of El Salvador's rural communities especially for those schools which have had little, if any, contact with the MOE since their schools were built. However, the 2800 classrooms constructed under APRE

reflect only a fraction of the educational needs that must be met in El Salvador.

Supervision was carried out largely under school construction and reconstruction, Component 1. School construction and reconstruction was supervised by UNM with a cadre of locally hired engineers with APRE involved marginally in contract and payment approvals. On occasion supervision was carried out by unqualified personnel.

Supervision for the remaining components was carried out by visits to the schools, through direct evaluations by the promoters in follow-up sessions and seminars. However, these were infrequent, if at all. A mechanism for receipt of completed works was in place, but there was no subsequent visit to ensure that the completed classrooms were free of latent defects, etc. Supervision also lacked a mechanism for quality control with respect to latent defects which were not discoverable until after school furniture and equipment was turned over to the schools.

Initially, supervision was also hindered by lack of vehicles.

2. Conclusions

- a. The lack of field supervision and follow-up is one of the chief failings of APRE, the Project and the educational system.
- b. Components 2, 3, and 4 were supervised sporadically but without significant follow-up, much less evaluation.

K. FINANCE

1. Findings

The Price Waterhouse accounting firm recently informed USAID/ES that it had suspended its audit of APRE. This action was taken following several requests by Price Waterhouse for financial information from APRE. According to the auditing firm, APRE is behind more than a year in its accounting. This is largely due to the shortage of personnel in the Finance Department, a situation that existed in 1987 and was noted in the interim evaluation.

Several of the findings and recommendations in the previous evaluation dealt with the processing of financial documents and the facility of communication between those involved in project finances.

An examination of the current situation reveals that USAID/ES is generally on time with regard to informing APRE about deposits, although there have been instances where there is late notification. The Regional Finance Center in Mexico City is operating in a most flexible manner with regard to disbursement of funds. Likewise SETEFE is said to be successful in its efforts to approve fund disbursement, generally in a period of from 10 to 15 days. SETEFE has

also set up an amendment procedure for Action Plans to accommodate changes, and approvals are made in a timely manner in almost all instances.

Another recommendation in the previous evaluation dealt with the use of PL480 funds, suggesting a project agreement amendment clearly stating its objectives and the mechanism to be employed for use of those funds. Since then the use of PL480 funds has been determined in accordance with the project's Action Plans by means of appropriate regulations and project implementation letters. A project amendment was not necessary. Funds were reassigned in order to distribute texts in the schools, and there is now adequately clear definition of the use of the PL480 funds. For example, SETEFE would not allow APRE to use PL480 funds to employ new personnel, but instead required that new personnel be seconded from the MOE. Additionally, SETEFE feels that all of the technical components of APRE (excepting Component 5) are presenting Action Plans that are detailed and specific for the use of funds.

The assignment of Corte de Cuenta personnel to APRE has facilitated the flow and approval of project documentation, although it was indicated that the Corte de Cuenta does not have standard criteria regarding transactions of funds deposited in SETEFE, and at times is said to obstruct transactions. The Corte de Cuenta personnel assigned to APRE during the past 27 months have helped out considerably in the processing of financial documentation.

Decision making concerning financial management is based on the Action Plans. The amount of funds for each component was sufficient and has been spent, or will be spent prior to the extended PACD.

2. Conclusions

- a. The Finance Department does not have sufficient personnel to operate efficiently.

3. Recommendation

- a. Provide sufficient financial personnel to APRE in order to comply with accepted accounting standards and complete the Price Waterhouse audit before year end 1989.

VI. IMPACT ASSESSMENT

A. EDUCATIONAL IMPACT

1. Access

Four hundred new classrooms were constructed and 1818 reconstructed, providing places for about 177,000 students on double shift. If the schools were to operate on three shifts daily, the access potential would be 265,000 places.

In the field study, a teacher-pupil ratio of 45 was rather constant. Rarely did we see one teacher with just a few students. If any thing, it was beyond 45. We did not find a school where admission was refused because of overcrowding.

~~Data was difficult to gather and not very reliable.~~ As compared to enrollment of nearly 70,000, the sample study data showed about 4,600 students of basic school age, or roughly 1 in 15, out of school. It appears small but it must be noted that many of the school directors do not do a school census to confirm such important school planning data.

The data collected in the sample study indicated there are approximately 9,548 students under- and over-age for their grades (1-6). Ages range from 5 to 30. This represents about 14% of the total enrollment in the sample. The first grade accumulates many of these overage students from lack of a well thought out promotion policy. If teachers feel that students have not dominated expectations at each grade level, they will not promote the student to the next grade. On the other hand, now that textbooks are a significant part of the basic education program, teachers might do group teaching and be willing to accommodate the overage student in a lower group within the higher grade, rather than force the student to repeat the same grade one or more times. School directors felt this figure on age/grade differences was relatively small and that it is diminishing each year. The textbook program with improved capacity to monitor reading and learning development should help reduce the numbers of overage students.

The fact that the data shows some underage students attending school speaks well for access. It could signify that the mother cannot care for them and they must go to school with their brothers and sisters. Hence the school has gained students by granting access to underage students in the first grade. The fact that a sizeable number at ages 12 to 15 ~~and ages 20 and over~~ remain in the primary grades despite continuous failure also speaks well for the accommodating educational program and social climate of the school. X
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We found cases where a great deal of effort was made by the director to accommodate students, especially if the school had only four grades and there were sizeable groups of fifth and sixth grade students. The director put the school on double shifts and provided programs for these students who would have had nowhere to go. We saw many schools where this was being practiced, reflecting considerable concern for the welfare of students.

2. Quality

~~It was not feasible to measure the quality of education.~~ There was no baseline data on quality. At present the system does not use standardized testing of student achievement. In any event, quality-related interventions from this project have been too recent, within the past year or so, for significant measurable impact to be reasonably expected.

The quality of the basic education system could, however, improve relatively rapidly now that project resources are in place. Some 18,000 teachers have had at least an orientation on how to use textbooks. Whereas they are not as effective in the use of textbooks as they will be, they are not refusing to use them. Further, there appears to be an interest on the part of nuclei and school directors to participate in textbook use training. They are anxious to regain the confidence of teachers in their ability to offer assistance to improve the instructional program.

The textbooks are so written as to guide the learning process. This is significant in a country where teachers for too long have been in control of course content with little or no monitoring. If textbooks are used properly with close observance and implementation of the teachers' guide, there will be more assurance that students are progressing in some uniform way in the acquisition of knowledge and needed skills. This contributes to the feasibility and effectiveness of standardized testing.

The project left about 40 skilled and well-trained trainers in use of textbooks. There is a place for them in the sub-regions to continue teacher training until all teachers are operating at a desired level of competency. If they are thus utilized in follow-up training activities, they would be instrumental in raising the quality level of education:

Frequent checks by the evaluation team provided evidence that students read ~~with comprehension.~~ Furthermore, they like the books and want to use them. They will force the teachers to become competent in their use and hopefully go beyond so that they can guide knowledge acquisition more generally.

The textbook program challenges educators all over the country to identify problems and research them. The dissemination of such results would assist more effective use of textbooks and, in turn, have its impact on the quality of education. If teachers are encouraged to do action research on their experiences with the use of textbooks and the MOE finds a way to disseminate it, this too could lead to innovative approaches to teaching with textbooks.

B. COMMUNITY DEVELOPMENT IMPACT

1. Design Concept

The project was designed primarily to deliver training, manuals and tools to the schools in order to facilitate preventive maintenance of school facilities by teachers, students, parents and others in the community. The major focus

of the project has been on the schools, rather than on the community. Project interventions were to encourage school personnel to promote community collaboration; they were not designed to promote community initiative or development per se.

2. Project Impact

The communities--particularly parents--are providing a great deal of support to their schools in the form of monetary and labor contributions. In most cases they were doing so before the project began, both because MOE budget limitations force the schools to rely very heavily on community resources and because education is important to people as a means to improve their children's lot in life.

It is evident from our survey ~~that the physical condition of their children's schools~~ many indicated that the condition of the school had some influence on student attendance (given any option, for example, they would choose a nicer school over one in poor condition). The condition of the school is also important to some community respondents as an indicator of community image and local pride. Some parents said that the learning environment affects student motivation and performance to some degree.

It is difficult, however, to assess the degree to which project interventions have increased community collaboration. It is clear that linkages between the ~~school and the community~~ communication with regard to the program has not been as effective as it might be, principally because of lack of follow-up. Another important factor limiting community collaboration--and certainly limiting any possibility of community initiative--is the limited degree to which people in the community have received training in preventive maintenance. Training more people is essential in order to create within the communities that critical mass of interested citizens which will provide support to the schools, take an active part in decision-making and share information, resources and responsibility. At present, this is occurring only to a very limited degree--most of the members of the Parents' Association we interviewed knew little about the program and had no real voice in planning projects. They simply provided contributions when requested, to the best of their ability.

As noted in section II.C. above, the project's most effective contribution has been the tool kits, which in many schools are used directly by students or parents to carry out school improvement projects. Given the prevailing cultural division of labor, most direct labor using these tools is provided by men. Therefore, provision of the tools may be a means to encourage greater participation in school maintenance and improvement by fathers, given that, overall, mothers were most often cited as the principal collaborators. ~~Without baseline information for comparison, we are unable to document this supposition.~~ It is clear, however, that in light of the high proportion of woman-headed households in some areas, the questions of who in the community should receive training, who will use these tools and what types of

collaboration are expected need to be carefully considered in order to facilitate effective participation.

C. OVERALL IMPACT

1. Numbers and Development

On its face this project presents the achievement of numerical targets within the original project implementation period. As detailed elsewhere, 2,800 schoolrooms have been built or refurbished, 18,000 teachers have been trained in the use of textbooks, 3200 schools will have been reached with preventive maintenance training and tool kits, and over 3600 schoolroom sets of furniture will have been delivered to schools throughout the country along with various other educational materials. That all of this has been done even close to the original project completion date of September 30, 1989 represents outstanding effort by many people, particularly in view of the slow start reported in the interim evaluation. Virtually all of those schoolrooms were built and those teachers trained within the last two years of the project. *

Looking beneath the figures, however, we find ~~little or no~~ developmental impact, especially in terms of ~~management~~. Although 2,800 rooms have been built or refurbished, virtually all management of that construction was carried out by an AID contractor, University of New Mexico. APRE was involved only peripherally and the MOE hardly at all.

