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LATIN AMERICA AND THE CARIBBEAN

Basic Education

Review of Experience

Bureau for Latin America and the Caribbean • Office of Development Resources • Education and Human Resources Division

U. S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Basic Education

Review of Experience

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In 1989, the Education and Human Resources (EHR) Division of A.I.D.'s Bureau for Latin America and the Caribbean (LAC) commissioned a series of three evaluations in education and human resource development: basic education, vocational education and training, and participant training. A fourth study of management education and training is planned.

These studies present lessons learned about the design, implementation, and evaluation of donor-assisted projects. Each study examines the relevant literature as well as actual site visits of programs or projects in the LAC region. The studies focus on the experience of the U.S. Agency for International Development over the past fifteen years. In addition, the work of other donor organizations is considered.

The studies are research and reference documents that lead to practical applications in project design, implementation, and evaluation. Part I of this series presents the *Reviews of Experience* and Part II the *Practical Applications* for each subsector.

The studies were carried out by the Academy for Educational Development (AED) through the LAC Bureau's Education and Human Resources Technical Services Project. The team for the studies included the following representatives of the EHR Division, AED, and its subcontractors.

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While the conclusions are the author's own, to the extent that this review provides useful information for enhancing the delivery of basic education services in Latin America and the Caribbean, all these people must be given full credit.

The importance of basic education as a factor in socioeconomic development is well established. Increased levels of education have been positively associated with higher individual incomes, better employment opportunities, increased agricultural production, improved health standards, lower fertility, and a greater sense of empowerment leading to participation in democratic processes. Basic education is also seen as contributing to adaptability to social and technological change. With the current expansion of access to knowledge and rapid technological advances, the role of education in creating a flexible, well-trained labor force becomes even more crucial.

Recognizing the importance of basic education, the Education and Human Resources Division of the U.S. Agency for International Development's (A.I.D.) Bureau for Latin America and the Caribbean (LAC) commissioned this review of A.I.D.'s and other donor agencies' extensive history of project development and implementation in the area of basic education in the LAC region. The review forms part of a set of four separate studies dealing with the topics of basic education, management education, vocational education, and participant training. This study summarizes the available literature and presents case studies of selected projects. Its objective is to provide a reference document for donor agency and host country managers in their efforts to design and implement relevant and efficient basic education programs.

In recent years, the countries of Latin America and the Caribbean have been successful in expanding access to basic education to a majority of their children. However, the heterogeneous nature of LAC countries, disparities in the distribution of economic resources, and the ongoing pressure of debt servicing create a situation where resources are spread thin and all children do not have a fair chance of advancing from one grade to the next. The opportunities for learning the tasks required for grade promotion are further limited by poor teaching, lack of educational materials, and poor information about the process of education in the region's schools. Thus, a large number of students fail, especially those entering first grade, but because of the expectations of their families, they continue to stay in school, repeating grades for a number of years.

Improving the quality of instructional delivery, and thereby reducing wastage in time and resources resulting from repetition and dropout, requires multiple inputs to the basic education system. Well-conceived strategies must be developed and implemented to increase the allocation of resources for basic education, improve the logistical and administrative support for schools, promote instructional methods that involve students actively in the learning process, offer opportunities for the professional and personal development of teachers, and provide information for systematic evaluation and decision making.

A.I.D. Basic Education Strategy and Project Design

A.I.D. has been working with public and private organizations in Latin America to improve the quality of education for more than thirty years. In that time, A.I.D. and other donors working in the region have contributed to the positive trends in access, coverage, and school attendance rates. In recognizing the tremendous costs resulting from poor quality instruction, repetition, and dropouts, A.I.D. has turned its attention to issues of quality and efficiency by supporting a number of broad goals for basic education in the region. These goals are to increase resources for primary education, increase equity of access, improve quality, improve efficiency, and improve the administration of education. In order to meet these goals, the LAC Bureau has developed

a regional strategy for investment in basic education. The strategy document, which serves as guidance to field missions designing and implementing basic education programs, outlines two activities in which missions should focus their efforts: policy dialogue and project implementation.

Background studies provide a basis for policy dialogue both by presenting information needed for decision making and by creating a forum for collaborative interchange between USAID mission and host country personnel. The most useful background studies are those that involve local educators as team members and are focused on the basic education system, provide statistical (descriptive or analytical) summaries of the existing situation in the education sector, and offer options for interventions.

Such studies also help determine the type of project to be developed. Several design modalities — such as pilot projects; large-scale, multifaceted projects; targeted interventions; and sector loans — have been used for basic education interventions in the region. Pilot projects have generally been among A.I.D.'s most successful interventions. With a pilot project, a small investment can have relatively large effects if it builds on local efforts that are viewed as successful. The implementation of even highly successful pilot programs on a national level, however, will take a number of years and is likely to require continued international donor support.

The complexity and interrelatedness of the problems facing basic education in the LAC region require a system-wide approach to improving the quality and efficiency of basic education. This has been recognized by A.I.D.; it has moved away from project assistance toward program-level assistance. However, even with the entire basic education system as the target of strategic objectives, the scarcity of resources to address the problems of quality and efficiency will require phased implementation over a relatively long period of time to effect change.

Resource scarcity also makes collaboration among donors imperative. A.I.D., with its extensive investment in basic education in the region, should take the lead in promoting collaborative efforts among donors to address the needs of host countries in this area.

Project Implementation

The implementation of A.I.D.-supported basic education projects and programs in Latin America has traditionally involved a partnership among a USAID mission, one or more host country organizations, and an international technical assistance provider. Because A.I.D. has generally focused on the public sector when supporting interventions for school-age children, the ministry of education has been the usual implementing organization. Ministries of education, however, are often ineffective in rapidly implementing donor-assisted projects. The establishment of a special implementing unit has proven to be an effective means of overcoming the bureaucratic inertia of education ministries; such units, however, may become ineffective when resources from donor agencies are no longer available. A second implementation strategy has been that of using multiple implementing units, including the private sector. Such an approach requires careful study of the capability of the local implementing organizations to ensure that their efforts will complement one another in a cost-effective manner and to assess their commitment to basic education and to working with the ministry.

Regardless of the project implementation strategy, the presence of a local USAID mission is a positive feature in implementation that distinguishes A.I.D. from many other international donors. The availability of USAID managers to respond rapidly to project needs is seen by host country officials as strengthening the implementation process.

Technical assistance forms the third element of project administration. Traditionally, technical assistance has been supplied by specialists from the United States who have been contracted individually or through institutions by a competitive bidding process. In recent years, with the increased educational opportunities for professionals in the region, there has been greater use of host country specialists or specialists from other countries in the LAC region as part of a technical assistance effort. As there can be great cost savings in using local professionals to carry out technical assistance activities, such resources should be sought whenever possible.

There has also been an increasing emphasis on short-term technical assistance in the region.

This can lead to implementation difficulties because of scheduling changes that result in availability problems for short-term consultants who have other occupations. In using international technical assistance, a balance must be struck between the need for long-term consistency and the flexibility of short-term technical assistance.

Box 1 summarizes the following discussion of A.I.D.'s goals for assistance in basic education and the kinds of interventions typically employed.

