



EL SALVADOR EDUCATION BASELINE STUDIES

EXECUTIVE SUMMARY

During August 1989, USAID/El Salvador contracted with the Academy for Educational Development to prepare a series of reports on the educational system of El Salvador. This series of reports presents the findings and recommendations of the specialists who focused on four technical aspects of the teaching/learning process which affect the quality, efficiency, relevancy, and access to education in El Salvador: (1) the Management Information System of the Ministry of Education, (2) teacher preparation and training, (3) the potential for student achievement testing, and, (4) the potential for radio education in El Salvador.

Individual team members consulted with a wide group of Ministry of Education people, and in the case of the section of the report dealing with Interactive Radio Education, with a wide range of private/ parochial persons or entities in the search for information to guide the preparation of the report.

MOE READINESS/PRIORITY

At the highest level within the Ministry of Education there are four stated goals:

- o Strengthening
- o Decentralization
- o Focalization
- o Privatization and Private Participation

While these goals may mean somewhat different things to different people, it seems clear that the improvement of teacher training ranks very high. Many actions have been taken, as described in that report, to move ahead in a substantial way toward changing old patterns, with several units of the Ministry having activities already well underway. More important efforts appear to be happening in this subsector than in any of the other three subsectors dealt with in this series of reports.

The issue of the management information system might be an area where unrelated, uncoordinated, costly activities leave the efficiency of Ministry activities in its greatest disarray. Without serious efforts to coordinate and integrate MIS activities, achieving efficiency will be more than difficult -- it may be impossible.

The study of interactive radio education presented a surprisingly broad range of extant activities by public, private,

and parochial entities, though somewhat uncoordinated. At several levels within the Ministry and in the private sector there is a readiness for participation in the proposed project which would include this subsector. It is less clear what levels within the Ministry perceive this subsector as having high relevance to their perceived priorities. This report, however, presents a strong case for the relevance and readiness of the Salvadoran society for new undertakings in Interactive Radio Education. The technical field is, of course, well beyond its infancy with numerous successful and replicable/modifiable projects in several Central American and Caribbean nations, thereby capable of reducing costs in money and time.

Achievement testing is probably the subsector where readiness is least evident despite the fact that the efficiency of the system is, in part, hostage to the poor quality, spotty use, and misapprehensions about the utility and essentiality of testing. It is probably an exaggeration to say "nobody knows" the degree of efficiency of the teaching process in the country, but it is entirely safe to say that far too few people have sufficient understanding of the role of testing in measuring system efficiency. This subsector, therefore, definitely needs to be included in the next project of Basic Education in El Salvador, both to provide teachers with a means of verifying the teaching/learning process pupil by pupil, and as a device for discerning the effectiveness of the educational system at the national level.

PROJECT ADMINISTRATION

Based on the Academy for Educational Development baseline study and the record extending back to the early 1950s, it is strongly recommended that the creation or resurrection of any servicio-like administrative mechanism for the management of a new education project be avoided.

The advantages such mechanisms provide are attractive in the short run because of the relative ease with which vexing delays associated with host government bureaucracies can be finessed. Such advantages are, however, transitory at best and ultimately when the projects are completed, those earlier perceived advantages have evaporated as have many of the outcomes and accomplishments of the projects parented by such mechanisms. APRE is but the most recent local case in point. Residual are a number of qualified personnel whose salaries were/are incompatible with the realities of Ministry policies and practices. In less time than it takes to note the occurrence, those people are gone: their expertise and enthusiasm only a memory. The follow-up ministry inherits an inventory of hardware, not of its choosing and often outside its budget for maintenance with entirely predictable results.

El Salvador's Education Ministry, is a major conduit of public funds. At some point early in the project design phase, a reflective assessment should be made as to whether the Ministry can be influenced to respond to needs with actions.

For the convenience of users of the report, an Executive Summary is included for each of the four areas, thereby providing readers/users of the report with stand-alone subsections.

A. MANAGEMENT INFORMATION SYSTEMS

Among the problems which hamper the ability of Ministry of Education managers is an information management system inadequate to operational and managerial needs of collecting, processing, analyzing, and presenting data. Despite substantial investments in computer equipment, lack of compatibility of this equipment and computer staff limitations represent major obstacles to providing the El Salvador Ministry of Education with a coherent, useful tool for management improvements.