Although 18,000 teachers were trained in the use of texts in information sessions, there was little follow-up to provide assistance in the application of such training or otherwise to see that it was used. To the extent that those trainers were employed by APRE at substantially higher than normal salaries for the Ministry of Education, it is far from certain that such training capacity would continue.

Similarly with respect to the training for preventive maintenance, there appears to have been substantial lack of follow-up ~~to ensure any system~~. Further for procurement of furniture and other educational materials there was no pretense of improving procurement capability of the Ministry of Education. Rather a U.S. purchasing agent was used from the very beginning for all procurement and that contractor, RONCO, did not respond to the interim evaluation recommendation to pass on the benefits of its experience and expertise to the MOE and other Salvadoran implementing agencies. To AID's credit, however, it did encourage RONCO to use Salvadorans to the extent possible and those skills developed by Salvadorans will continue in the private sector at least of El Salvador.

Although APRE was slow starting, implementation capabilities were eventually built. Unfortunately, however, professional staff was largely drawn from outside the Ministry of Education. They, along with those detailed from the Ministry of Education, were paid premium salaries and not many are expected to continue with the Ministry of Education. Accordingly only part of that

implementation capability can be expected to remain with the Ministry of Education.

While little has been left behind in terms of building the Ministry of Education as an institution, it is not yet too late to realize more return on some of the investment in the project. In the areas of textbooks use and preventive maintenance in particular, there are ~~opportunities for a~~ ~~successful project to build on existing investment by strengthening~~ ~~institutional capacity for follow through in production, training and~~ ~~management~~.

2. Shorter Term Political and Economic Impact

While noting the relative ~~lack of development impact of the project, it is~~ important to note the political context in which the project was developed and executed. AID is an international development finance agency; but it is also an important instrument of U.S. foreign policy. It was considered especially important to U.S. foreign policy toward El Salvador in 1984 to help the Government of El Salvador prove that democracy can work, that a freely elected government, with all its political encumbrances, can deliver to its people.

Viewed from this perspective, numbers gain importance. They reflect high levels of presence and visibility of the project throughout the country. Further, with but few exceptions, these schoolrooms are in use, not just built for the sake of presence.

Moreover the construction of those schoolrooms provided employment to Salvadoran construction contractors and their employees at a time when the construction sector of the economy was otherwise severely depressed. The UNM engineers estimate that the project provided short term employment and 13.3 million colones for more than 4,000 rural unskilled laborers. Some of these laborers learned new skills in brick laying or carpentry to provide a base for future employment. Further, approximately 20 million colones were spent on locally produced construction materials: bricks, cement, sand, roofing and paint, providing employment and wages to the suppliers.

Similarly the furnishing of these and other classrooms gains importance as ~~wide spread demonstration of a democratic government's efforts to serve its~~ ~~people.~~ The textbooks and preventive maintenance elements of the project are less visible in their presence and related less to the political rationale. Nonetheless, the tool kits especially, along with promotion efforts extended to communities under component 2, certainly had their political impact.

El Salvador's balance of payments benefited substantially from the conversion of approximately \$30 million to cover local costs of the project.

When faced with the alternative of taking longer to deliver such impact using the Ministry of Education's limited capability and building such capability in the process, the U.S. Government through USAID chose to get more, faster by turning to the U.S. contractors, University of New Mexico and RONCO to deliver the goods and buildings as rapidly as possible.

Without questioning the wisdom of such decision, we sense that the situation in El Salvador now has evolved sufficiently and in such way as to permit more emphasis on developmental input for future projects in the education sector.

ARTICLE I - TITLE

Education System Revitalization - Project No., 519-0295

ARTICLE II - OBJECTIVE

The primary objectives of this end of project evaluation are to: 1) assess the extent to which recommendations from the interim evaluation were carried out; 2) to assess the manner in which resources were provided in accordance with agreements between USAID and the University of New Mexico (UNM), between USAID and RONCO, and between USAID and the Government of El Salvador (GOES); 3) assess how these same resources are being utilized to assist the GOES in bringing the accessibility and effectiveness of public primary school education back to near pre-conflict levels; 4) examine the management of the project by USAID, the UNM, the GOES and by the procurement contractor RONCO; 5) identify constraints that affected project implementation and the resolutions for those constraints; 6) evaluate the overall development impact of the project to the extent possible; and 7) cite lessons learned and make recommendations to guide future A.I.D. projects of a similar nature in El Salvador and elsewhere. This evaluation is a normal end-of-project activity required by USAID.

A major purpose of USAID/San Salvador's education sector strategy is to improve the capabilities of the MOE, in project design, implementation and evaluation and to expand cooperation between the private and public sectors in all areas of education. Accordingly, this evaluation will utilize local educators and representatives of the private sector.

This scope of work includes implementation details to assist evaluation design, taking into account; 1) the lack of security in many rural areas, 2) the unavailability of reliable rental vehicles for field trips to isolated areas, and 3) the need to integrate MOE and private sector representatives into the evaluation design and information gathering process.

ARTICLE III - STATEMENT OF WORK**Background:**

USAID, and other donors have been providing assistance in the Education sector to El Salvador for many years. In the seventies, there were dramatic increases in the availability and quality of public primary school education. These improvements abruptly ended in 1979 when the guerrilla war began to escalate, leading to an immediate decline in almost all development sectors. The decline was especially noticeable in the primary public schools where attendance levels and the quality of education fell sharply. The situation continued to deteriorate through the mid-80s. In 1986 a disastrous earthquake damaged or completely destroyed hundreds of primary education schools

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throughout the country, adding additional problems. It became obvious that the overall situation would continue to deteriorate. To address the immediate problem, at the short term level, and to try to slow down the decline in primary school education, USAID designed the Education System Revitalization Project.

The Education System Revitalization Project (Project No. 519-0295) was initiated in April 1985. The authorized A.I.D. funding level for the project is \$37.6 million in grant funds, of which the entire amount has been obligated through a Grant Agreement and Agreement Amendments with the Government of El Salvador (GOES), the grantee. The GOES committed itself to providing, during the life of the project, a counterpart contribution in local currency equivalent to \$13 million. The Ministry of Education (MOE) is the implementing entity and project administration and coordination is the responsibility of a special management unit (APRE) which has been created within the MOE under the project. The Project Assistance Completion Date (PACD) is September 30, 1989.

The purpose of the project is to assist the MOE to restore the effectiveness and accessibility of the primary educational services in El Salvador to near pre-conflict levels. The project has five components: 1) classroom construction and reconstruction; 2) school maintenance; 3) classroom furniture, equipment and teaching materials; training (originally textbooks); and 5) project administration and management.

The interim evaluation in July 1987, reported the following findings: Component I (classroom construction and rehabilitation) was seriously delayed in implementation; Component II (establishment of a nationwide school maintenance system) had carried out 25 pilot projects, produced and distributed kits and manuals, and established regional school repair activities (however, the GOES rejected the establishment of a national school repair system as unrealistic given the Decreto 11 hiring freeze); Component III, (procurement of school furniture and equipment) was on schedule; Component IV (textbook publication) had changed focus. Due to IBRD assuming responsibility for textbook publication the project financed printing and distribution of curriculum guides and teacher orientation; and Component V (the special management unit) had not been effective due to inadequate role and procedural definition and understaffing.

The major recommendations were:

1. Do not limit provision of school equipment to project constructed schools.
2. Prepare a more feasible classroom reconstruction plan.
3. Re-examine role of regional office in community and devise a realistic plan for project support to institutionalize school maintenance;

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4. Develop a systematic, relevant and feasible management for the special management unit and provide needed additional staff.
5. Amend the Grant Agreement to increase Pl 480 counterpart contributions to provide needed MOE staff.
6. APRE, SETEPE, and USAID/ES jointly revise the Action Plan to (a) coordinate and integrate the 5 components in one document, (b) facilitate fund disbursement mechanism, and (c) establish an effective and efficient amendment process;
7. Provide training to APRE, MOE, and SETEPE to improve coordination and increase skills in administration and management, including construction, contracting and procurement, budget-planning, reporting, etc. and
8. Integrate the planned MIS with existing information base of the MOE, and include regional and subregional data elements.

Specific Tasks:

The contractor will work closely with USAID to develop a final detailed implementation plan that is acceptable to and adjudged to be feasible by USAID, which will achieve the evaluation objectives outlined in Sections II and III of this delivery order.

The evaluation design and implementation plan should be accomplished with the full involvement of the local MOE and private sector team members. The experience and knowledge of the local team members will be invaluable to the team, and the evaluation exercise will add to local expertise in evaluation and help to develop a field oriented think-tank human resource pool for advising USAID, and the MOE on future primary school issues.

The contractor will collect and analyze data, and draft a report which follows A.I.D. project evaluation guidelines and formats. For each question stated below the report will cite findings (data); Conclusions and Recommendations. The report will include an executive summary that follows the A.I.D. Project Evaluation Summary (PES) format.

Areas of Investigation:

Question No. 1:

To what extent were recommendations from the interim evaluation acted upon?

Question No. 2:

Have the inputs (resources) provided in that manner described in USAID agreements with the UNM, RONCO and with the GOES?

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Question No. 3:

What is the overall project impact on the primary school system in relation to the project purpose? To what extent has the project achieved its stated purpose? To what extent has the project achieved its stated purpose? Are the resources provided under the project being utilized to increase accessibility and effectiveness of public primary education?

Question No. 4:

How can existing primary school level resources be more effectively utilized to achieve the project purpose?

Question No. 5:

Describe project management and procurement structures and procedures of USAID, MOE and the contractors. Identify problems and promising practices.

Question No. 6:

In respect to the design and implementation of the project, what are the lessons learned?

The contractor will develop a well defined strategy and questionnaires during the first week for answering the above questions. These questionnaires, when feasible, will disaggregate data by gender. USAID will approve both the approach and the questionnaires prior to their use in the field.

Illustrative Procedures:

A. General Responsibilities:

The MOE and private sector representatives working in collaboration with a contractor specialist serving as field team leader are responsible for gathering data using the guidelines developed by the contractor.