BOX 1
A.I.D. Goals for Basic Education in the LAC Region

Increasing Resources for Primary Education

- Reallocating government budget
- Reallocating education budget
- Obtaining resources from private sector

Increasing Equity of Access

- Providing preschool education for children of the poor
- Providing instruction in indigenous languages
- Addressing issues that constrain girls' attendance

Improving Quality

- Improving children's health and nutritional status
- Renovating or constructing school facilities
- Revising or reforming curricula
- Developing instructional materials and technologies
- Training and supervising teachers
- Developing achievement testing

Increasing Efficiency

- Improving management of education systems
- Enhancing quality of teaching and learning
- Reducing dropout and repetition rates
- Improving status of teachers

Improving Administration of Education

- Strengthening Ministries of Education
- Supporting decentralization of certain functions to regions
- Creating supervision systems that support teachers
- Improving school organization and capabilities of principals
- Building support for schools on part of parents and communities

Increasing Resources

A primary concern in implementing basic education interventions is increasing resources. Although primary education is considered to have the greatest social rate of return among education levels, it generally receives a disproportionately low percentage of the education budget. Thus, considerable attention has been paid during the 1980s to the possibility of reallocating resources from other sectors or from other education levels to basic education. There appears, however, to be little possibility of intersectoral reallocation because the chief candidate for cuts is defense. Many of the region's countries are attempting to deal with insurgency and/or drug trafficking, and they are unwilling to make cuts in this area. Tax reform and levies for education offer some possibility for increasing funds in countries where education is highly valued.

The transfer of funds from higher to basic education is a commonly suggested reallocation strategy within the sector. This may necessitate constitutional modification, engender student unrest, and endanger the quality of the threshold level of higher education needed for development. Other strategies for intrasectoral reallocation such as cost containment and cost recovery offer little possibility of success at present, for the former because the bulk of expenditures goes to salaries, and for the latter because of the large-scale poverty in the region. Experience using private sector organizations as basic education service providers as a way to cut costs has been limited. While several innovative activities have been undertaken with the private sector in different parts of the LAC region, questions remain about the commitment to basic education of profit-making private sector organizations and their willingness to sustain educational endeavors.

Increasing Equity of Access

Although LAC countries have made great strides in the past twenty years in improving access to primary education, there are certain groups — such as the urban and rural poor, girls, and linguistic minorities — that may fall outside the coverage of the school system or, if enrolled in school, may not have an equal chance for success. Reaching these children has become an area of donor interest.

Much of preschool education in the region has focused on middle- and upper-class children, and the limited programs for children of the poor have shown inconclusive results in terms of effects on academic achievement, repetition, or dropout. The negative effects of traditional primary education may offset the benefits of the preschool experience or programs may not be of sufficient scale to demonstrate impact.

Bilingual education provides children from indigenous groups and linguistic minorities with the opportunity to acquire content in their own languages and thereby not fall behind while learning the national or predominant language. Program effectiveness depends primarily on the availability of bilingual teachers. Once bilingual teachers have been assigned to schools, improving the quality of instruction requires dealing with many of the general problems of LAC basic education systems, including teacher-centered instruction, lack of learning materials, and poor classroom management.

A positive relationship has been consistently shown between women's levels of basic education and indicators of economic development. Although women in Latin America are better educated than are women in other third world countries, this varies for certain population segments such as rural and indigenous females. Couching education for girls in terms of national economic development can be an effective strategy for winning high-level support to educate women. Data to support the relationship within a given country will be needed to convince decision makers of the importance of girls' education and to further policy dialogue.

Improving Quality

The success that children have in taking advantage of improved educational delivery and content will depend a great deal on their health when entering school. Interventions in educational quality should be combined with nutritional enhancement programs, where appropriate, to ensure that children can take full advantage of improved educational delivery. Similarly, school maintenance and renovation are important, especially in poor countries, to ensure that a minimum infrastructure exists so that students can take advantage of inputs related to educational quality. A school renovation effort can also serve as a catalyst to increase community involvement with the local school.

The teacher is a major factor in improving educational quality in Latin America. The poor quality and lack of relevance of teacher training institutes, combined with patronage systems that may rule against new teachers finding jobs in education, suggest that emphasis should be placed on motivating teachers already in the work force to remain in the basic education system and on upgrading their skills. Teachers, at least in the cases studied, are not disinterested and unmotivated. Rather, they are frustrated and discouraged by a lack of infrastructure, few instructional aids, and low salaries. They can be motivated through the provision of training and instructional materials that lead to visible improvement in student outcomes. Teachers, however, tend to teach in the way that they were taught. As most rural educators have had little experience with textbooks or other instructional materials, they are unlikely to use such items in innovative ways. Thus, teachers guides and student texts must be made intuitive and easy to use in ways that encourage active child-centered instruction.

While textbooks have been the principal instructional intervention in the LAC region, innovative technology such as programmed learning, computer-aided instruction, and interactive radio instruction have been used at least on a pilot basis in a number of countries. Each has been relatively successful, but only programmed learning has been carried out at a low cost. Although radio has the potential to generate low per-student costs if used on a national basis, LAC countries that have used this technology have faced serious problems in sustaining their programs.

Achievement testing is a vital factor in monitoring the implementation of educational interventions aimed at improving instructional delivery.

However, the development of a national testing system is extremely expensive and time-consuming, and no LAC country has as yet developed an adequate national testing system. Because of the expense, testing systems must be developed in a phased manner, building on efforts to monitor the progress of donor-assisted interventions. This requires long-term planning to build capacity in test development and diagnosis at the local level and test analysis and feedback at the national level.

Increasing Efficiency

The principal output of an efficient basic education system is a primary school graduate who completes his or her schooling in the prescribed number of years. Improvement of efficiency will depend heavily on the quality of educational delivery at the classroom level, that is, the creation of learning situations that offer children a fair chance to make normal progress from grade to grade and to make use of their learning experiences in daily life. Improved quality, in turn, requires an administrative infrastructure that can deliver and sustain relevant educational interventions and that can build on investments such as in-service teacher training by keeping trained personnel in the basic education system.

Improving Administration

The general lack of trained administrative personnel in the region suggests that the development of capable human resources to administer public-sector basic education programs at national, regional, and local levels will require a relatively long time frame and successive interventions. The development of human resources in administration needs to be made an explicit objective of donor assistance efforts. Measurable criteria beyond numbers trained should be developed to ensure that administrative skills and decision-making capacity are improved.

Project Evaluation

Experience with the evaluation of development assistance efforts points out several issues to be considered in evaluating basic education interventions in developing countries. One issue is that there are a number of audiences for evaluation results. Program managers in development agencies, host country policy makers, and local project implementors all have information needs. Because these needs may differ, flexible evaluation approaches that provide timely information for decision making for each audience are necessary.

A.I.D. and other donor agencies, in their literature, are aware of the potential of multi-method evaluation approaches focused on managers' use of results and of the relevance of such approaches for education in developing countries where program strategies and implementation processes influence the effects on individual children. To date, however, there has been little use of these approaches in actual evaluations of donor-assisted programs.

In addition, the evaluation of development assistance tends to focus on quantitative outputs (e.g., number of teachers trained) rather than on the quality of the services (e.g., teaching behavior in the classroom). A.I.D. evaluations remain tied to an inflexible schedule of a midterm and final evaluation focused on the output data needed to meet donor reporting requirements; these evaluations use key informants as the principal data source. New qualitative evaluation methodologies offer the opportunity to examine the quality of education service delivery and to provide information for refining interventions during the implementation process. Similarly, new technology for quantitative monitoring and evaluation allows more precise estimates of program effects.

Finally, there have been few attempts to design evaluations around the information needs of the host country implementing organizations or to build local capacity to carry out evaluation research. Recent basic education projects in Central America have begun to deal with these needs and the costs involved by building ongoing formative evaluation into the project design.

I Introduction and Methodology

Background

The importance of basic education as a factor in socioeconomic development is well established. Increased levels of education have been positively associated with higher individual incomes, better employment opportunities, increased agricultural production, improved health standards, lower fertility, and a greater sense of empowerment leading to participation in democratic processes. Basic education is also seen as contributing to adaptability to social and technological change. As the world moves into the "Information Age," characterized by increasing access to knowledge and rapid technological advances, the role of education in creating a flexible, well-trained labor force becomes even more crucial.