The MOE does not possess a serious information systems plan which details the overall philosophy, direction, and strategy of MIS activities in response to the information resource management needs of the MOE. Equipment procurement has been made with little regard to establishing and preserving a stable institutional environment for the MOE's MIS to develop in. "Inexpensive" solutions have been opted for which threaten to fall short of both MOE requirements and expectations.

The basic administrative functions served by the existing system are essential for MOE operation. On the other hand, the MIS is not currently conceptualized as a planning or strategic management tool.

The Computer Center performs essential data processing functions without which the MOE would collapse. Basic Education collects the information necessary for its own operation. The Statistical department depends on the goodwill of other units to actually collect the data, and is not really a user of the information. With no direct authority relationship to the data providers, Statistics can do little to improve data coverage or timely reporting. No material support or information feedback is ever received in return by the data provider.

The largest gains in MOE efficiency will be obtained by improvements in the administrative procedures employed by the MOE on a day-to-day basis. Longer-term gains will result from policy formulation and adjustment based upon the analysis of information captured through the operation of an affective method, for such management. It is essential to consolidate the MOE's capability

to support administrative functions while capturing the result of the administrative activity.

The educational statistics system is operated by the Estadística department now located under the MOE's planning unit. Initial enrollment data are collected disaggregated by grade, age, and sex. This system requires a substantial amount of data collection effort, consolidation, and aggregation and suffers from substantial delays in data flow, incomplete coverage, and unknown data quality.

The Computer Center of the MOE has been located under the Administration Directorate, a reflection of its implicit priorities.

Even though a large number of computer applications currently exist, the principal problems are those of access and relation. Data extraction, consolidation, and presentation are important functions for strategic management, and these are currently poorly served by the existing system. The number of terminals and printers available are inadequate.

For the MOE to implement sustainable administrative improvements, it will be necessary to provide for their effective decentralization. Central information requirements must be met through regional information capture and flow up through the system. There should be completely compatible hardware, operating and software systems at all levels of the MOE. Currently, the MOE has a "mixed salad" of computers, peripherals, and software, and there is no effective support.

Data communications also form an important part of any computer decentralization plan. Communications infrastructure in El Salvador is currently poorly developed but a number of options exist which can be implemented such as leased-lines, radios, or wireless, modems, private microwave links. In any case, fall-back means of data exchange must be provided.

Regional and subregional offices will require both clean power and a reasonably clean environment: this means that uninterruptible power supplies and air conditioning be included for each site.

The essential support needs of the MOE must be met through a hardware and software environment which is of sufficient power, flexibility, reliability, and compatibility. No serious plan has yet been developed. The MOE must define the direction of MIS efforts.

Given the importance of an effective MIS for improving the effectiveness of MOE management and planning, and the difficulties of sustaining such an MIS within a Ministry environment, the

argument for a unified hardware/software environment is strong.

With current equipment, however, the MOE's needs are not met. Effective decentralization requires computer support for four offices. Continued purchases of smaller personal computers do not address central MOE needs.

Hardware support should be provided for test development and scoring.

Communications systems are extremely important to support the decentralization of MIS functions. A study will require funding to select the most appropriate options for the MOE.

Efforts undertaken to date for the personnel system have suffered from the mechanization of deficient manual systems, which results in deficient automated systems. Recursos Humanos needs assistance in reorganizing its personnel procedures. What is needed for a successful effort at improving the efficiency of MOE personnel management is a combination of specific long-term technical assistance supported by a carefully selected and adapted full-function personnel software system.

A concentrated search needs to be conducted for a personnel system as part of the decision process for hardware selection.

Long-term specialized technical assistance in personnel management to the Recursos Humanos directorate should accompany the implementation of the new personnel software, and will have to develop a phased, multiyear plan for conversion to the system.

The most important conclusion to be drawn from this study is that the information problems of the MOE are of a larger scale than had been recognized to date. The MOE is a very large, complex organization with a weak information system, which has not been responsive to MOE management needs.

Combined with a limited personnel system is an educational statistics system best characterized as inflexible, seriously delayed, and of questionable coverage and quality.