B. Interview Phases:

There will be 3 interview phases. Each field team will interview in a different region for up to 5 days during each phase. Each field team will visit all three regions of the country during the 3 week field research period.

C. Random Sampling Procedures:

A list of all project schools, and the project resources provided to them, will be made available to the contractor on day one of the evaluation. From this list, a random sampling list will be

established. This list will be reviewed and all schools in inaccessible areas excluded. From the remaining schools, a final list of school groupings in adjacent areas will be developed. Each team will complete evaluations at 3 schools per day.

D. Urban and Rural Schools:

At least 15% of the schools will be from marginal city/city areas; all the remainder will be in rural areas. Ten percent of schools will be non-project schools.

E. Interview Forms:

Interview forms will be developed and used to answer each of the major question areas mentioned in Section III (Tasks). USAID will review all interview forms prior to their usage in the field.

Recruitment of Personnel:

1. The contractor will be responsible for hiring all evaluation team members except those working for the MOE, and the driver-guides.
2. On day one of the work schedule, USAID will provide the contractor names of private sector organizations who may assist in identifying qualified persons to act as the Assistant Evaluation Team Leader, as field research persons, and as support staff (clerk-typist, secretary, and translator). The contractor will select his staff using these organizations or through other sources, with USAID concurrence before they are hired. USAID will alert the private sector organizations of the evaluation staff requirements and of the qualifications, but USAID will not make individual recommendations or assist in the actual hiring of field research staff persons.

The contractor will always have available one extra private sector team member in addition to those identified in the organizational chart in paragraph III. This person will participate in all activities and travel daily with one of the field teams as an observer. He/she will be completely familiar with the responsibilities of all interview team members and be prepared to act as a substitute if necessary.

3. MOE Field Research Team Members: USAID will request the MOE to provide 7 persons to serve as field research team members (include one alternate). USAID will not suggest individuals but will approve the names of persons submitted by the MOE. USAID will request that persons having the following qualifications be made available:

- primary education background with at least 4 years of teaching in primary schools (3 persons);
- background in school construction and maintenance (1 person);
- background in development of primary school teaching materials (2 persons);
- background in general program and planning of educational activities for primary schools.

Illustrative Implementation Schedule:

Evaluation Set-Up - Days 1-5:

Evaluation Team Leader, Admin. Assistant and Assistant Team Leader begin work:

- USAID briefing
- develop final implementation plan by NLT 5th day.
- contractor and MOE briefing/orientation
- hire local team members
- review project documents

Evaluation Team Training/Orientation - Days 6-7:

Field Data Collection - Days 8-20:

Preparation of Draft Report - Days 21-25:

Briefing on Evaluation Findings - Day 26:

Revised Draft Report to USAID - Day 30:

ARTICLE IV - REPORTS

Present a written draft report English and Spanish to USAID at least 7 working days before team's planned departure date, followed by a feedback session with USAID, contractors and MOE.

Present a written final "draft" to USAID, incorporating feedback as appropriate, prior to departure.

Provide 15 copies in English and 15 copies in Spanish of the final approved report.

Final Report:

The contractor will develop a final report using the standard USAID Evaluation Report format, including PES format for the Executive Summary.

The contractor will develop a final report using the standard USAID Evaluation Report format, including PES format for the Executive Summary.

The report will contain the findings and conclusions and, based on these, a set of recommendations that can be acted upon by the USAID and/or the GOES in the design and implementation of future projects. It shall contain, but not be limited to the following:

- A. Paginated table of contents:
- B. A copy of the scope of work under which the evaluation was carried out;
- C. A description of the methodology utilized to carry out contracted tasks will be explicitly outlined, and any deviation from the contracted scope of work will be documented and explained;
- D. An executive summary including the purpose of the evaluation, the methodology used, findings, conclusions, and recommendations; it should be complete enough so that the reader can understand the evaluation without having to read the entire document; the summary shall be a self-contained document;
- E. A clear presentation of evaluation recommendations, and lessons learned in separate sections of the report, so that the reader may easily locate them.

ADDITIONAL REQUIREMENTS

- A. The contractor will meet weekly to brief Mission and MOE on the evaluation.
- B. The contractor's Chief of Party and team will present a draft report and brief Mission, contractor and MOE 5 days before the end of their stay in El Salvador. The briefing will cover the findings, conclusions and recommendations of the evaluations team.
- C. The USAID will review, suggest changes if necessary and make comments to be incorporated into the final report as appropriate.
- D. The final report with 15 copies in English and 15 copies in Spanish will be due 20 days after the contractor has USAID approval for the final report.

This evaluation was a collaborative effort of a U.S. consulting firm, the Institute for International Research, the Government of El Salvador's Ministry of Education, and certain other Salvadorans. The U.S. consultant representation included six members, four specialists in project management, engineering, community development, and education respectively, and two generalists including the Chief-of-Party and an Assistant to Chief-of-Party responsible for logistics and editing.

To participate full-time in the evaluation the Government of El Salvador selected seven highly qualified administrators, including two with experience in construction program management, of which one was an architect. -

Upon arrival on El Salvador the advance delegation of Chief-of-Party and Assistant, with screening assistance from USAID, recruited as Assistant Chief-of-Party an American residing in El Salvador with considerable managerial experience as an executive of an American school. He in turn helped with recruitment of eight Salvadorans from outside the Ministry of Education. The recruitment process along with the various arrangements to establish a support office for an evaluation team of 22 people, consumed the first five days in El Salvador. The Salvadorans from outside the Ministry of Education included the following disciplines: engineer, university professor, five teachers and former teachers, three with extensive rural primary world experience, plus a rural community specialist from the Ministry of Agriculture.

Following recruitment, the team participated in a two day training session led by the U.S. consultants, much of which session consisted of on the job training in developing functional area questionnaires for field work.

For this work, as well as much of the later work in the evaluation, the team was divided into four functional teams for administration, community development, administration, education and engineering/construction, respectively. Each functional team developed its questionnaires to be used in the field research as members of the interdisciplinary field teams.

For field research the team divided into three interdisciplinary teams of five to six members each, typically including an engineer, a community development specialist, an education specialist and a person experienced in education management. In addition a fourth team concentrated principally on management issues at the headquarters of the implementation agencies in San Salvador.

The field teams proceeded to the field for two days to test their questionnaires. They then returned for one day to incorporate their field experience into the final questionnaire.

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Then followed two and a half weeks in the field interrupted by one Salvadoran holiday, which was used along with intervening weekends for processing data and producing preliminary conclusions and recommendations. Then in the final week of the evaluation a draft report was submitted to AID Mission and discussed with concerned members of the Mission prior to departure so that Mission comments could be incorporated in the final draft. During the same final week portions of the report were translated to Spanish, or in some cases Salvadoran contributions retained in Spanish, and presented to principal officers of the Ministry of Education.

Field sampling consisted of random choice among the 3,000 Salvadoran elementary schools, one of every ten. This 299 school sample was reduced to 158 by security considerations; and 12 other schools were found to be inaccessible for practical purposes, leaving a sample of 146 to be visited from the original 299. Of those 146 schools, 120 were visited along with 12 other non-sample schools which were visited by mistake or by substitution for inaccessible schools.

Accordingly the sample is not completely random, skewed to some degree by security and inaccessibility. These factors along with the small size of the sample, less than 5% of the total, should be taken into account in attempting projections from the data.

↓ Urbana

Nombre de la Escuela	N ^o niños	Urbana	Rural	Departamento	Municipio	Cantón	Caserío
Escuela Urbana Mixta unificada fo y Alcaniz	4	X		San Miguel	San Miguel	-	-
Esc. Urb. Mixta "Ernesto Liebes"		X		San Miguel	Nueva Guatula Lufe	-	-
Esc. Urbana Mixta unificada "Ana Rita Velez de Moreira"	13	X		San Miguel	Quelepa	-	-
Esc. Urbana de Niñas "Eulogia Rivas"	1	X		Luscatlán	Cajutepeque	-	-
Esc. Urbana de Varones "Cristin Sanchez"	9	X		San Vicente	Apartepeque	-	-
Esc. Urb. Mixta unificada Lic. Juan José Guzmán	5	X		Morazán	San Carlos	-	-
Esc. Urbana Mixta unificada "Gral. Francisco Morazán"	6	X		Morazán	Jocoro	-	-
Escuela unificada Club de Leones	1	X		La Unión	La Unión	-	-
Esc. Urbana mixta de Niñas República de Argentina	8	X		La Unión	San Alejo	-	-
Esc. Urbana Mixta unificada Gilberto Augusto Corcama		X		Sanja Ana	San Lorenzo	-	-
Esc. Urb. Mixta unificada Gral. Francisco Menéndez		X		Ahuachapán	Atipuzajá	-	-
Esc. Urb. Mixta unificada Juan de Dios del Cel.	7A	X		Ahuachapán	Yurín	-	-
Esc. Urbana Mixta unificada Guaymango	11A	X		Ahuachapán	Guaymango	-	-

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Nombre de la Escuela	Nº	Urbana	Rural	Departamento	Municipio	Cantón	Caserio
Escuela Urbana Mixta Unificada San Luis Talpa	11	✓	—	La Paz	San Luis Talpa	—	—
Escuela Urbana Mixta Unificada Camilo Campos N° 1	39	✓	—	San Salvador	Santiago Texacuarpa	—	—
Esc. Urbana Mixta Miguel Angel Garcia N° 2	22	✓	—	La Libertad	Quetzaltepeque	—	—
Esc. Urbana Mixta Unificada Sor Cecilia Santillana	2	✓	—	San Miguel	San Miguel	—	—
Esc. Urbana Mixta F.E.M.	12	✓	—	La Libertad	Comasagua	—	—
Esc. Urbana Mixta Unificada Republica de Honduras.	5	✓	—	San Salvador	San Salvador	—	—
Esc. Unificada Mixta Lindor B. Johnson	9	✓	—				
Esc. Urbana Unificada de Niñas Republica del Ecuador N° 1	6	✓	—	San Salvador	San Salvador	—	—
Esc. Urbana Mixta Unificada Constitución 1950	14	✓	—				
Esc. Urbana Mixta Florida D. Gonzalez	5	✓	—	Santa Ana	Santa Ana	—	—
Esc. Urbana de Niñas Republica de Venezuela N° 1	5	✓	—	Santa Ana	Santa Ana	—	—
Esc. Urbana de Niñas Unificada Humberto Quinteros N° 1	3	✓	—	Santa Ana	Santa Ana	—	—
Esc. Urbana de Niñas Unificada "Aminta de Pineda" N° 2	5	✓	—	San Miguel	San Miguel	—	—