The greater availability of new technologies, however, can be a double-edged sword. Access to new knowledge and the ability to adapt it to local needs imply greater investment in the educational system. In many developing countries, the continuing economic crisis has shrunk resources at a time when ministries of education are struggling to serve growing school populations. Because resources are stretched thin, disparities in the educational services received by groups within a country and between countries have increased. As technological advancement continues to accelerate, poorly educated populations will be at an increasing disadvantage in their efforts to participate in social and economic development.

In addition to disparities in access, the quality of educational services is in jeopardy. Although tremendous progress has been made in the last few decades in increasing overall access to education, the economic adjustment faced by many developing countries has led to a decline in services to the growing student population. In the poorest countries, per pupil expenditures have fallen from 20 percent of gross national product per capita to less than 12 percent.

Existing resources are often used inefficiently: a disproportionate percentage of funds go to higher education, and high rates of repetition and dropout characterize primary education. In most of the poorer countries, only 40 to 60 percent of the children who enter school complete the primary grades, compared to 80 percent in developed countries. Even those children who complete school often lack the basic literacy and numeracy skills needed to function effectively in their societies.

Differences within a country exacerbate the situation as rural dwellers, ethnic minorities, and female pupils often have access to lower-quality educational services. Low completion rates among these groups contribute disproportionately to high costs per graduated student. In addition, it is estimated that worldwide up to 145 million school-age (6-11) children, who come mainly from these groups, have never attended school.

The existing economic crisis together with the current expansion of technological knowledge has placed a premium on the efficient management of educational services and the quality of their delivery. Similarly, cost-effective means of reaching the out-of-school population, females, and minorities must be found.

Purpose and Methodology

The U.S. Agency for International Development (A.I.D.) and other donor agencies have an extensive history of project development and implementation in the area of basic education. This report calls on that experience in summarizing existing literature and examining previous and current projects to identify lessons that are applicable to the problems faced by managers of basic education projects in the Latin American and Caribbean (LAC) region.

This review of basic education was designed as a study of the management of change in a develop-

ment context. Its focus is on deriving lessons that can be applied to new interventions in basic education. Lessons are presented that relate to project design, implementation, and evaluation.

In the 1980s, A.I.D. and other donor agencies were much concerned with studying their experience in providing assistance to developing countries. A.I.D. contracted for a review of its assistance to education over a twenty-year period (Method and Shaw 1981), examined the lessons learned from its contribution to education in the developing world (AID/PPC/CDIE/PPE 1984), and conducted a series of impact evaluations designed to determine whether certain interventions made a difference and what their replicability would be in other settings (White 1986).

The World Bank regularly reviews its performance in the education sector and recently completed a "state of the art" review of primary education and used this information to draw policy options for future Bank investment (Lockheed and Verspoor 1989). In addition, World Bank studies examine specific issues such as the effects of textbooks (Verspoor 1985) and improved teaching (Verspoor 1986) on student performance. There has also been a concern in Bank literature for cross-cutting issues such as female educational attainment in different geographical regions (e.g., Bustillo 1989), decentralization of education (Winkler 1988), and project management (Middleton et al. 1987)

The Canadian International Development Agency (CIDA) also undertook reviews of its experience and that of other donors in human resource development (CIDA 1985, 1986a). Other organizations, such as the Organization for Economic Cooperation and Development, studied cross-cutting management issues including policy formulation and evaluation in developing countries (OECD 1988).

Not only have donor agencies been concerned with their experience, but private, nonprofit interest groups have also become interested in the results of donor assistance and have produced reports on their findings (Lindblom 1990).

These documents provide summary information on each organization's activities in the education sector; they are discussed in detail in the appropriate sections of this report. Review of these documents is complemented by review of relevant research studies, project documents, and evaluation reports.

In addition to the review of literature, case studies were conducted in the LAC region of previous and current A.I.D. projects. Each case study consisted of a review of project documents, interviews with key personnel, and observations in primary school classrooms. The classroom observations were conducted to take rapid soundings of the degree of implementation of project interventions. Focused observations were made of individual children, and teachers were interviewed about changes they felt had taken place during the project implementation period. Four projects were chosen for in-depth examination through site visits conducted in 1990:

- The *Educational Technology Applied to Rural Community Unitary Schools Project in Colombia* served as a pilot project for the highly successful *Escuela Nueva* rural multi-grade classroom program.

- The *Rural Primary Education Improvement Project in Guatemala* was chosen for its success in providing educational services to minority populations.

- The *Primary Education Efficiency Project in Honduras* was chosen because of its national textbook effort and its multi-faceted design focused on increasing efficiency.

- The *Primary Education Assistance Project in Jamaica* was included because of the private sector's extensive participation in the production and distribution of textbooks and its innovative community involvement program.

In addition, two projects were reviewed through the available literature and summarized as "shelf" cases. They were the *Education Sector Loans in Brazil*, which provide an example of non-project funding, and the *Incentives to Improve Basic Education Project in Haiti*, which illustrates the use of private schools to provide education services.

Several assumptions were made in conducting this evaluation that should be explicit. First, it was assumed that the principal audience of the results would be project managers working in field situations. Thus, the discussion is aimed at

this group and attempts to provide lessons that are practical in nature rather than contribute to the theoretical literature on development. Second, in selecting a sample the assumption was made that the project mode of assistance should be the focus. This decision was based on A.I.D.'s current emphasis on projects in the LAC region. The study, therefore, deals only peripherally with the issue of non-project assistance for basic education.

These assumptions led to several limits in the design of this study. First, the evaluation is limited largely to the development literature in examining the issues related to project management. Research studies were used primarily in examining the effects of certain interventions.

Second, there is always the question of breadth versus depth in undertaking a study of this scope. Given the wealth of summary information that has been produced by the international donors themselves, the author opted for closely examining the experiences of current A.I.D. projects in the LAC region that address issues of special concern to the development community. The study relies heavily on the compilations of A.I.D. and other donors to supply the breadth of experience on a given issue.

Finally, the school-level data were collected from a sample of opportunity and in no way should be considered generalizable. This information is used only for illustrative purposes until confirmed by larger, more systematic studies of schools in the region.

Conceptual Framework

This review of basic education examines two distinct but interrelated questions:

- What are the management strategies of A.I.D. and other donor agencies that contribute to a successful intervention in basic education?
- What are the factors within a country, subregion, or region that facilitate (or constrain) interventions in basic education?

The unit of analysis for the study was a basic education project, which was traced from its inception through to the present. The simple flow model, which follows in Figure I-1, illustrates this approach. The model combines the A.I.D. project cycle with the stages normally associated with the diffusion of an intervention in the literature on management of change.

As can be seen from the model, project design is related to both the external environment (e.g., U.S. funding priorities and the political climate in a country) and host country institutional capabilities.

Project implementation includes three key elements:

- Disbursement of funds, commodities, and technical assistance on the part of the donor agencies;
- Interaction and timeliness of these activities with host country education and general development strategies; and
- Capability of local institutions to develop and sustain interventions.

These activities are also related to local responses to the intervention. This level includes the degree of "fit" that the intervention has with other components of the education system at the local level, the commitment of local staff (usually a function of the support/technical assistance provided to assist in understanding and mastering the intervention), and the extent to which local budgetary and legal support exists for the intervention.

The third stage in the cycle are the project outcomes as measured and adjusted through evaluations. In the case of basic education, these outcomes include both the institutionalization of the intervention — defined nationally as sustainability and locally as routine use — as well as teacher/student outcomes.