A second problem area has been to assume that MIS personnel can solve the MOE's very large problems. Insufficient specialized technical assistance has been provided to guide the reworking of the MOE's procedures, and this compromises MIS impact.

A third weakness in the effort to strengthen the MIS of the MOE has been a propensity to apply "small" solutions to very large problems.

The foregoing findings suggest that the Mission should carefully consider its commitment to different MIS aspects under

a future project. Substantial time and resources will have to be committed in a sustained manner. The priorities for this action are: personnel management inefficiency, the lack of timely and reliable educational statistical data, a software environment which will permit their combined analysis.

If student testing is to be supported at a nationwide level, specialized hardware and software will have to be procured to manage the large volumes of data. Specialized technical assistance should be provided for test development and operational planning.

For the personnel system, a search should be conducted for a full-function personnel system which can be adapted to the specific needs of the MOE.

The MOE's WANG VS-45 is virtually obsolete as equipped: it is insufficient to meet the current demand. A concerted effort must be made to define the future development of the MOE's computer environment.

USAID support for MIS must now address better means of assuring the institutional sustainability of the management tools necessary for the MOE to achieve educational quality and efficiency.

B. TEACHER TRAINING

This study presents background material on the pre-service and in-service training of early childhood and primary school teachers in El Salvador at the end of the 1980s. This is placed within the historical perspective of a country with over a decade of internal strife and war. Training is viewed as a single process beginning from the time the teacher enters pre-service programs until he or she retires. At the same time it is seen in consonance with curriculum and materials development, all part of what must be a unified effort to improve the quality of education.

The study was completed at a time when the Government of El Salvador (GOES) had just increased initial teacher preparation from two postsecondary years to three. In addition, new primary school curriculum programs had been implemented in 1988. Despite this, both teacher education and curriculum development were in a state of turmoil and uncertainty.

For the moment there is no problem with the supply of primary school teachers, exactly the opposite of what was true a decade ago. By placing teacher training in eight public and five private Technological Institutes in 1982, the GOES has managed to achieve several outcomes:

- a. Change from a country with a deficit in trained primary

school teachers to a country with a surplus, currently estimated between 5,000-8,000.

- b. Increase the number of years of study for the primary school teacher from 12 in 1980 to the current 15 years.
- c. Stimulate the interest of young people in teaching to such an extent that at present only about one of every five who want to enter this career are accepted at the training centers.

Despite this, strong voices clamor for a return to the days when teacher training was in a single, centralized unit at the Ciudad Normal. There may be some certainty to these affirmations inasmuch as:

- a. The new teachers who entered the profession in the 1980s have come largely from lower income groups, thus shifting the traditional middle class base of the profession.
- b. Most of the Technological Institutes are poorly equipped, understaffed, small, and unable to offer quality training.
- c. Mixing teacher training with technical careers is demeaning to the profession.

There is currently a GOES decision to improve the quality of the training programs, translating into proposals to:

- o increase the number of years of pre-service training from three to four or five.
- o center the training in fewer institutions, probably one in the central area outside of San Salvador, one in the east and one in the west.
- o freeze enrollments for one or two years while these changes are being finalized.

To carry forth these proposals, the GOES will need support in:

1. The medium-term training of the trainers of teachers (less than 100 in the entire country) on a massive scale in 1990-91. Most are products of the same system described above and, despite heroic efforts on their part, have received very little updating in recent years.
2. Providing the newly selected centers with modern bibliographies, materials, and equipment to raise the quality level of the training.

3. Reorientation of the curricular programs of the pre-service training centers centering around active methodologies, a more scientific base, and work with the communities.

Those teachers already in service face a different dilemma. At present, the updating or training they receive is minimal and parcelled out by at least a dozen different units. There is no official coordination and no assurance that the same teachers are not receiving the majority of the training. Even worse, inasmuch as the Ministry of Education (MOE) has almost no budget for training, activities depend upon the support of externally funded projects, each with their own special objectives.

One unit exists which, in theory, has responsibility for the in-service training (PPMS). However, PPMS has limited resources and has targeted its actions at specific groups: school directors, teachers without certification, first grade teachers, etc. Its method of coordination with the other units which carry out in-service training has been through special agreements and technical assistance.