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Nombre de la Escuela	Nº	Urbanas	Rural	Departamento	Municipio	Cantón	Caserio
Esc.º Carlos Arturo Iruñ- dia	16	x		Sonsonate	Sonsonate	-	-
Esc. de niñas Dolores de Brita Noz	2	x		Sonsonate	Sonsonate	-	-
Esc. unificada María Lorena de Borata	10	x		Sonsonate	Isthuatón	-	-
Esc. unificada Luz de Soto Mayor	8	x		La Libertad	La Libertad	-	-
Esc. unificada Orpio Rouero Barquera Noz	9	x		Cuscatlán	Oratorio de concepción	-	-
Esc. Urb. Mixta unificada Estado de Israel	16	x		Sonsonate	Nahuizales	-	-

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↓ Rural

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Nombre de la Escuela	No. de Maestros	Urbana	Rural	Departamento	Municipio	Cantón	Caserío
Esc. Rural mixta Hacienda La Cañada	2		x	La Unión	Canchagua	La Cañada	-
Esc. Rural mixta Campesinos Plojos Negros	4		x	La Unión	Canchagua	Plojos Negros	-
Esc. Rural mixta Colonia Buena Vista	4		x	La Unión	Canchagua	El Ciprés	Los Corrales
Esc. Rural mixta Caserío El Carrizal	4		x	Morazón	El Divisadero	San Pedro	Carrizal
Esc. Rural mixta unificada Dr. Ricardo Figueroa de León	5		x	Morazón	Jocoro	Las Moritas	-
Esc. Rural mixta Campesinos Las Pitas	7		x	La Unión	El Carmen	Las Pitas	-
Esc. Rural mixta Campesinos El Tizatón	8		x	La Unión	San Alejo	Tizatón	-
Esc. Rural mixta unificada El Agua Escondida	2		x	La Unión	La Unión	Ataca Escondida	-
Esc. Rural mixta Cantón San Luis	7		x	Sauvate	Izalco	San Luis	-
Esc. Rural mixta unificada Cantón Salitrero	6		x	Ahuachapán	Ahuachapán	Salitrero	-
Esc. Rural mixta colonia Nueva Cantón Cuartito Abajo	12A		x	Ahuachapán	Sujutla	Cuartito Abajo	-
Esc. Rural mixta unificada Cantón El Jocotillo	14A		x	Ahuachapán	Sr. Francisco	Jocotillo	-
Esc. Rural mixta unificada Cantón La Huastlucura	19A		x	Ahuachapán	Sr. Francisco	La Huastlucura	-

no.

Nombre de la Escuela	Nº	Urbana	Rural	Departamento	Municipio	Cantón	Caserío
Esc. Rural mixta unificada 194. Rodolfo Enrique Vera Alvarado	13		X	Sonsonate	Ocejuella	Sn. Julián	-
Esc. Rural mixta con los pilotos.	15		X	Santa Ana	Santiago de la frontera	peletos	-
Esc. Rural mixta con los El Conacaste	25		X	Santa Ana	Coatepeque	El Conacaste	-
Esc. Rural mixta con los Casta Dul			X	Sonsonate	Ocejuella	Coatepeque	-
Esc. Rural mixta unificada con los El Coco.	10		X	Santa Ana	Chalehuapa	El coco	-
Esc. Rural mixta con los San Jorge con los cruces.	7		X	Santa Ana	Chalehuapa	Los cruces.	Sn. Jorge
Esc. Rural mixta con los Zacatal	9		X	Santa Ana	Chalehuapa	El Zacatal.	-
Esc. Rural mixta Colonia La fortuna	5		X	Santa Ana	Santa Ana	-	-
Esc. Rural mixta con los Mercedes con el Zacatal	26		X	Santa Ana	Coatepeque	El Zacatal	Las Mercedes
Esc. Rural mixta con los José	8		X	Santa Ana	Chalehuapa	Sn. José	-
Esc. Rural mixta con los Juguat.	6		X	Sonsonate	Caluco	Juguat	-
Esc. Rural mixta unificada con los El Platanar	14		X	San Miguel	Almáciga	El Platanar	-
Esc. Rural mixta con los alto	12		X	Sn. Miguel	-	El Zacatal	El alto

Nombre de la Escuela	No. de alumnos	Urbana	Rural	Departamento	Municipio	Cantón	Caserio
Esc. Rural Mixta Cantón Las Mesas	11	-	✓	San Miguel	Chinameca	Las Mesas	-
Esc. Rural Mixta Cantón Cruz Primera	11	-	✓	San Miguel	Chinameca	Cruz Primera	-
Esc. Rural Mixta Cantón los Pílonos	22	-	✓	San Miguel	Uluazapa	Los Pílonos	-
Esc. Rural Mixta Cantón Monte Grande	7	-	✓	San Miguel	San Miguel	Monte Grande	-
Esc. Rural Mixta Unificada Cantón San Antonio Silva	7	-	✓	San Miguel	San Miguel	San Antonio Silva	-
Esc. Rural Mixta Cantón Miraflores		-	✓	San Miguel	San Miguel	Miraflores	-
Esc. Rural Mixta Cantón Delicias	5	-	✓	Cuicatlan	Santa Cruz Michapa	Delicias	-
Esc. Rural Mixta Cantón San Francisco		-	✓	Cuicatlan	Cojutepeque	San Francisco	-
Esc. Rural Mixta Cantón El Limón	22	-	✓	San Salvador	Goyapungo	El Limón	-
Esc. Rural Mixta Cantón San Bartolomé	27	-	✓	San Salvador	Ilopango	Cantón San Bartolomé	-
Esc. Rural Mixta Unificada Cantón La Palma	28	-	✓	San Salvador	San Martín	La Palma	-
Esc. Rural Mixta Cantón San Felipe		-	✓	San Vicente	Apesqueque	San Felipe	-
Escuela Rural Mixta Unificada "Jorge Lardes"	7	-	✓	Sonsonate	Sonsonate	Las Figueras	-

Nombre de la Escuela	Nº	Urbana	Rural	Departamento	Municipio	Cantón	Caserio
Esc. Rural Mixta cantón Asunción Amatepe	12	-	✓	La Paz	Rosario de la Paz	Amatepe	-
Esc. Rural Mixta Cantón El Papalón	6	-	✓	San Miguel	San Miguel	El Papalón	-
Esc. Rural Mixta Cantón Palo Negro	27	-	✓	Santa Ana	Coatepeque	Palo Negro	-
Esc. Rural Mixta Cantón Comalapa	11	-	✓	La Paz	San Juan Talpa	Comalapa	-
Esc. Rural Mixta, Caserio Valle Nuevo Cantón Santa Lucía	11	-	✓	La Paz	Olocuilta	Santa Lucía	Valle Nuevo
Esc. Rural Mixta "Dr. Antonio Díaz"		-	✓	San Salvador	Santo Tomás	El Ciprés	-
Esc. Rural Mixta Cantón Primavera	21	-	✓	La Libertad	Jesús Saltepeque	Primavera	-
Esc. Rural Mixta Cantón La Reforma		-	✓	La Libertad	Ciudad Arce	La Reforma	-
Esc. Rural Mixta Cantón San Felipe	10	-	✓	La Unión	Pasaquina	San Felipe	-
Esc. Rural Mixta "Capitan Davelia Vladimir Varela"	10	-	✓	La Unión	Pasaquina	Santa Clara	-
Esc. Rural Mixta Cantón El Albornoz	11	-	✓	La Unión	Bolivár	El Albornoz	-
Esc. Rural Mixta Cantón El Chupadero	4	-	✓	Santa Ana	Santa Ana	El Chupadero	-
Esc. Rural Mixta Caserio Las Mesas Cantón Ayutla	11	-	✓	Santa Ana	Santa Ana	Ayutla	Las Mesas

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Nombre de la Escuela	Nº	Urbana	Rural	Departamento	Municipio	Cantón	Caserio
Esc. Urbana mixta unificada Cantón el Zungul	9		X	La Libertad	Tauvanique	El Zungul	-
Esc. Rural mixta cantón El Bebedero	10		X	San José	San Julian	El Bebedero	-
Esc. Rural mixta cantón Tunahuiles	5		X	San José	Izaleo	Tunahuiles	-
Esc. Rural mixta cantón El cacao	11		X	San José	San José	El cacao	-
Esc. Rural mixta cantón La Unión	18		X	San José	Juayua	La Unión	-
Esc. Rural mixta Cantón el Cimarrón	6		X	La Libertad	La Libertad	Cimarrón	-
Esc. Rural mixta Felipe Huerfano	9		X	Cuscatlan	San Pedro Perulupán	Istapa	-
Esc. Rural mixta cantón San Pedro	9		X	Cuscatlan	San Ramón	San Pablo	-

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ANNEX 4**SUMMARY OF RESPONSE TO INTERIM EVALUATION**

Response to the principal interim evaluation recommendations as summarized at Section I.C at page 3 was as follows:

1. The number of classrooms for construction and reconstruction under the project was not reduced. Rather, through outstanding performance, the original target numbers of classrooms for both reconstruction and new construction were met or exceeded within the four years for project implementation. See Section II.A at page 4.
2. In implementation of the school maintenance program the conscious decision was made to emphasize the role of the communities. -It is now apparent, however, that there is need for more involvement of the regional MOE/DCM offices in providing necessary support and supervision for such activities. See Section II.C at pages 19 and 26.
3. No specific administrative or management plan was prepared for APRE to address the requirements of the technical components. APRE staff was substantially augmented following the interim evaluation, without, however, any specific provision for a procedural expediter. See Section V, page 62.
4. Adequate provision was made for allocation of PL480 contributions to specific project activities, and such allocations did reflect the comparative advantage of PL480 funds relative to grant funds for certain uses. This objective was accomplished through implementation letters without need for project agreement amendment. See Section V, page 72.
5. While action plans for the project components were never fully integrated into one document, APRE, SETEPE and AID did arrange increased integration of the component action plans with disbursements tied to completion of such plans, and satisfactory procedures for amendment of action plans were established. See Section V, page 62.
6. While at least one joint training program in project administration was carried out subsequent to the interim evaluation, in the evaluators' judgment more should have been done to carry out this recommendation. See Section V, page 67.
7. To the knowledge of the evaluators no semi-annual or other major periodic workshops were conducted for implementing agencies to jointly address project implementation problems. See Section V, page 62.
8. The University of New Mexico did provide technical assistance and in-service training as part of its contractual duties. We were sorry to learn, however, that RONCO, which had successfully

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managed most of the project procurement, left El Salvador without providing any technical assistance or in-service training to appropriate personnel of APRE, SETEFE, MOE or other implementing agencies. See Section V, page 59.