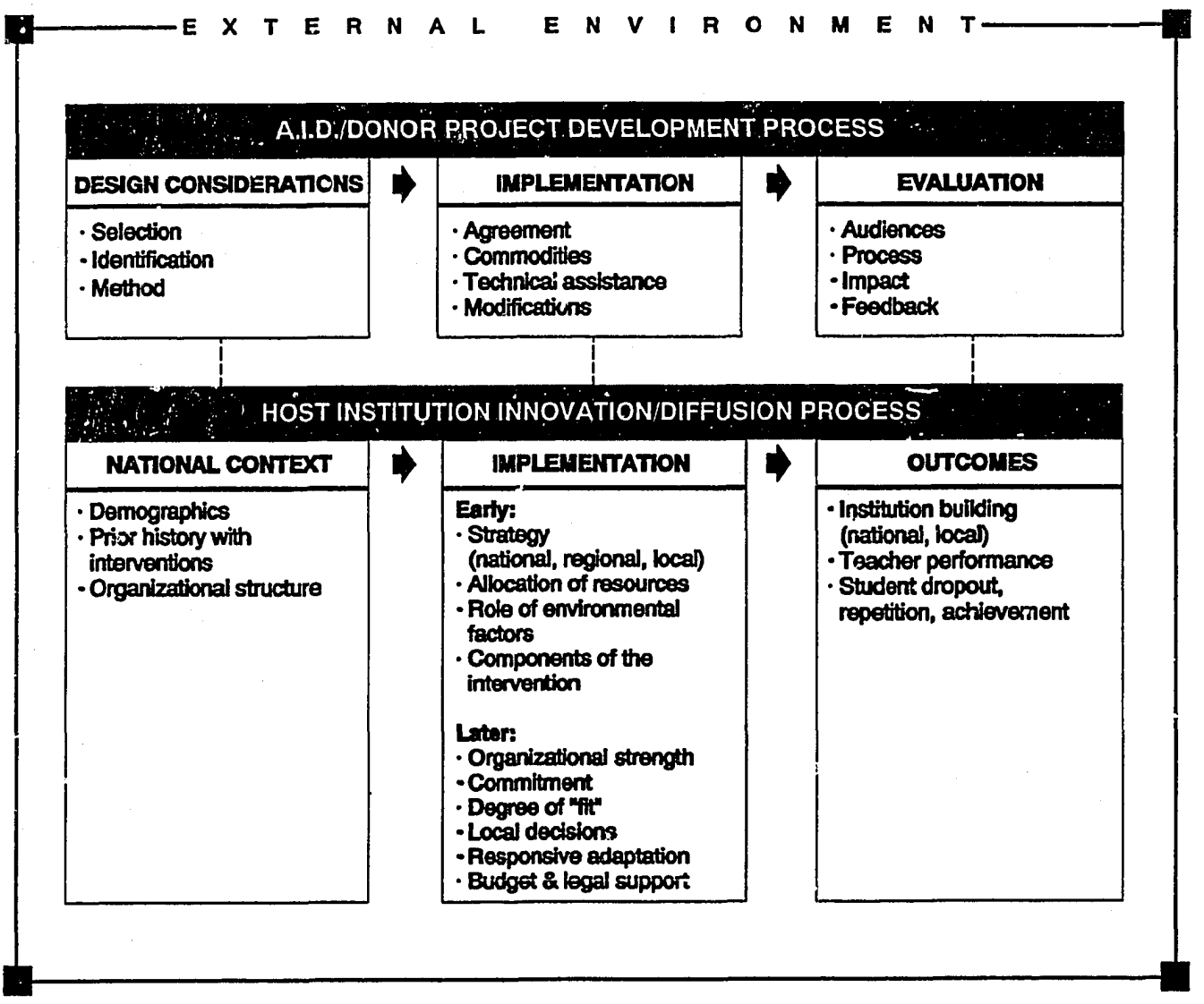
Organization of the Report

The chapters that follow discuss the results of the case studies and the literature review. The chapters are organized in accordance with the three principal phases in project management: design, implementation, and evaluation. Each chapter summarizes the findings and presents a series of lessons learned based on those results.

The Appendix includes descriptions of each of the case studies conducted for this study. The

case studies are organized in the same manner as the general report in that they present findings related to project design, implementation, and evaluation and include a series of specific lessons learned. Portraits of the projects selected for in-depth review are presented in Boxes I-1 through I-6. Specific findings from the case studies are highlighted throughout the report.

FIGURE I-1
Process Model of Basic Education Intervention



BOX I-1
COLOMBIA CASE STUDY:
Educational Technology Applied to Rural Community Unitary Schools

National context. Colombia is a country characterized by rugged terrain, poor infrastructure in the countryside, and low population density. Many of the elementary schools in the rural areas are multi-grade schools where the teacher may have responsibility for up to five grades. In the 1960s, only about 20 percent of rural children completed primary school, compared to 80 percent in urban areas.

With the assistance of Unesco, Colombia began to develop an entirely new form of school through the unitary school program to provide education to rural communities. In 1962, the first of the "new schools" was established. *Escuela Nueva* encourages independent learning on the part of students, the creation of learning materials by teachers, and the active involvement of parents and community members in the schools. In 1968, the Government of Colombia decreed that the unitary school approach should be followed in all rural schools with only one teacher. A teachers guide was developed, and more than 4,500 teachers received training in the unitary school approach in 1968. By the early 1970s, several approaches to the unitary school were under development in Colombia.

USAID support for basic education. Through the 1960s and early 1970s, USAID education sector loans helped expand the coverage of primary education through school construction in the rural areas. In addition, USAID helped fund a training manual for teachers and instructional materials for the classroom. USAID designed the Educational Technology Project as part of a strategy to maximize small investments by building on existing local interventions and testing locally developed materials in a broader national context. Representatives of the national Ministry of Education, the state Secretariats of Education, and the *Escuela Nueva* program participated in designing the project.

USAID project. Educational Technology Applied to Rural Community Unitary Schools

Duration. 1976-1978

Funding. $452,000 USAID grant
$605,000 Government of Colombia

Project purpose and design. The project was designed to consolidate investments in the unitary school movement so as to promote its greater expansion throughout Colombia.

Project components. The project had activities in five areas: technical assistance, training, seminars and workshops, research studies, and demonstration materials.

Implementing agencies. Planning Office of the Ministry of Education; rural divisions of Secretariats of Education in the three departments (states) where the project was to be implemented.

Technical assistance. U.S. contractor

Donor coordination. None

Evaluation activities. Evaluation committee meeting every six months to monitor project progress; survey to establish baseline data; midterm and final evaluations of project.

BOX I-2
GUATEMALA CASE STUDY:
Rural Primary Education Improvement Project

National context. Almost half of Guatemala's population is of indigenous Mayan descent. These people make up the bulk of the country's rural population, engaging in subsistence agriculture. They speak 22 different languages and traditionally have been poorly served by the national educational system. National development policies have favored the Spanish-speaking population, and, at times, the indigenous groups have been the victims of violent repression.

USAID support for basic education. USAID has focused its assistance to the education system of Guatemala on the needs of the indigenous population. From 1980-1984, USAID conducted an experimental pilot project to test the effectiveness of bilingual education in assisting indigenous children to make the transition from their mother languages to Spanish. The pilot project developed a curriculum and instructional materials in four of the Mayan languages for grades 1-4 and tested them in 40 schools.

The successful results of the pilot project led to the formal adoption of the program by the Government Guatemala and the design of a USAID project to expand the bilingual education program from 40 to 400 ols. With the democratic election of a new government in 1985, there was a considerable decline in lity toward the indigenous population and growing support for recognition of the Mayan culture. use of the positive political climate in 1985, the mission felt it vital to expand the scope of bilingual ation rapidly and ensure a solid foundation for its future existence. Administrators and technical ts of the Ministry of Education were closely involved in conducting background studies and in ning the project.

USAID project. Rural Primary Education Improvement Project

Duration. 1985-1990

Funding. $10.2 million USAID loan
$3.3 million USAID grant
$25 million Government of Guatemala

Project purpose and design. Multi-component project with activities in six areas designed to provide relevant bilingual education to the indigenous children of the Guatemalan Highlands and to create a permanent capability within the Ministry of Education to provide that education. The project incorporated a phased implementation plan for the design, production, and distribution of textbooks and the placement of bilingual teachers.