The needs for in-service training are huge because:

- a. Teachers in the system are products of greatly diversified pre-service training programs, varying from the secondary level preparation at the Normal School to the two-year postsecondary training at the Technological Institutes.
- b. A policy for placing teachers based on seniority in terms of their training is followed. This means that virtually all teachers in the system have been trained prior to 1984, leaving at least a five-year gap in their preparation.
- c. Alarming statistics on repetition and desertion within the first three grades of primary school indicate that current methodologies of teachers need to be re-examined and re-oriented so that individual children can be more adequately helped.
- d. At a time when the country is in need of reconstruction at the community level, most teachers do not have the necessary skills to reach out into the towns and rural areas where they teach to promote projects and development.

As a result it seems imperative that the following actions be initiated:

1. Naming a central unit responsible for the coordination

of teacher training and providing that unit with the means to carry out its task.

2. Launching a massive program of in-service training in 1990-91, using whatever media available (distance, presence, combinations) for all primary school teachers, with special emphasis on those in the first three grades.
3. Providing the classroom teacher with materials of a practical nature, ones which consider his specific needs and the cultural community in which he works.

This report also looks at the primary school curriculum. Despite recent efforts to change, as evidenced by the 1988 curricular programs, the current curriculum is still very much urban biased, oriented toward the middle class, traditional in its orientation and parcelled out in increasingly shorter half-day shifts. Because of the obvious and urgent need to change the primary school curriculum, the entire teacher training process described above is in jeopardy. One cannot prepare the "new" teacher for the "old" curriculum. The two must advance in harmony.

This concept translates into the following necessities:

- a. Evaluation of the real needs of the student and of his/her strengths and weaknesses, particularly in the first three grades, so that the necessary corrections can be made.
- b. Analysis of existing materials used at the primary school level to determine their future orientation. There is a need to avoid contradictions and overlapping in the printed materials.
- c. Orienting the curriculum to a more diversified, integrated, locally oriented base so that it can serve both the student and the community needs.
- d. A new student evaluation system which assesses strengths and weaknesses for the purpose of assisting individuals in their development. This may mean taking a longer range view of the child and his development process, perhaps delaying a final assessment until the end of each cycle (three years).
- e. Consideration of the development of the child from an earlier moment, perhaps orienting some governmental educational support to children in the 5-6-year age range. This could mean the expansion of the current "grade 0" project, the incorporation of preschool sections into the primary schools, or some other mechanism of this nature.

Development projects which will support the MOE in their struggles with the aforementioned tasks confront some of the following decisions:

1. How to orient a large part of the budget and the actions so that the people at base level, the classroom teacher in this case, receive 80-90% of the benefits of the project.
2. How to insure that those who benefit most from the projects are those who live in urban marginal or rural areas.
3. The way in which one can insert new and innovative ideas into the educational system without conflicting with experiences already gained or other cultural diversifications.
4. Whether training can best be accomplished with in-country or third country programs, and just when training in the developed countries is most helpful. Both cost and relevancy should be considered.
5. The level of technologies which can be most useful at particular times. Extremely sophisticated technologies need to be analyzed in terms of the capacity of the country to absorb these technologies and their ability to carry them forth at project end.

C. TESTS AND MEASUREMENTS

Brief History of Student Achievement in El Salvador

A multimethod approach was used to conduct this requested survey of testing systems and practices in Salvadoran Primary schools, including review of documents, interviews with MOE and university personnel, and interviews with teachers.

Prior to 1950, little was written in the journals and professional publications regarding theory or use of measurement. From 1950-1970, discussion and emphasis on testing was superficial, dealing with simple theoretical issues.

A report prepared in 1972 by Teresa Pennafirme suggested using a more structured, systematic, uniform approach to evaluating student achievement. A manual was prepared (1973) to assist teachers in the classroom, but after an initial wave of training, little was done to provide support to the concept. After two

years, little use was made of the manual.

In the same period (1974-77), Stanford University researchers initiated a project with the MOE to develop a set of national achievement tests, based on what was then considered the national curriculum. Developed without the involvement of teachers or university faculty, and mandated for use in the nation's schools, the initial and continuing reaction was one of rejection. As a result, the tests were not used nor any systematic data collected.