9. The University of New Mexico, working with APRE and the Ministry of Education, has been working to integrate the planned management information system with the existing MOE information base to include data capture and preliminary processing at the regional and sub-regional level. While we heard considerable expression of dissatisfaction with the technical assistance for management information systems, we were informed that this would be the subject of intensive technical assistance over the remaining three months of the project. See Section V at page 63 through 65.

10. On various occasions distribution of school furniture, equipment and supplies occurred prior to completion of project funded schoolroom construction. Unfortunately on some occasions such distributions were motivated more by political than technical considerations, and were carried out in such magnitude and haste as to lack appropriate accountability. See Section III at page 37.

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ANNEX 5 DATA ANALYSIS - PREVENTIVE MAINTENANCE

MANTENIMIENTO PREVENTIVO

ANALISIS DE DATOS

(por Escuela y por Tipo y Region)

(Este anexo incluye datos recolectados el 18 y 19 de Septiembre)

(Clave: OCR= Occidente Rural, OCU= Occidente Urbana, ORR= Oriente Rural, ORU= Oriente Urbana, CR= Central Rural, CU= Central Urbana)

1. Numero total de escuelas visitadas.

OCR: 29 OCU: 12 ORR: 24 ORU: 12 CR: 27 CU: 16 TOTAL: 120

2. Numero de escuelas no participantes en el Componente 2.

OCR: 6 OCU: -- ORR: 4 ORU: -- CR: 7 CU: 4 TOTAL: 21

3. Numero que han recibido capacitacion.

OCR: 23 OCU: 12 ORR: 20 ORU: 12 CR: 20 CU: 13 TOTAL: 99

4. Numero en que por lo menos dos informantes comprobaron que se ha compartida la capacitacion con maestros y/o con la comunidad.

OCR: 21 OCU: 6 ORR: 9 ORU: 4 CR: 7 CU: 1 TOTAL: 49

5. Numero que han recibido las herramientas.

OCR: 23 OCU: 10 ORR: 18 ORU: 12 CR: 13 CU: 5 TOTAL: 76

6. Numero que no las han recibido todavia aunque han recibido la capacitacion.

OCR: -- OCU: 2 ORR: 2 ORU: -- CR: 7 CU: 7 TOTAL: 18

7. Numero (de escuelas con herramientas) en que maestros no sabian de las herramientas.

OCR: 6 OCU: 7 ORR: 3 ORU: 4 CR: 4 CU: 2 TOTAL: 26

8. Numero (de escuelas con herramientas) en que padres de familia no sabian de las herramientas.

OCR: 14 OCU: 8 ORR: 3 ORU: 7 CR: 7 CU: 5 TOTAL: 44

9. Numero (de escuelas con herramientas) en que los padres de familia no tienen derecho a usar las herramientas.

OCR: -- OCU: 1 ORR: 1 ORU: 3 CR: 3 CU: 1 TOTAL: 6

10. Numero (de escuelas con herramientas) que han sufrido perdidas de herramientas por robo u otra causa.

OCR: 5 OCU: 2 ORR: 1 ORU: -- CR: 3 CU: -- TOTAL: 11

11. Numero que han reportado uso de las herramientas para mantenimiento o mejoras.

OCR: 21 OCU: 9 ORR: 12 ORU: 9 CR: 15 CU: 6 TOTAL: 73

12. Numero que han recibido manuales (juego de 2 libros).

OCR: 15 OCU: 6 ORR: 11 ORU: 4 CR: 13 CU: 6 TOTAL: 55

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13. Numero que solo reportaron haber recibido folletos, no manuales.
 OCR: 1 OCU: -- ORR: 2 ORU: 3 CR: 2 CU: 1 TOTAL: 9

14. Numero que reportaron uso de los manuales y/o los folletos.
 OCR: 5 OCU: 4 ORR: 3 ORU: 1 CR: 1 CU: 1 TOTAL: 15

15. Numero en que los maestros sabian que habian manuales.
 OCR: 11 OCU: 8 ORR: 12 ORU: 3 CR: 7 CU: 3 TOTAL: 44

16. Numero en que padres de familia sabian que habian manuales.
 OCR: 1 OCU: 1 ORR: 3 ORU: 1 CR: -- CU: -- TOTAL: 6

17. Numero que recibieron (o en que Uds. observaron) carteles del APRE sobre el mantenimiento preventivo.
 OCR: 3 OCU: 3 ORR: 11 ORU: 4 CR: 7 CU: 4 TOTAL: 38

18. Numero que reportaron usar los carteles para planear o enseñar a los alumnos.
 OCR: 5 OCU: 1 ORR: 3 ORU: 1 CR: 2 CU: -- TOTAL: 12

19. Numero en que hay serio problema de falta de comunicacion entre la Direccion y personal docente.
 OCR: 5 OCU: 5 ORR: 10 ORU: 6 CR: 7 CU: 7 TOTAL: 40

20. Numero en que hay serio problema de falta de comunicacion entre la escuela y los padres de familia.
 OCR: 10 OCU: 5 ORR: 3 ORU: 7 CR: 3 CU: 8 TOTAL: 36

21. Numero que reportaron haber hecho un plan de mantenimiento (que no sea el plan o memoria anual de labores).
 OCR: 7 OCU: 4 ORR: 1 ORU: 1 CR: 1 CU: 1 TOTAL: 15

22. Numero que han cumplido o estan cumpliendo su plan.
 OCR: 5 OCU: 2 ORR: 1 ORU: -- CR: 1 CU: 1 TOTAL: 10

23. Numero que han recibido visita de seguimiento de APRE.
 OCR: 5 OCU: 1 ORR: 1 ORU: 3 CR: 1 CU: -- TOTAL: 12

24. Numero que reciben colaboracion economica de los padres de familia para el mantenimiento o para hacer mejoras.
 OCR: 27 OCU: 13 ORR: 23 ORU: 11 CR: 26 CU: 13 TOTAL: 113

25. Numero en que los padres de familia han aportado mano de obra voluntaria para mantener o mejorar la escuela.
 OCR: 27 OCU: 13 ORR: 19 ORU: 8 CR: 23 CU: 10 TOTAL: 100

26. Numero en que padres/madres colaboran por igual.
 OCR: 10 OCU: 7 ORR: 8 ORU: 6 CR: 11 CU: 2 TOTAL: 44

27. Numero en que mujeres colaboran mas.
 OCR: 8 OCU: 4 ORR: 10 ORU: 7 CR: 12 CU: 7 TOTAL: 48

28. Numero en que por lo menos un informante indica que la razon por la mayor participacion de mujeres era que habia muchas madres solas.

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OCR: 2 OCU: 1 ORR: 3 ORU: 4 CR: 3 CU: 4 TOTAL: 17

29. Numero en que hombres colaboran mas.

OCR: 3 OCU: 2 ORR: 3 ORU: 1 CR: 1 CU: 2 TOTAL: 12

30. Numero en que colaboran:

a. Autoridades locales.

OCR: 17 OCU: 10 ORR: 16 ORU: 9 CR: 8 CU: 4 TOTAL: 64

b. Empresas.

OCR: 8 OCU: 2 ORR: 2 ORU: 1 CR: 5 CU: 3 TOTAL: 21

c. Cooperativas.

OCR: 6 OCU: -- ORR: 1 ORU: -- CR: 1 CU: -- TOTAL: 8

d. Instituciones beneficas.

OCR: 6 OCU: 1 ORR: 2 ORU: 5 CR: 7 CU: 5 TOTAL: 27

e. Instituciones estatales.

OCR: 15 OCU: 6 ORR: 14 ORU: 9 CR: 10 CU: 7 TOTAL: 61

f. Individuos (que no sean padres de familia)

OCR: 6 OCU: -- ORR: 6 ORU: 2 CR: 3 CU: 1 TOTAL: 13

31. Numero en que alumnos hacen reparaciones o mantenimiento haciendo uso de las herramientas.

OCR: 16 OCU: 6 ORR: 8 ORU: 7 CR: 13 CU: 6 TOTAL: 56

32. Numero en que alumnos hacen trabajos de jardin o campo haciendo uso de las herramientas.

OCR: 21 OCU: 5 ORR: 1 ORU: 8 CR: 11 CU: 5 TOTAL: 63

33. Numero en que alumnas hembras reportaron uso de las herramientas.

OCR: 4 OCU: 6 ORR: 1 ORU: 5 CR: 8 CU: -- TOTAL: 24

34. Numero en que los alumnos hacen poco o nada de uso de las herramientas (porque hay conserje u otras razones).

OCR: 2 OCU: 4 ORR: 3 ORU: 3 CR: 2 CU: -- TOTAL: 14

35. Numero en que se reporto un impacto positivo en los alumnos debido a su participacion en el mantenimiento de la escuela.

OCR: 21 OCU: 10 ORR: 20 ORU: 11 CR: 17 CU: 9 TOTAL: 88

36. Numero en que se reporto un impacto positivo en los alumnos con mencion especifica de las herramientas.

OCR: 12 OCU: 2 ORR: 9 ORU: 6 CR: 10 CU: 3 TOTAL: 42

37. Numero [-de padres/madres de familia]-0 que dijeron que la condicion fisica de la escuela influye en la asistencia de los hijos a la escuela (indican cuantos por escuela si son mas de uno).