Project components. The six components included administration and supervision, curriculum development, textbook printing and provision of classroom equipment, training, research and evaluation, and technical assistance.

Implementing agency. National Bilingual Education Program (PRONEBI) within Ministry of Education.

Technical assistance. U.S. and local technical assistance

Donor coordination. Activities were closely coordinated with those of the World Bank. The World Bank was to fund the production of the textbooks and teachers guides developed through the project.

Evaluation activities. Midterm project evaluation (1987); primary education subsector assessment (1987-1988); project paper for continuation of activities: Basic Education Strengthening (1989).

BOX I-3
HONDURAS CASE STUDY:
Primary Education Efficiency Project

National context. In the mid-1980s, Honduras was the poorest country in Central America. Unemployment was high, large deficits existed in the balance of payments, and 27 percent of export earnings was used to service debt. A weak human resource base contributed to the weakness of the national economy. Although 85 percent of school-age children had access to primary school, only 26 percent of those enrolled actually completed the sixth grade. On average, eleven years of schooling were needed to produce one sixth grade graduate. Forty percent of the adult population was illiterate, and only 27 percent had completed the fourth grade.

USAID support for basic education. An early project, Rural Primary Education (1980-1986), focused on increasing access to primary education through constructing, furnishing, and equipping classrooms in rural areas; training rural teachers and supervisors; and beginning the development of an education management information system.

In 1985, as USAID considered the design of a new project, the mission focused on improving the quality and efficiency of basic education. Because this was a period of political transition in Honduras, the mission could not work directly with senior administrators of the Ministry of Education. Instead USAID officials worked with leading Honduran educators over the course of a year to conduct background studies and design the project. The Honduran educators presented the project to the new government and helped gain support for USAID's basic education activities.

USAID project. Primary Education Efficiency Project

Duration. 1986-1994

Funding. $22 million USAID grant
$5.5 million USAID loan

Project purpose and design. Multi-component project with activities in seven areas to enhance the ity and increase the efficiency of basic education by reducing dropout and repetition rates and easing completion rates. The project incorporates a phased strategy for national implementation. For iple, textbooks would be developed for grades 1-6; the texts for one grade level would be produced each over the course of six years, with the full set to be available by 1991. Teacher training would follow production and distribution of the new texts, and interactive radio instruction would also be tied to the duction of the new texts.

Project components. Textbooks, teacher training, evaluation, research, construction, education management information system, and interactive radio instruction.

Implementing agencies. Ministry of Education for all components except interactive radio instruction, which was handled by a local private voluntary organization, AVANCE.

Technical assistance. One U.S. contractor for textbook, teacher training, evaluation, and management information system components and another U.S. contractor for interactive radio instruction.

Donor coordination. None

Evaluation activities. Assessment of basic education subsector (1989); midterm project evaluation (1991).

BOX I-4
JAMAICA CASE STUDY:
Primary Education Assistance Project

National context. Looking to improve its economic performance in the mid-1980s, the Government of Jamaica was highly concerned with the poor quality of its primary schools, half of whose graduates were considered functionally illiterate. Because of high unemployment among primary school graduates, the government was forced into assuming further costs for remedial education and training. Schools were characterized by poor physical conditions, a high rate of vandalism, and a dearth of instructional materials.

In 1984, the Ministry of Education, the private sector, and international donors began an innovative program to provide low-cost texts and teachers guides to Jamaica's 350,000 school children. Jamaica's leading newspaper produced the texts on newsprint, and a consortium of donors covered the costs. In planning its basic education project, the USAID mission chose to build on the textbook experience.

USAID support for basic education. USAID had been one of the original donors involved in the textbook program. The mission used this experience as the foundation for planning a more comprehensive project to address some of the fundamental problems in Jamaica's primary education system. A basic education survey was conducted to provide background information. The mission's strategy was to fund interventions that would show high impact in the short term and to increase local capacity to assume responsibility for the activities.

USAID project. Primary Education Assistance Project

Duration. 1985-1987; extended to 1990

Funding. $11.3 million USAID grant
$3.8 million Government of Jamaica

Project purpose and design. The project was designed to increase the quality and efficiency of Jamaica's primary education system through targeted interventions that would produce a high impact and prepare Jamaicans to assume responsibility for local schools.

Project components. The project included three components: an expansion of the original textbook program to provide instructional materials for all students and teachers, a construction component to repair existing school facilities, and a community participation component to effectively involve parents and community members in the welfare of local schools. All components stressed working with the private sector in addition to the Ministry of Education.

Implementing agencies. Ministry of Education; local newspaper publisher; parent-teacher associations; local building contractors.

Technical assistance. U.S. private contractor and university

Donor coordination. The World Bank and donors from the United States, Canada, and Japan all cooperated closely on the implementation of the textbook program.

Evaluation activities. Monitoring of construction/renovation component; requirements for midterm and final project evaluations waived.

BOX I-5
BRAZIL CASE STUDY:
Education Sector Loans I and II

National context. In the 1960s, Brazil began an education expansion and reform program that would lead to a restructuring of the educational system. Despite high economic growth rates, poverty was widespread and wealth was concentrated in the hands of a very small percentage of the population. Even in the relatively affluent Southeast, only 48 percent of the children under 18 years of age were adequately nourished. This figure dropped to 32 percent in the Northeast. In both regions, the school-age population (7-14) had the highest proportion of inadequately nourished children. Only three children in every 1,000 in the Northeast and 35 per 1,000 in the Southeast completed the fourth grade.

USAID support for basic education. Three projects set the stage for the sector loan program in Brazil. The Program of American Assistance in Elementary Education (1957-1964) created a pilot teacher training program for supervisors, principals, teacher trainers, and curriculum specialists from around the country; revised the elementary school curriculum; and prepared instructional materials. The Program to Improve Primary Education in the Northeast (1963-1971) included school construction and renovation, the development of secretariats of education, and the establishment of a network of supervisory centers to reach outlying areas. The Educational Administration and Planning at the Primary Level Project (1965-1969) provided technical assistance in planning at the national and regional levels.

The planning process for the education sector loans focused on maximizing the impact of the loans. USAID worked with Brazilian managers to determine priorities and make joint decisions on how foreign assistance could contribute to meeting such priorities. The strategy that was devised focused on low-income states with largely rural populations and addressed the access problem at the middle school (grades 4-8) level. States were to be chosen based on their ability to submit viable plans for meeting loan requirements, thus building on capabilities developed under previous projects.

USAID program. Education Sector Loans (ESL) I and II

Duration. 1970-1974 and 1971-1975

Funding. ESL I — $32 million USAID loan and $32 million Government of Brazil
ESL II — $50 million USAID loan and $50 million Government of Brazil

Program purpose and design. Multi-component programs aimed at assisting educational reform at the national level and accelerating the reform process in participating states. Emphasis was placed on human resource development to strengthen the capacities of the educational system. Four-year education plans, a commitment to increase educational resources, better employment conditions, and mechanisms for supervision, evaluation, and regular reporting were required from participating states to ensure effective implementation and institutionalization.

Program components. School construction and renovation, teacher training, central and regional management personnel upgrading, career and compensation improvement, curriculum improvement, educational research, and instructional materials production.

Implementing agencies. Ministry of Education and Culture's secondary education planning unit and state secretariats of education.

Technical assistance. U.S. university

Donor coordination. None

Evaluation activities. Careful monitoring by USAID of financial inputs and of progress in reaching targets as defined and tracked in each state secretariat's plan.