In 1983, the OAS cooperated in several Central American countries to attempt a systematic appraisal of learning in primary schools. Sample tests were developed in four areas -- Mathematics, Social Sciences, Science, and Language. Once again the development was done entirely within the MOE with no teacher or university involvement. Data were collected from the sample, but little was done with the information for planning or decision-making.

In 1986, the OAS returned to conduct a follow-up of the 1983 project to explore whether any instructional interventions implemented during the three years of the program had affected the learning of the students. Results showed that, overall, students had not made any progress. Again, no follow-up was done on the data collected.

Status of Current Student Assessment Systems

Testing in any standardized fashion has been almost nonexistent over the past two decades. Currently, no student assessment is conducted in the classroom, with teachers devising their own evaluation systems. Teachers are free to select from a list of objectives in the curriculum guide, resulting in substantial inequity in the process. Some teachers use a minimum proficiency level to evaluate students while others use a maximum level of what should be learned.

In the teacher interview portion of this baseline study, the following alarming findings emerge:

- o 66% of the teachers interviewed do not have a system for evaluating pupils.
- o 53% assign grades based on how the student performs on the day of the examination.
- o 100% use objectives to evaluate pupils, but those objectives represent entirely different levels of performance requirements.
- o 73% use written tests not necessarily linked to objectives or expectations.

- o 80% indicated they use the results to make decisions about how to help the pupils, but when probed, they did not know how to make diagnostic decisions.
- o 73% indicated they had very little training in how to develop and use tests in the classroom.

One fledgling effort is currently being made to serve as a building-block for other testing activities in the current (October-December 1989) University of New Mexico collaboration with the MOE. Some training has been conducted involving test-item writing. Unfortunately, a project to develop and conduct a national assessment requires a strong organizational structure within the MOE, and none now exists. MOE's involvement is through the Departamento de Investigación y Evaluación; there are six teachers working with 12 MOE evaluators.

With regard to achievement data, as far as could be determined, the MOE is not a recipient of any achievement data from the schools. The only type of performance data the MOE receives is a grade tally on a grade register. In general, a grade of 3 or 4 will assure the pupil of passing: in other cases, a grade of 5 or 6 is required. Again, this demonstrates the inequity in the evaluation "system".

Capability of Developing a Student Assessment System

The MOE does not currently have the personnel necessary to embark on a major testing project.

At the university level, some capability exists. The current University of New Mexico test-item writing is a potential source for the required skills. No work has been completed to date, but the staff are oriented to the process, and more comprehensive training could be developed.

Attitudes toward Testing and Willingness to Develop a System

Interviews conducted with MOE personnel suggest a very positive attitude.

In the universities, there was a very positive attitude toward testing, but that attitude was based on the view of testing from an academic perspective.

Teachers realized the realities of the use of testing in the classroom and were very positive about testing.

The teachers' union was contacted by telephone and a positive

attitude toward testing was expressed; however, cautions related to the use of testing information to evaluate teachers were also cited.

Expected Development Impact

It is possible to identify several areas that would be direct recipients of the impact of an achievement testing project:

Beneficiaries

The primary beneficiaries are the students themselves. A second group would be the teachers who would begin to have information from which to make sound instructional decisions. A third group of beneficiaries would be the MOE officials who at present lack credible information about learning trends or performance levels of primary school pupils.

Institutional Strengthening

To develop a student assessment system would create a collaboration among several areas of the educational community. That in itself would strengthen the organizational and administrative capacity of the MOE, and the links between the MOE and other participants in such a project would lead to all participants working toward common goals/objectives at all levels.

Capacity Building

One of the greatest benefits of a project of achievement testing would be the capacity building at various levels -- the MOE, the universities, the teachers -- all combining to better serve the pupils in El Salvador's basic education system.

Conclusions/Recommendations

A series of 11 conclusions describe a virtual lack of any useful system, or history or proposed plan within the MOE, to address the issues of pupil achievement. The MOE, the universities, and the teachers all lack understanding, training, and experience in achievement testing. The result is that the quality output of the educational system is low and is not improving.

1. The intellectual antecedents needed to create the professional base for supporting a project seem to be absent. Most of the historical professional work has been elementary and theoretical. The universities need to recognize that this type of project requires the preparation of professionals in specialized areas to insure its ongoing success.