OCR: 18 OCU: 10 ORR: 16 ORU: 11 CR: 18 CU: 12 TOTAL: 85

38. Numero reportando obras mayores de mejoras hechas por la comunidad con fondos de la comunidad.

OCR: 13 OCU: 2 ORR: 3 ORU: 3 CR: 8 CU: 3 TOTAL: 38

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39. Numero de estas obras hechas con uso de las herramientas.
OCR: 9 OCU: 2 ORR: 5 ORU: -- CR: 6 CU: 2 TOTAL: 245

40. Numero en que la comunidad paga mano de obra para edantamiento o para mejoras (incluye pago de conserje).

OCR: 11 OCU: 8 ORR: 7 ORU: 9 CR: 5 CU: 5 TOTAL: 45

41. Numero en que la comunidad paga a maestros.

OCR: 10 OCU: 1 ORR: 6 ORU: 2 CR: 6 CU: -- TOTAL: 25

< 94

JUEGO DE HERRAMIENTAS

- 1 - JUEGO DE DESTORNILLADORES
- 1 - ALICATE
- 2 - LLAVE CANGREJA
 - una de 10
 - una de 8
- 1 - MARTILLO DE UÑA
- 1 - PICO
- 1 - MACHETE
- 1 - CUMA
- 1 - PALA
- 1 - BARRA
- 1 - CERRUCHO
- 1 - CINTA METRICA DE ACERO
- 1 - CEPILLO DE ACERO
- 1 - LIMA DE 1/2 CAÑA
- 1 - ESCOFINA
- 1 - BALDE
- 1 - MIDEL
- 1 - CUCHARA DE ALBAÑIL
- 1 - MARCO PARA SIERRA
- 2 - CUCHILLA PARA SIERRA
 - UNA DE 10
 - UNA DE 12
- 1 - ESCUADRA
- 1 - PLOMADA
- 1 - CINCEL
- 1 - CINCEL STANDAR
- 1 - CARRETILLA
- 2 - BROCHAS
 - UNA DE 3
 - UNA DE 4
- 1 - TREPANO
- 1 - CANDADO
- 1 - CAJA PEQUEÑA PARA HERRAMIENTAS

MINISTERIO DE EDUCACION
 ADMINISTRACION DEL PROYECTO REVITALIZACION DEL SISTEMA EDUCATIVO (A.P.R.E.)

HERRAMIENTAS DE MANTENIMIENTO PARA REGIONES

ARTICULO	CANTIDAD	ESPECIFICACION	PRECIO UNITARIO \$	PRECIO TOTAL \$
Cuchara de albañil -	6	Forjada en una sola pieza de acero de hoja ancha. Largo de la hoja: 8", ancho de la hoja: 4".	5.00	30.00
Plomada	1	Peso: 14 oz., 400 grs, largo 3 1/2". De cobre o similar.	6.00	6.00
Nivel	6	Hecho de una sola pieza de magnesio marco de viga I. Para uso pesado. Largo 12" Nº de tubos aplomadores: 2, Nº de tubos niveladores: 1	21.55	129.30
Cinta Métrica	9	Enrollado automático, largo de la hoja 5 mts. /10 pies, ancho 1/2". Tiene graduaciones métricas e inglesas	7.00	63.00
Martillo de uñas	1	Con mango de nogal, peso: 16 oz. largo del mango: 13", 25 mm.	6.00	6.00
Martillo de Bola	1	Caras pulidas, chaflanes y bocas. Peso 16 oz. largo del mango de madera dura 13-3/4"	10.15	10.15
Almendra	1	Peso 6 lbs., longitud de cabeza 5", tamaño de cara 2-3/8", tamaño del ojo 1-1/2" x 1-1/4" Acero al carbono.	16.80	16.80
Cinzel Estándar	3	Para todo tipo de cincelado en metal. Corte 1/2", largo 6". Acero hexagonal de alto grado.	2.55	7.65
Cinzel Estándar	3	Para todo tipo de cincelado en metal. Corte 1 a 2", largo 6". Acero hexagonal de alto grado	2.75	8.25
Capillo de alambre	1	Asidero recto sin mango y de 1 1/4" filas de 5 x 10. Alambres de acero, 2 1/8" a 2 3/8" ancho x 7 1/4" largo.	3.50	3.50
Tarraja	1	Capacidad 1/2-1", tamaño de los dedos que se suministran 1/2", 3/4", 1". Nº de dígitos III-E Tipo de cabeza expuesta	131.10	131.10
LLave Stillson	1	Tipo recto, largo 10", capacidad 1-1/2"	13.40	13.40

Llave Stillson	1	Tipo recto, largo 14", capacidad 2"	17.70	17.70
Marco para sierra	1	Estandar, usa cuchillas de 10" y 12". La cuchilla se ajusta en cuatro posiciones diferentes para cortar, profundidad del cuello: de 3" a 3 1/2". Equipada con una cuchilla de 10", 24 PTI	10.00	10.00
Serrucho	1	Tratado al calor. Longitud de hoja 26"	20.00	20.00
Juego de Desatornilladores	1	De 10 piezas, para ranura y phillips. Hoja de ranura cuadrada de 3/8" x 8", hoja de ranura redonda de 1/8" x 4", 3/16" x 6", 1/4" x 4", hoja redonda phillips # 1 x 3", # 2 x 4, # 3 x 6", phillips reforzado # 2 x 1-1/2".	29.35	29.35
Juego de Desatornilladores Aislados	1	Con mango de Tenite, juego de cinco piezas, con hojas de: Largo Ancho 2-3/4" 5/32" 6" 5/32" Revestimiento de hule 6" 5/32" 6-3/4" 7/32" Hojas aisladoras 8" 5/16"	26.75	26.75
Alicate (uso pesado)	1	Sirve como tenaza y para cortar alambre, tamaño 9", ancho de quijadas 5/8", abertura máxima 1 3/4", cortadores 5/8". Las quijadas son hechas de una fuerte aleación de acero y nickel.	19.10	19.10
Lima Plana	1	Corta doble en ambos lados. Corte sencillo en ambas orillas. Largo 8", tamaño ancho x grueso 25/32" x 13/64" (3/4 x 5/16")	4.20	4.20
Lima Plana	1	Corta doble en ambos lados. Corte sencillo en ambas orillas. Largo 10", tamaño ancho x grueso 1" x 1/4"	5.25	5.25
Lima de Media Caña	2	El lado plano tiene corte doble. Largo 8", tamaño ancho x grueso 3/4" x 7/32"	7.20	14.40
Prensa	1	Cuerpo fundido de hierro acerado. Prensa para todo uso - mandíbulas 4" de ancho x 2-2 3/4" de alto, con capacidad de abertura de 5". Alto de 6 1/4". Peso 31 lbs.	80.35	80.35
Tijera para cortar lámina	1	Largo total 12", longitud de corte 3 1/4" capacidad de corte-hierro galvanizado 20 G. Piza forjada en acero de construcción.	45.50	45.50
Pala	1	Cuadrada, abierta por atrás - ancho 9 1/2".	12.00	12.00

at

alto 12", tamaño N2 2, mango de nogal, largo de mango 25", hoja de acero tratado térmicamente.

Pala	1	Punta redonda abierta de atrás, ancho 9", alto 12", tamaño N2 2, mango de nogal de 25",	12.00	12.00
Pico	1	Ojo N2 6, peso: de 4 1/2 lbs., largo: 19", ancho de la hoja: 3 1/2". Fabricado en acero forjado, tratado térmicamente	14.00	14.00
Hacha	1	De acero forjado tratado térmicamente, mango de nogal colocado a presión. Peso: 3 1/2 lbs. de un solo filo. Largo del mango 36"	19.60	19.60
Barra	1	De acero, diámetro: 1". tamaño 5' similar a barras de oreja de telegrafista. Peso: 13 libras.	25.00	25.00
Carretilla	1	3 1/2 pies cúbicos. Modelo de marco de acero. Con rueda de hule	70.00	70.00
Machete	1	Para todo propósito, largo de la hoja: 22", hojas de acero, mango de plástico	7.00	7.00
Cuchilla para Sierra	10	Con filo de carburo - Planes de 10"	1.00	10.00
Cuchilla para Sierra	10	Con filo de carburo - Planes de 12"	1.00	10.00
Almódana	1	Con mango de madera, mazo de acero al carbono, peso 4 lbs. tamaño de la cara 1-3/4", largo: 1 1/4 x 7/8"	33.75	33.75
Probador de Circuitos	1	Combinación de desatornillador y probador de circuitos, se usa en circuitos de 80-300 voltios	4.50	4.50
Tenaza	1	De lengua y ranura, tamaño 10", capacidad 1-1/4"	13.05	13.05
Llave Cangreja	1	Hecha de aleación de acero, forjada a martete y tratada en caliente, largo 10", capacidad 1-1/8"	22.00	22.00
Teneza para Electricista	1	Con agujeros para enderezar alambre de calibre de 10 a 22", largo total 6", orillas de corte endurecido agarraderos revestidos de plástico	16.10	16.10
Escuadra	1	Tamaño 24" x 2", lengua 16" x 1-1/2". acabado de acero pavonado de azul	5.00	5.00
Trepano	1	Portabroca tiene capacidad para brocas	20.00	20.00

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circulares o cuadradas de diámetro 1/8 a 1/2". Radio de acción 6", largo 12", 300 mm. El portabroca tiene afinado de zinc plateado y cromado. Las agarraderas y cabezas son de madera.

TOTAL

991.75

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ANNEX 7 - TEXTBOOK COMPONENT

- | | | | |
|--|----------------|---|-----------------------|
| 1. Number of Urban Schools
Numero de Escuelas Urbanas | 41 = 36.9% | Number of rural schools
Numero de Escuelas Rurales | 70 = 63.1% |
| | | TOTAL | 111 |
| 2. Total Males
Total de Varones | 21,428 = 49.2% | Total Females
Total de Hembras | 22,124 = 50.8% |
| | | TOTAL | 43,552 |
| 3. Total teachers
Total de Maestros | 1753 | | |
| 4. Number of students overage for 1-5 Grade
Numero de Niños sobre Edad Educativa de 1o. a 6o. Grado | | | 11,354 |
| | | Males | Females |
| 5. Total Enrollment of 111 Schools Interviewed
Matricula Total de 111 Escuelas Entrevistadas | | MI
41,493
49.6% | ME
42,066
50.4% |
| | | TOTAL | 83,564 |
| 6. Number of students in the community not in Basic Education School from 1-6 Grade
Número de Niños en las Comunidades que No Reciben Educación Básica de 1o. a 6o. Grado | | | 4,775 |
| 7. Años en que fueron distribuidos los Libros por Escuela
Year that textbooks were distributed in Schools | | | |

AÑO YEAR	No. ESCUELAS No. SCHOOLS	AÑO YEAR	No. ESCUELAS No. SCHOOLS	AÑO YEAR	No. ESCUELAS No. SCHOOLS
1986	7	1987	11	1988	30
	6.5%		10.1%		27.7%

AÑO YEAR	No. ESCUELAS No. SCHOOLS	AÑO YEAR	No. ESCUELAS No. SCHOOLS
1989	58		
	53.7%		

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Number of books and guides
 Cantidad de libros entregados hasta Agosto del 69.