BOX I-6
HAITI CASE STUDY:
Incentives to Improve Basic Education Project

National context. The poorest country in the LAC region, Haiti has a long history of poverty and political instability. Its poverty is reflected in the low educational level of its population, which has an overall literacy rate of 20 percent. Its public school system has not been capable of meeting the demand for education, and many small private schools have opened, especially in the poorest and rural parts of the country. Over 60 percent of primary school enrollment is in private schools, which are sponsored by diverse organizations ranging from churches to communities. The schools in general are characterized by poorly paid and unqualified teachers, a lack of instructional materials, and poor administrators. In addition, many children suffer from poor nutrition and ill health.

USAID support for basic education. USAID conducted an extensive sector assessment of basic education in Haiti in 1984. Because of the unique conditions in Haiti, USAID chose to focus its project efforts on private schools that serve the poor. Leaders from both the Catholic and the Protestant schools participated in the design of the project.

USAID project. Incentives to Improve Basic Education Project

Duration. 1986-1992

Funding. $15 million USAID grant
$3.8 million Haitian in-kind contribution
$1.7 million grants from other donors

Project purpose and design. The project aims to bring coherency to the private schools of Haiti in order to improve the quality, efficiency, and equity of the education they offer. The project also focuses on institution building, so that a general system will be created to guide private education. The project has supported the establishment of an education foundation to provide overall guidance to the church-supported private schools.

Project components. The project includes four components: support to individual private schools for instructional materials, school supplies, teacher training, improved administrative practices, and school repairs; support for the formation of education associations, representing Catholic and Protestant schools, and the establishment of a private education foundation; research and development activities to test the efficacy of selected education interventions; and support to the Ministry of Education to strengthen its oversight of private schools in terms of accreditation and testing. The final component was dropped when political conditions made it impossible for USAID to continue working with the Government of Haiti.

Implementing agencies. Catholic and Protestant sector service centers; FONHEP (Fondation Haitienne de l'Enseignement Privé).

Technical assistance. U.S. university

Donor coordination. The project was planned in close coordination with the World Bank and the Inter-American Development Bank as well as French and Canadian donor organizations.

Evaluation activities. Extensive research plan as part of project; midterm project evaluation; summative evaluation.

II Project Context and Design

This chapter discusses the principal issues in basic education project design as defined by the literature and A.I.D. experience in the LAC region. The chapter begins by examining the status of basic education in the countries of the region and institutional constraints that must be considered in project design. The A.I.D. basic education strategy and project design options are then discussed within the framework of these constraints. Conclusions about project design and recommendations for future action conclude the chapter.

Context

LAC Region — Macro Issues

In designing basic education interventions, the context in which the project or program is to be implemented must be taken into account. The Latin American and Caribbean (LAC) region presents a wide range of economic, social, and ecological contexts. Except for geographical location, these countries have few characteristics in common. Even within sub-regions, such as the Caribbean Basin, Central America, or the Andes, there is wide variation in the cultural backgrounds and the economic pursuits of the inhabitants. There are, however, similar macro-level conditions and institutional structures that influence all of the countries within the LAC region in terms of their ability to institute educational change.

Politically, almost all of the countries of the LAC region have had an ongoing struggle to establish democratic forms of government. Although revolution and independence movements swept the continent in the 1800s, military dictatorships have been common throughout the region since that period. Thus, even the more established democracies have only a thirty- to fifty-year history, and military influence remains strong in most countries. Several countries in the region are still struggling for political determination. Nicaragua has just emerged from years of civil conflict, and in El Salvador, civil war continued for eleven years until the recent peace negotiations. The Caribbean experience with self-government is also of short duration; many of these nations broke with colonial rule in the 1960s.

Governments and commerce have been dominated by a small group of elites who have generally been trained in more developed countries. Large central bureaucracies predominate in the public sector, which has resulted in limited local participation in schooling, delayed delivery of educational materials to outlying areas, and urban-based curricula.

Economically, the region has been characterized by specialization in the export of primary commodities. The industrial sector tends to be relatively small and focused on advanced capital-intensive technologies supported by foreign investment. Wealth is concentrated in the hands of a few, and income distribution is highly skewed.

Presently, the LAC countries are attempting to deal with a debt crisis that came about as a result of generally sustained economic growth in the 1960s and early 1970s. This led to expansion of development programs as countries felt themselves able to handle increased recurrent costs and to borrow based on perceived growth to finance development efforts. The severe recessions of the 1970s and 1980s have forced these countries into adjustment policies aimed at reducing inflation and domestic demand in order to meet the demands of debt servicing. This has reduced public expenditures, especially in those areas viewed as nonessential such as education, and particularly, primary education (Reimers 1991).

Socially, there are socioeconomic, linguistic, and cultural differences within countries as well as across the LAC region. Development policies favor urban areas and result in higher malnutrition, birth, and illiteracy rates among rural dwellers. The greater chance for health, education, and employment opportunities attracts people to large urban areas and creates squatter settlements throughout the region. Many countries are characterized by linguistic enclaves or by internal migration resulting from economic need or the pressure of armed conflict. These factors complicate the delivery of educational services.

The following tables highlight several trends that must be considered in the design of basic education projects in the LAC region. First, as shown in Table II-1, with the exception of Argentina, Chile, and several Caribbean islands, birth rates are high. This suggests that there will be continued, and in many countries increasing, demand for education services. Second, while the countries of Central America and much of the Caribbean remain largely rural, there is a growing trend of movement to cities throughout the region. This puts demands on the school systems to provide increased services in marginal urban areas and to make schools relevant to the needs of the population represented by these changing demographics. Finally, Table II-1 indicates relatively low per capita income, by developing country standards, in most of the region. Given the unequal distribution of income that characterizes the region, this suggests that large numbers of the populace are living in poverty.

LAC Education Systems

Educationally, the region has been successful in providing primary school access to its students, as shown in Table II-2. Average completion rates are generally below the sixth grade level, however, and repetition rates are high in much of the region. While primary education receives a relatively large percentage of the total education budget, the size of the primary education systems make per-student expenditures relatively small. In addition, as mentioned previously, primary education has been a leading candidate for reductions during the current economic crisis in the region.

In addition to general political, economic, and social conditions, certain institutional characteristics of the education sector are common to most of the region. Because these characteristics can act as constraints to effective implementation of programs, they must be considered in the design of educational interventions. Such constraints concern policy, managerial, and financial issues.

Policy constraints. Educational policy in Latin American countries often lacks clear demographic targets and well-defined implementation agendas. Policy might often be described as an indirect call for action, focused almost entirely on implementing vague goals such as "improving basic education" or "creating industrial employment through the public sector." The lack of clear objectives makes it difficult to develop models or indicators of the success of policy initiatives (Schiefelbein 1990). It leads to ad hoc solutions that may not promote efficiency and equity in the provision of basic education.

The problems of decision making are exacerbated by the lack of infrastructure to provide timely data and technical support to ensure that policy discussions are based on sound analytic reasoning. Although data are collected in most countries, tabulations are often carried out manually, which can result in long delays in providing information to policy makers. Even where data analysis is automated, the lack of strategies with defined targets limits the degree to which information can be used for allocating resources to the systematic improvement of basic education.

Private sector agencies have not generally been invited to participate in government deliberations or to play an influential role in policy formulation. Within the private sector in the LAC region, policy formation and administration are generally uncoordinated, factionalized, and dominated by ad hoc responses to a wide array of economic and social problems. Poor data and the lack of sound analysis also tend to weaken the policy dialogue process in a number of areas where the public and private sectors might cooperate.