2. There is no formal student assessment system in existence in El Salvador. Some efforts have been made to conduct studies of achievement but were either "one-shot" efforts or failed because of the lack of proper organization, support, and communication.
3. Achievement data does not exist for students in primary schools. What information has been gathered over the years is not accurate because of the problems encountered in the data collection. These data have never been used in any manner for planning, curriculum revision, or resource allocation. The fact is that most of the people in the MOE and the universities do not really understand how one would use the data for making key decisions.
4. The universities provide pre-service teachers with a course or two on evaluation and testing, but much of it is non-experiential. Therefore, when the teachers get into the classroom they fail to link their previous learning to their current experience. The result of this is the non-use or inappropriate use of student assessment techniques in the classroom.
5. The obstacles for developing a student assessment system that will serve the educational community well are significant but not insurmountable. By beginning a project with proper orientations, training, and collaboration development, the building-blocks could be put in place for a successful effort.
6. Achievement data are not used in the schools for making diagnostic decisions. Teachers in both public and private schools use testing for certification purposes (passing or failing). Much of this is due to their lack of understanding of how to diagnose learning problems and how to provide the necessary remediation to resolve the problem.
7. Teacher-made tests have very little congruence with the national curriculum. Often the tests are related to a static set of teacher objectives regardless of what the students are working on. This creates an incredible mismatch and an inequity for the students.
8. The grading system is somewhat uniform across schools and grade levels. However, the criteria for using the system varies significantly. A particular grade does not represent the same from school to school or classroom to classroom. Teachers do not understand what the minimum requirements should be for grade assignment or for promotion.

9. There is high interest and positive attitudes about beginning a testing project in the MOE, universities, and among teachers. However, the capabilities, knowledge, experience, and training are lacking. Careful planning and significant technical assistance would be needed to initiate a project.
10. The necessary expertise for designing and implementing the operational requirements of a testing program do not exist in El Salvador. This is an extremely critical piece of any testing program. Without proper planning and coordination of the operational component, most any testing project attempting to conduct large-scale assessment will fail.
11. The tests used in the past for achievement studies have questionable technical quality. No evidence of statistical studies were found to establish the validity or reliability of the tests. Proper procedures would have to be built into a testing project to insure that the necessary statistical studies are conducted.

A series of 10 recommendations are made. Any failure to address all of these recommendations could cripple and potentially derail achievement of project goals.

1. Acquire top-level commitment from the MOE. Any decision to implement a testing program in El Salvador must be based on a strong MOE commitment if the program is to be successful.
2. Establish an advisory group made up of key representatives from important and influential constituencies. They should include the MOE, universities, teachers' union, schools, etc. Their representatives should be used to plan the project and deal with problems that might impede its progress.
3. Jointly with the MOE, interested universities and other key constituents should conduct a conference and draw up a working concept paper of how this operation would work. This would provide the opportunity to get all the issues on the table for discussion. This also would present useful information for the preparation of the project paper.
4. Conduct a thorough study of all persons who have the necessary training to work on a testing project. A preliminary list was prepared for this project, but a more comprehensive one will be necessary.

5. Investigate thoroughly whether there would be major systems(operational) problems at the onset of the project. Explore the compatibility of the systems in the MOE and those of the universities. To begin to resolve the problems early would prevent delays in the project in the future.
6. Should a project be planned, conduct thorough training for people who will work on the project. Much of what is known is superficial and there is a tremendous lack of experience.
7. The MOE should delineate a policy for the appropriate department to take charge of the project. There are differences of opinion regarding the task of testing. Some feel it is part of the curriculum effort and others do not. A.I.D. could provide important assistance by helping the MOE in devising this policy.
8. Should a project be initiated, devise a strategy for the project to be a collaboration between the MOE and the universities. Neither sole entity has the knowledge, capability, or experience to handle a project on its own.
9. Should a project be initiated, incorporate long-term technical assistance to provide the necessary training and direction to ensure success of the project. A test development and testing operations person will be required for 1-1/2 to 2 years of technical assistance. In addition, provide for short-term specialized technical assistance, such as in software development, for a minimum of 18 person-months.
10. Should a project be initiated, provide for off-site training for staff to gain experience in the realities of testing program operation. Training should involve not only visitations but also possible internships at locations that can provide hands-on experience.