Grade GRADOS	Subject MATERIAS	No. of Books TEXTOS	No. of Guides GUIAS	No. of workbooks LIBRETAS DE TRABAJO
1o.		Books	Guides	
		7.5% Tomo 1 3670	Guia 57=21.2%	
		3.8% Tomo 2 1863	Guia 34=25.5%	7,952 = 74.7%
2o.	Mathematics Matemáticas	6.0% 2,973		787 = 14.8%
	Soc. Studies Sociales	4.6% 2,294		
	Nat. Science Naturales	5.8% 2,862	58 = 17.5%	
	Nat. Language Idioma Nac.	5.7% 2,789		557 = 10.5%
3o.	Matemáticas	4.5% 2,230		
	Sociales	4.6% 2,296		
	Naturales	4.6% 2,254	50 = 15.1%	
	Idioma Nac.	5.3% 2,591		
4o.	Matemáticas	5.4% 2,660		
	Sociales	4.4% 2,187	29 = 3.7%	
	Naturales	4.9% 2,406		
	Idioma Nac.	4.4% 2,239		
5o.	Matemáticas	3.6% 1,830		
	Sociales	3.6% 1,842	21 = 6.3%	
	Naturales	3.6% 1,832		
	Idioma Nac.	3.5% 1,786		
6o.	Matemáticas	3.1% 1,601		
	Sociales	3.1% 1,604	19 = 5.6%	
	Naturales	3.0% 1,524		
	Idioma Nac.	3.0% 1,518		
	TOTAL	49,959	328 = 100%	5296 = 100%

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I. Orientation of the work for APPE, PPMC and PLANAL 1995
(4 hours)

II. Curriculum development (20 hours)

1. Scheme of the new structure.
2. Changes in the new program of studies.
3. Methodological focus in the new programs.
4. Support documents.
5. Instructional Materials.

III. Textbooks (20 hours)

- (1) Technical framework of the texts
 - (a) Methodological Focus
 - (b) Philosophical Focus
 - (c) Psychological Focus
 - (d) Sociological Focus
 - (e) Pedagogical Focus

IV. Textbooks and the curriculum (40 hours)

1. Textbooks as an adjunct to the teaching in meeting curricular requirements.
2. Daily lesson plans and the inclusion of curricular content.
3. How to use textbooks to teach curricular content.
4. Textbooks as an additional aid in the education of basic education children.

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The use of workbooks (20 hrs)

1. Use and purposes of workbooks in 1st. grade
2. Use and purposes of workbooks in 2nd. grade

VI. The use of the Teachers guide (40 hrs)

1. Teachers Techniques
2. Innovative Methodologies

VII. Preparation of Instructional Materials (40 hrs)

1. Inexpensive Materials
2. Free Materials

VIII. Group Teaching (40 hrs)

IX. Evaluation of the Educational Process (20 hrs)

UNA EVALUACION RAPIDA DE LECTURA

Nivel de Aprestó	Nivel de Libro	1o.	2o.
de	uva	pelota	nuestro
mi	dado	pino	por favor
dame	pila	sapo	yo mismo
come	pipa	sepa	pueblo
mio	lima	paso	temprano
dado	nido	ojo	mandar
palo	fito	pina	crea
pelota	cama	boca	silenciosamente
maná	tomo	sopa	cuidadosamente
papá	sofá	tomate	ancho
3o.	4o.	5o.	6o.
ciudad	decidido	escaso	puente
medio	servido	desarrollar	comercial
momento	sorprendido	considerado	eliminar
asustado	quieto	discutido	aparato
varios	mejorado	portado	comentario
solitario	ciertamente	espléndido	elementario
dibuje	entrado	conocido	necesidad
hasta	realizado	escapado	galeria
recto	interrumpido	serio	relatividad
exclamado	chocado	sin duda	chofer de camiones

Resultados

Una palabra lector independiente.

Dos palabras nivel instruccional.

Tres palabras nivel de frustración.

CASERIO LAS MERCEDES BASIC EDUCATION

On September 2, 1989, at about 4 o'clock we visited the Caserio Las Mercedes Basic Education school. It is a World Bank two room school with an adjoining building providing office space and kitchen and food storage facilities. The mixed rural school is situated about 15 kilometers from Santa Ana in the Occident region. Access to this school is largely by foot over very rough roads especially during the rainy season. The approximately 170 students who attend this school walk an average of 10 kilometers. The teachers must walk to and from school a total of approximately 30 kilometers. They start their trek at about 4 a.m. in the morning and arrive home about 9 p.m.

Upon approaching the school we met a young bilingual teacher. He introduced himself and welcomed us to the school. He then quickly invited us to his own classroom where he had about 70 students ranging from 7 - 14 years of age covering grades 1 - 3. He introduced us to his class committee for greeting and greeting visitors. About four of these committee members came forward to shake our hands and then placed themselves in four corners of the room. Each took turns calling on small groups of students in rotation left to right. Each little group had a short quaint little song to present. No gaps between performances were permitted. After the small groups had finished, the entire group sang.

Two male teachers manage about 150 students between themselves from grades 1 - 5. The groups are about evenly divided. The 4th and 5th grade group teacher is the director. Since he could not be in school on this day the other teacher was

working for the two groups

The classrooms were filled with beautiful displays, with pictures, pedagogical materials other things adorning the walls. Two huge blackboards were neatly filled with seat work assignments for certain specific groups.

The teacher had to leave the room for interviews while both classes carried on with their assignments and were directed by a corps of monitors. Some members of our group strolled through the rows observing their work and asking them to read. Their reading was exceptionally good as well as their creative writing.

Upon termination of the interviews the students were given a recreation break. Again they organized and supervised their own play. They were orderly having a great deal of fun with a great deal of responsibility.

A discussion with the teacher revealed that he was using group teaching based on interest and ability levels. To accommodate the wide range of age grade differences he was individualizing instruction for about one fourth of the class. This is a modern strategy for teaching reading and requires good class management skills.

In the school visiting were two committees from the community. They were grateful for our visits and made it clear that they would not tolerate a transfer of their two loved teachers to another school. We assured them that this was not our mission.

It was one of the finest displays of an excellent school in action. This school with some further refinement could be one of

John Swartz

a series of model schools to lead the way in effective textbook use. The teachers had not only won the hearts of the excellent young students they teach but the parents and community as well.

If there is any doubt that textbooks are being used and that students are learning to read they need only to visit this school and see a great neighborhood school doing a superb job of bringing a well rounded education to a group of handsome, intelligent children.

There is no doubt that the prime mover of this school is the young creative teacher. The beautifully designed world bank school provides a sound physical environment for learning. Most of all, the PLANALIBRE textbooks provide the rich reading material for full support of the modern individualized and group teaching strategies.

Best Available Document

VISITATION TO FAMILY

On Thursday, September 7, 1990, a talk was made to a family studies training session seminar in La Union. The training was held in one of the high schools. The seminar was given jointly by APRE and the IPPM trainers to some 170 basic education second grade teachers.

The session had already been under way when the visiting team arrived. There were two trainers one on each side of the classroom, one from APRE and the other IPPM. They alternated with each person lecturing for about 5 minutes. Each person tried to support in some way what the other was presenting. The teachers were most passive. Not one person was taking notes on the contents of the presentation. On two occasions the same student asked for permission to express his views, was given the opportunity and continued for more than 10 minutes each time without a pause. During his intervention the student had strayed from the themes touched on by the two trainers. However, no effort was made to regain the central theme. This brought a general discussion with a mixture of opinions by the class without any effort to bring about any generalizations or conclusions.

By this time it was time for a group report by a teacher who was selected for this task. He presented the points of view of his group but it was difficult for the observation group since the timing and intent of the presentation was not fully understood. The class took a coffee break and the observation group went on to observe other 2nd grade teacher groups working in groups. They were all examining the teachers guide without

any specific guidelines of what to look for, and no mention was made of any specific assignments relative to the use of the guides.

The purpose of the training session was to develop the competency of 2nd grade teachers in the use of textbooks and teacher guides. Some observations of the training session were:

1. That the delivery of the message was based far too heavily on verbal communication.
2. There were little or no visual materials used in the presentation.
3. The verbal presentations appeared to have been improvised rather than carefully planned.
4. The presentation by the two trainers centered around general content of family education rather than on the use of textbooks.
5. There was no practical application of theory given in class.
6. There appeared to be no advanced preparation on the part of the trainers to create an environment for using textbooks that might be imitated by teachers for use with children.
7. Trainers were not dramatic nor exciting or even convincing in their delivery style and hence appeared to have little or no impact on the teachers. If dependence on the delivery of the message rests with oral communication, the deliverer of the message must be a superb communicator. This did not seem to be the case.

9. The trainers in both APRE and Población Educativa upon active participation in so many training sessions should have come up with some effective procedures, for delivery of the message of using textbooks, visual and written materials, certain innovative audio visual aids and practical activities in the use of textbooks. Yet, there was no indication of any particular approach, instructional materials or any innovative presentations which might have been unique, creative, dramatic or even inspiring.