Administrative and managerial constraints. A series of management and structural problems in both the public and private sectors in many Latin American and Caribbean countries can prevent education programs from achieving their full effectiveness. Efforts within ministries of education have been influenced by labor disputes, long delays in client processing, weak

TABLE II-1
Country Characteristics

	Population Estimate (000s) (Mid-1991)[1]	Annual Population Growth Rate (%) (1980-89)[1]	Urban Population (%) (1989)[1]	GNP per Capita (U.S. $) (1989)[1]	GNP from Agriculture (%) (1989)[2]
CENTRAL AMERICA	116,000	2.5	64	1,760	—
Belize	200	3.3	50	1,600	20
Costa Rica	3,100	2.4	45	1,790	18
El Salvador	5,400	2.8	43	1,040	14
Guatemala	9,500	3.0	39	920	24
Honduras	5,300	3.1	43	900	22
Mexico	85,700	2.3	71	1,990	9
Nicaragua	3,900	3.4	57	830[a]	21
Panama	2,500	2.1	52	1,780	9
CARIBBEAN[b]	34,000	1.8	58	—	—
Barbados	300	0.7	32	6,370	5
Cuba	10,700	1.1	73	—	17
Dominica	100	2.0	—	1,670[a]	7
Dominican Republic	7,300	2.3	58	790	17
Grenada	100	2.9	—	1,900	7
Haiti	6,300	2.9	28	400	21
Jamaica	2,500	1.9	51	1,260	6
St. Kitts-Nevis	40	1.1	45	2,860[a]	4
St. Lucia	200	1.6	46	1,810	4
St. Vincent	100	1.6	21	1,200[a]	4
Trinidad and Tobago	1,300	1.6	64	3,160	4
SOUTH AMERICA	302,000	1.9	74	2,080	—
Argentina	32,700	1.2	86	2,160	13
Bolivia	7,500	2.6	50	600	24
Brazil	153,300	1.9	75	2,550	11
Chile	13,400	1.8	84	1,770	9
Colombia	33,600	2.0	68	1,190	19
Ecuador	10,800	2.4	55	1,040	16
Guyana	800	1.8	35	310	17
Paraguay	4,400	2.8	47	1,030	27
Peru	22,000	2.3	69	1,090	11
Suriname	400	2.0	48	3,020	17
Uruguay	3,100	0.8	89	2,620	13
Venezuela	20,100	2.3	83	2,450	6

Notes:
a. 1987 or 1988 data
b. Caribbean total and averages are for the entire region, not just the countries listed in table.

Sources:
1. Population Reference Bureau, Inc., *1991 World Population Data Sheet*, Washington D.C.: April 1991.
2. PC Globe, Inc., *PC Globe Software*, 1989.

TABLE II-2a
Country Education Statistics

		Gross Primary Enrollment (%) (1986)	Net Primary Enrollment (%) (1986)	Gross Secondary Enrollment (%) (1986)	Gross Tertiary Enrollment (%) (1986)	Primary Repeaters (%) (1987)
CENTRAL AMERICA	Belize	—	—	—	—	—
	Costa Rica	98	85	41	23	10
	El Salvador	79[b]	71[b]	29[b]	18[b]	8
	Guatemala	76	58[b]	20	9	4[c]
	Honduras	106	91	32	9	15[d]
	Mexico	119	100	53	15	10
	Nicaragua	98	75	42	9	15
	Panama	106	89	59	28	11
CARIBBEAN	Barbados	103[g]	99[g]	93[c]	19[e]	—
	Cuba	105	95	87	23	8
	Dominica	—	—	—	—	5
	Dominican Republic	101	73	74	19[d]	17
	Grenada	—	—	—	—	13[e]
	Haiti	83	47	17[d]	1[d]	9[d]
	Jamaica	106	99	63	4	3
	St. Kitts-Nevis	—	—	—	—	—
	St. Lucia	—	—	—	—	7[f]
	St. Vincent	—	—	—	—	—
	Trinidad and Tobago	98	86	81	4	4
SOUTH AMERICA	Argentina	109	—	71	39	—
	Bolivia	87	79	37	17	—
	Brazil	103	84[b]	37	11	20[d]
	Chile	102[a]	90[e]	68	17	7[f]
	Colombia	114	73	56	14	17[c]
	Ecuador	118	—	56	28[b]	6
	Guyana	79	—	60	3	6[c]
	Paraguay	102	87	30	9[b]	9
	Peru	122[d]	97[d]	65[d]	24[d]	14[d]
	Suriname	125	96	53	8	23[c]
	Uruguay	110	92	73	47[b]	10
	Venezuela	107	89	54	26	9

Notes:
a. Data are for the year 1988
b. Data are for the year 1987
c. Data are for the year 1986
d. Data are for the year 1985
e. Data are for the year 1984
f. Data are for the year 1983
g. Data are for the year 1982
h. Data are for the year 1980

Source:
United Nations, *Statistical Yearbook: 1990*, Paris: UNESCO, 1991.
Gross Primary Enrollment: Table 3.2. Enrollment Ratios for the First, Second and Third Levels of Education
Net Primary Enrollment: Table 3.2. Enrollment Ratios for the First, Second and Third Levels of Education
Gross Secondary Enrollment: Table 3.2. Enrollment Ratios for the First, Second and Third Levels of Education
Gross Tertiary Enrollment: Table 3.2. Enrollment Ratios for the First, Second and Third Levels of Education
Primary Repeaters: Table 3.6, Education at the First Level: Percentage Repeaters by Grade

TABLE II-2b
Country Education Statistics

		Literacy Rate (%) (1985)	Public Expenditure on Education (as % of total public expenditure) (1987-88)	Public Expenditure on Primary Education (as % of all levels) (1987-88)	Mean Years of Schooling (%) (1980)
CENTRAL AMERICA	Belize	91	15	65	5
	Costa Rica	92	21	38	6
	El Salvador	69	13	60	3
	Guatemala	52	12	38	4
	Honduras	68	20	47	3
	Mexico	85	25	24	4
	Nicaragua	78	12	37	4
	Panama	86	27	39	6
CARIBBEAN	Barbados	99	20	41	6
	Cuba	92	14	20	6
	Dominica	94	14	60	5
	Dominican Republic	80	10	44	4
	Grenada	96	13	72	5
	Haiti	48	21	57	2
	Jamaica	98	11	29	5
	St. Kitts-Nevis	90	13	40	6
	St. Lucia	82	17	48	4
	St. Vincent	82	12	72	5
	Trinidad and Tobago	95	12	45	6
SOUTH AMERICA	Argentina	95	9	—	6
	Bolivia	73	20	72	4
	Brazil	79	18	52	3
	Chile	92	15	52	6
	Colombia	85	22	40	5
	Ecuador	83	21	46	5
	Guyana	95	3	31	5
	Paraguay	88	17	37	5
	Peru	82	23	31	6
	Suriname	93	23	61	4
	Uruguay	95	15	36	6
	Venezuela	86	17	21	5

Notes:
a. Data are for the year 1988
b. Data are for the year 1987
c. Data are for the year 1986
d. Data are for the year 1985
e. Data are for the year 1984
f. Data are for the year 1983
g. Data are for the year 1982
h. Data are for the year 1980

Source:
United Nations Development Programme, *Human Development Report*, New York: Oxford University Press, 1991.
Literacy Rate: Indicators Table #1, "Human Development Index"
Public Expenditure on Education as a Percentage of Total Public Expenditure: Indicators Table #15, "Education Imbalances"
Public Expenditure on Primary Education as a Percentage of All Levels: Indicators Table #15, "Education Imbalances"
Mean Years of Schooling: Indicators Table #1, "Human Development Index"

logistic systems, and inadequate or ineffective staff and program supervision, all of which affect the quality and range of program coverage.

Decentralization of decision making to the local level, which could possibly lessen the burden on central ministries of education, has been limited. With the exception of a few experimental efforts, parents have little opportunity to participate in decisions about their children's schooling.

For the purposes of basic education development, private sector agencies can include almost anything that is not the ministry of education. Thus, the definition of a private sector agency includes everything from large profit-making corporations to individual families. However, those actually involved in development issues have tended to be small, individual, fragmented organizations with specific objectives, such as church groups or private voluntary organizations (PVOs). These groups tend to keep a low profile in the face of shifts in government policies and attitudes. Beyond the administration of a single school or program, many of these organizations are inexperienced in the delivery of education services.