D. RADIO EDUCATION

This study analyzes the potential for radio education in El Salvador. To provide a proper perspective, the roles that television, distance education, and cultural promotion have played in formal and nonformal education were also analyzed.

It was found that, as in most developing countries, radio listenership is very high. Survey results available from urban areas reveal that 96% of the respondents own radios. Experts believe that most rural homes have radios, and that while urban dwellers listen most to music programs, the rural population regularly listens to informational, religious, and news programs. The only consistently programmed educational broadcasting is found on YSAX, the station operated by the Archdiocese of San Salvador. This half-hour program, broadcast three times daily, supports an adult literacy program that currently involves about 30,000 participants in greater San Salvador and the surrounding populous rural areas.

Much of the infrastructure necessary for a future radio education project already exists but is widely scattered among different Ministry of Education (MOE) divisions and departments. There are no clear definitions of terms such as "nonformal", "adult" and "distance" education, or "cultural promotion". The MOE is currently attempting to consolidate divisions, define an organizational structure, and delineate policies.

It is recommended that the MOE integrate the activities of distance education, adult education, and cultural promotion. It is also recommended that the Department of Educational Television be renamed "Department of Cultural and Educational **Radio** and Television" (Dirección de Radio y Television Cultural Educativa), that a media policy be written, and that this department reinforce its audio production and recording facilities and staff.

USAID is considering a grant project to improve the quality and efficiency of education in El Salvador. In so doing, it asks, "Can radio assist in the classroom education of preschool and primary school children and in the in-service training of rural promoters and teachers in El Salvador?" Certainly, radio has a strong potential for educating children without access to formal schools; to assist teachers in the classroom, especially in math and civics subject areas; to support in-service teacher training; and, to support distance education, cultural promotion, and adult literacy programs.

It is recommended that the MOE acquire the operating and programming rights to the government-owned FM station, YSS, which is currently only being used to broadcast popular music.

In the short term, beginning in the first year of the project, the MOE could consider adapting the Honduran "Family of Numbers" math program for use in school classrooms. The Costa Rican in-service teacher training program could be adapted to train teachers to use the "Family of Numbers" program.

A "moral and civics" education program could be developed for the first and second cycles of basic education, over the life of the project. A radio-supported teacher training program also should be developed to complement the classroom broadcasts.

A RADECO-type interactive radio instruction (IRI) program can be adapted and broadcast to communities where children have no access to formal schools. Community Cultural Centers (Casas de Cultura), religious organizations, distance education centers, municipalities, and other organizations can assist in this effort. Promoters from these organizations can assist in the organization of community IRI schools and in training, with radio support, of volunteer "monitor-guides".

It is recommended that MOE officials visit the RADECO project in the Dominican Republic, the AVANCE project in Honduras, and the adaptation of the "Family of Numbers" with the complementary teacher training program at the Ministry of Education in Costa Rica. Experience has demonstrated that it is necessary to see IRI in action to understand fully its potential impact.

At a later stage of project life, an IRI program for first cycle, or preschool reading and writing, might be developed. Work on a similar project will be developed in Honduras in 1990. The results of the Honduran experiment might be applicable in El Salvador. Use of IRI for adaptation or development of other subject areas, especially science and English language, might be considered.

Use of radio to support other in-service teacher training areas should be developed as the project proceeds.

It is recommended that, to avoid establishing a separate Radio Education program development entity, the proposed MOE divisions be assigned responsibility for specific IRI development tasks. A permanent, overall Radio Education Advisory Committee should be established, with a full-time Executive Secretary to oversee the radio education initiatives. If more than one type of radio education program (i.e. math, RADECO approach, morals and civics, etc.) is to be undertaken, the Executive Secretary could have an assistant to coordinate each specific program.

Scriptwriting and/or review can be undertaken by teams formed within the "Curriculum Development" department. The department can appoint a full-time coordinator and assign a number of scriptwriters to develop new programs, or revise content if the

program is to be adapted. Similarly, production can be undertaken within the framework of the Radio and Television Department; Evaluation and Supervision, within the respective departments.

It is recommended that USAID finance up to 12 person-years of long-term, and 36 person-months of short-term technical assistance. It also is recommended that a study be made of equipment, complementary staff, and training requirements for the Radio Education component for the grant project in consideration, prior to preparation of the Project Paper.