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PROGRESS REPORT
UP TO APRIL 30, 1989
EDUCATIONAL SYSTEM REVITALIZATION PROJECT
GOES/AID 519-0295
COMPONENT IV: TRAINING

ACHIEVEMENTS TO DATE

1. Local Training for Use of PLANALIBRE Texts		
A. Seminars for Trainers and Teachers (1-5 weeks each)		5
B. Teacher Training Shops at national level, 1 week each		224
C. In Service Trained Teachers		17,960
D. Pre-service Trained Teachers (in Technological Schools)		561
E. In Service Trained School Directors		1,350
In Service Trained Nucleus Directors		225
2. Local Teacher Training on New Content		
A. Reading Seminar (1st. grade) for Teacher Training (1 week)		1
1. Teacher Training Shops at national level		39
2. In Service Trained Teachers for 1st. grade.		3,823
B. Seminar on Population Education for Teacher Trainers (3 weeks)		:
3. Foreign Training		
A. Master Degree Training-New Mexico University		35
1. 10 Master Degrees in Education (August 87-July 88)		
2. 10 Master Degrees in Public Administration (January-December 88)		
3. 15 Master Degrees in Education (August 88-July 89)		
B. Two-week Shop/Seminar at Honduras' Ministry of Education for Teacher Trainers		15
4. Printed Educational Materials		
A. Study Programs (Curriculum Guides)		45,000
B. Instructions for Teacher Trainers		500
5. Textbook Distribution		
A. 1st.-6th grade (Distributed by APRE)		2,112,575
(Distributed by the Directions of Educational Technology and Basic Education)		2,618,937
Total		4,731,512

BOOK PRINTING FOR THE YEAR 84 TO 88 IV EDUCATIONAL PROJECT GOES

PAYMENT DATE	ENTERPRISES	GRADE	No. of BOOKS	UNIT PRICE	TOTAL PRICE
JUL - 84	INST. SALESIANO	1st.	21.000	5.64	118.555.
DEC - 84	TREJOS HNOS.	2nd.	21.000	2.33	48.825.
DEC - 84	LIL, S. A.	1st.	20.500	1.39	28.507
MAY - 86	TREJOS HNOS.	1st.	127.920	2.22	284.500.
JUN - 86	PIEDRA SANTA	1st. & 2nd.	539.200	0.986	531.647.
DEC - 86	LIL, S. A.	1-2-3-4th.	543.360	1.20	653.022.
NOV - 87	LIL, S. A.	1-2-3-4th.	2.054.396	2.53	5.200.550
NOV - 87	LIL, S. A.	2nd.	140.086	2.62	367.520.
NOV - 87	PIEDRA SANTA	2-3-4th.	370.000	1.81	669.100
JAN - 88	CARVAJAL, S. A.	5th. & 6th.	615.200	4.12	2.535.107
JUN - 88	TREJOS HNOS.	5th. & 6th.	3.900	14.82	57.817
TOTALS			4.456.562		10.691.145

APRE PRINTING: 240.000 1st. Grade Notebooks,
 40.000 Kindergarten Notebooks,
 45.000 1st. to 9th Grade Study Programs,
 500 Teacher Trainer Instructions.

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5. Administration and Management

Over the past five years the MOE has implemented two A.I.D. projects and one UNDP/UNESCO Project and is currently implementing one project financed by the IBRD.

The MOE's implementing record has been less than satisfactory. In the case of the World Bank Project, for example, after six years of slow implementation, many of the problems were overcome by the creation of an autonomous special implementation unit within the MOE. According to a recent evaluation report: "the special implementing unit has been able to invest more funds, to complete a major portion of the Project and to monitor activities reasonably well."

Although progress has been made to correct or minimize some of the deficiencies of the MOE, it still suffers from serious administrative and managerial weaknesses. Moreover, the Ministry is subject to lengthy GOES procedural and legal restrictions which hamper the efficient and effective implementation of such project activities as procurement of commodities and construction. In addition, the MOE is currently in the throes of another educational planning exercise and reorganization program for the period 1983 to 2000, both of which could pose significant distractions if the MOE still wants to achieve the goals of the educational plan formulated in 1983.

Given this situation, both the MOE and A.I.D. have agreed on the need to establish a SMU responsible for the management and coordination of Project activities. Accredited to the MOE, the SMU will have direct access to all of the Ministry's divisions in order to ensure a direct line of communication and avoid bureaucratic bottlenecks. The SMU will be created on an ad-hoc basis to administer Project related activities.

The SMU will have a Project Coordinator and a professional and support staff. The Project Coordinator will function as the head of the Unit, directly under the Minister of Education, and will have overall responsibility for administration and implementation of the Project. The Coordinator will also serve as the primary liaison with and have direct access to both the Minister of Education and the USAID Mission.

The technical staff will assist in the development of implementation plans and time-phased schedules for carrying out Project activities. They will oversee the execution of the functions and responsibilities of their respective areas of expertise and of the SMU as a whole.

The selection of all professional staff will be a joint AID/GOES process to ensure that the best and most qualified people are hired. Although all personnel will be on a host country contract, A.I.D. will have to concur in the selection of all SMU staff, and approval of any and all contract extensions for personnel.

Every effort will be made to staff the professional positions in the SMU with experienced MOE personnel. However, if qualified individuals are not available, the positions will be filled by contracting from outside the Ministry.

The SMU will be composed of the following professional and support staff: (i) a Project Coordinator, who will be assisted in general Project management by an administrative assistant, and or contract/procurement specialist; (ii) a textbook specialist, engineer, architect, construction technician, and a maintenance specialist to monitor specific Project components; and (iii) a controller and an accountant, to maintain administrative and financial records.

The major objective of the SMU is to enable the Project to effectively achieve its goal and purposes. The responsibilities and functions of the Unit will cover the entire range of the implementation process. A major aspect of this will be the development of time-phased implementation plans, budgets, and management of project inputs in accordance with approved plans. It will be responsible for the accounting of all Project funds and for monitoring and reporting Project activities.

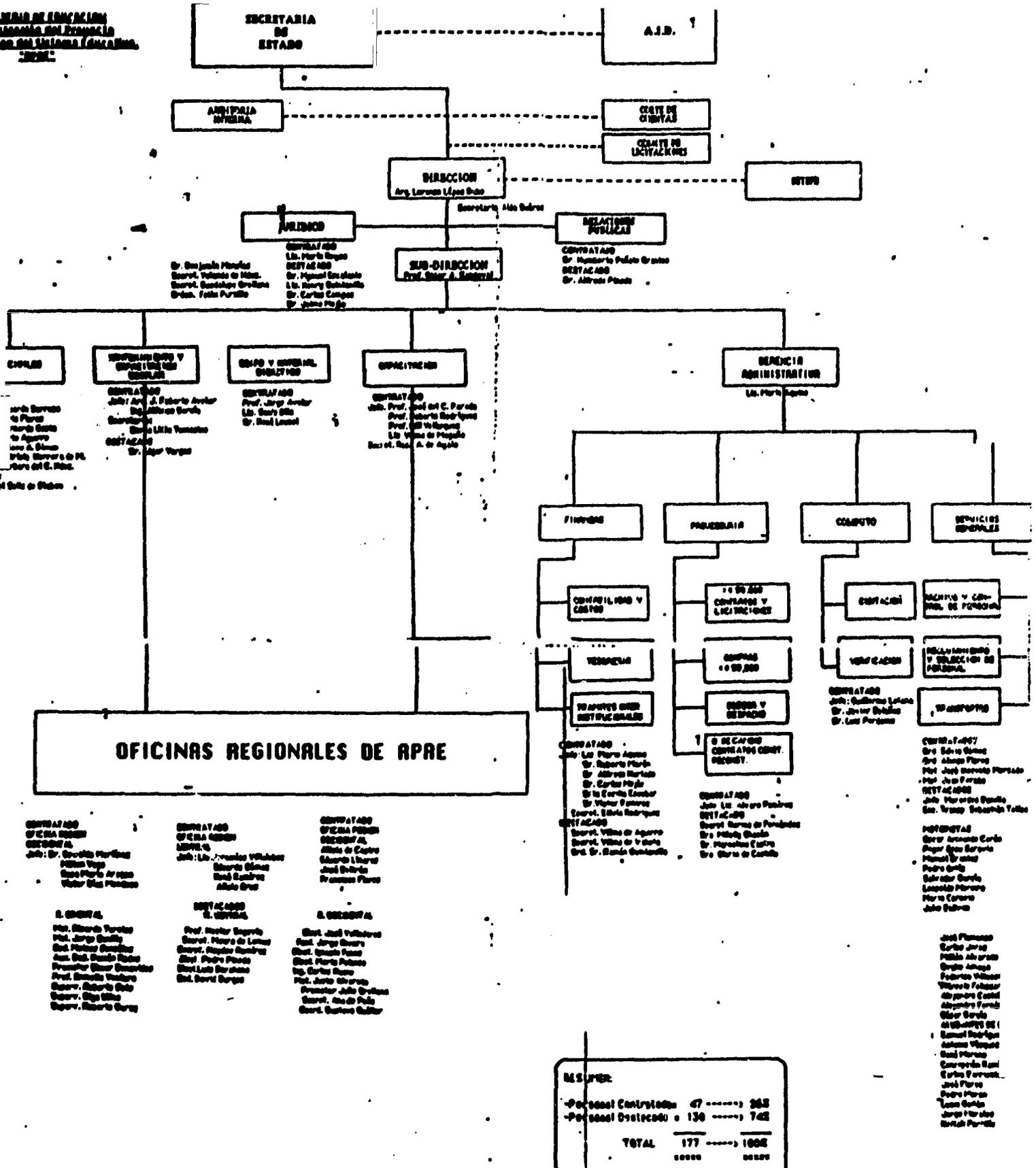
The costs of the SMU are proposed for Project financing, because this Unit is envisioned as a temporary entity within the MOE whose only responsibility will be to plan, coordinate and supervise Project activities.

To help the SMU carry out its duties and responsibilities, Project funds have been set aside to finance audits and an interim and final evaluation.

COMPONENT FIVE
ADMINISTRATION AND MANAGEMENT
SUMMARY BUDGET
(\$ US 000)

ITEM	A. I. D.			GOES	TOTAL
	FX	LC	TOTAL		
Professional Staff Salaries	605	300	905		905
Counterpart Salaries				2,019	2,019
Operating Costs		50	50		50
Rent				49	49
Equipment & Vehicles	50		50		50
Technical Assistance/Audit	60		60		60
TOTAL COMPONENT V	715	350	1,065	2,068	3,133
	*****	*****	*****	*****	*****

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115