Profit-making enterprises in the region for the most part have taken little interest in basic education. There has not been a general recognition of the potential of a successful basic education system to reduce later private sector investment in retraining workers.

Funding constraints. Domestic financial support for educational development activities in both the public and private spheres is severely limited in Latin America. As Reimers (1991) points out, Latin America is the most indebted region in the world. He reports that eleven of the seventeen most highly indebted nations in the world are in Latin America. Responses to the debt crisis in the region through structural adjustment programs have resulted in cuts in governments' expenditures on education. A majority of the countries in the region have experienced a decline in the level of national education expenditure as a percentage of gross national product, which has also declined. Primary education has generally suffered disproportionately in these cuts.

Within the education sector itself, most of a ministry's budget is devoted to salaries and fixed operating costs, and almost all of the funds to finance public-sector programs are supplied by countries the needs of local private sector organizations are met by international cooperating agencies since these organizations receive no financial support from the public sector and tax laws often do not reward contributions to private, nonprofit institutions. In addition, funding decisions by the international intermediary agencies have not always been coordinated to most effectively utilize the monies provided to public and private sector programs.

Donor Organizations

Donor involvement. A number of multilateral and bilateral development organizations provide assistance to LAC countries. Western European nations — such as Norway, the Netherlands, Denmark, Germany, Italy, France, and Spain — and Japan carry out small bilateral programs, often focusing on the provision of computers and other educational technology. The European nations also provide support through multilateral organizations such as Unesco. Canada is active in the region through participant training programs and the support of educational research. With basic education projects of over $10 million in Honduras, Guatemala, El Salvador, Haiti, and Costa Rica as well as smaller projects in the Dominican Republic, Jamaica, and Bolivia, A.I.D. is the leading bilateral donor in this sector in the region. A.I.D. is also planning a basic education project in Nicaragua.

The multinational development banks are also involved in the region. The World Bank has recently provided a large loan to Colombia to expand its innovative basic education program, *Escuela Nueva*. The Bank also supports basic education projects in northeast Brazil and is planning projects in El Salvador and Nicaragua. Traditionally, however, only a small percentage of the World Bank's loan portfolio has been directed toward education (Lindblom 1990) and the proportion of this amount that has gone to basic education has often been targeted for school construction. The Inter-American Development Bank (IDB) has also focused much of its portfolio on development support for sectors other than education. Its involvement in education has dealt primarily with support for the preparation of technicians in the sciences. The United Nations Development Program (UNDP) primarily provides grant technical assistance to

Latin America. Only a small portion of these funds are devoted to basic education.

Donor strategy. As a result of the World Conference on Education for All in Thailand, there has been an increased emphasis on basic education. The World Bank, for example, has pledged to double its worldwide basic education loan support over three years (1990-1993) to $1.5 billion per year. The conference also served to summarize recent movements by host countries and donor agencies away from questions of access to focus more closely on the issues of the quality and efficiency of education programs. There is a growing concern with establishing planning mechanisms for dealing with these complex issues in often uncertain environments.

In addition to its education sector policy statements, the World Bank has carried out a number of studies of its education programs in an empt to overcome design difficulties. Authors ng examples such as a World Bank education ject in the Dominican Republic, in which nomic and political conditions led to four presidents, six education ministers, and eight ject directors in eight years (Middleton et al. 36), have argued for simplicity of objectives, eful assessment of available human resources mplement a project, and the design of ects that have flexible implementation tegies in light of the nature of the change process in individual countries (Verspoor 1985; Middleton et al. 1986). This has led to a call for contingency planning as an approach to designing education projects in developing countries (Rondinelli et al. 1989).

In addition to its own policy statements (AID/PPC 1982) and general sector strategy (A.I.D. 1983), A.I.D. has also commissioned studies to assist in the development of more specific strategic approaches. A twenty-year retrospective study of A.I.D. funding in education argued that while A.I.D. in the 1970s remained a leader in some areas, including educational media and participation of women, it was not responding to the expressed needs of recipients for institutional strengthening and basic formal education (Method and Shaw 1981). Method and Shaw suggest approaches similar to those argued for by World Bank authors. These include:

- Integration with education activities in other sectors;
- Higher resource levels for education and clear criteria for allocation of such resources among donors;
- More flexible program guidelines to respond to local needs; and
- A recognition of the centrality of education and human resources in all development programs.

In examining such trends in education assistance, A.I.D. recognized that information on overall impact of past education interventions was needed to make informed policy choices. Thus, the A.I.D. Office of Evaluation, Bureau for Program and Policy Coordination carried out a series of case studies of past A.I.D. education programs throughout the world. Specialists in development were brought together to discuss the results of the studies and to synthesize lessons learned from these findings and their own experiences (AID/PPC/CDIE/PPE 1984). Because the structure of field missions in each country provides A.I.D. with a greater ability to respond to uncertain conditions than many development agencies, planning for local management contingencies was not stressed in the report. The document did, however, include several points related to project planning that could apply to other donor agencies. These included the importance of formulating goals and purposes that consider the local culture, social setting, and economy; flexibility that would allow for overcoming constraints of this nature; the need for projects of sufficient duration to show positive results; and the need for missions to formulate long-term development strategies consistent with the development plan of the host country.

Donor collaboration. Despite the similarity in strategic approaches to basic education, there has been little donor collaboration in the LAC region. Each A.I.D. project paper discusses the activities of other donors in the sector; however, there appears to be little direct collaboration between A.I.D. and other international donor agencies in overall strategic planning or project design. Generally, each agency will try to work in different areas within the sector or in efforts that are complementary to one another. Interviewees in USAID missions and at other donor agencies agreed that there is cooperation and

sharing of information among donors. The difference in project cycles and implementation strategies together with the in-country, mission-level A.I.D. design process, however, was seen as limiting the likelihood of the direct participation of other donors in one another's activities.

The commitment to basic education of the different donors and the similarity of important design issues would seem to build a basis for greater collaboration. As resources continue to become scarcer, greater collaboration to avoid overlap is likely.

Donor agency constraints. Project design, especially in the case of bilateral donor agencies, is often influenced by political policy in the donor country. U.S. foreign policy considerations have had a significant influence in shaping LAC education programs. For example, throughout the 1980s, in an attempt to strengthen democracy in an area torn by civil conflict, much of the U.S. educational portfolio in the region was devoted to the Central American Initiatives. This focused on scholarships for youth and promote skills training and under- of democratic institutions. Although it atly increased funding for education and esource development in the region, the dealt with basic education only periph- ough the training of some educational ators and teachers.

A.I.D. Basic Education Strategy

Goals

A.I.D. has been working with public and private organizations in Latin America to improve the quality of education for more than thirty years. In that time, A.I.D. and other donors working in the region have contributed to positive trends in access, coverage, and school attendance rates. However, the current high rates of dropout, repetition, and illiteracy upon school completion show that serious problems of quality and efficiency exist in the region. In recognizing the tremendous costs resulting from wastage of time and resources, A.I.D. supports a number of broad goals for basic education in the region.

Increasing resources. Making basic education more equitable and more efficient will require increased national investment. Ministries of education generally have little control over their resources, which are determined by policy makers and are allocated largely to personnel salaries and fixed operating costs. Thus, there is a need to identify alternative sources of financing through such mechanisms as intersectoral reallocation, increased government revenue generation targeted for education, or cost recovery that will give the ministry funds to direct to overcoming inefficiencies.

Increasing equity of access. Sparse and dispersed populations, which have made the construction of schools economically unfeasible, have been a factor in limiting access to schooling in many LAC countries. Other factors include cultural and linguistic constraints that have kept girls in the home and made schooling unintelligible to young children, economic constraints that have required children of both sexes to contribute to the economic support of the family at the expense of schooling, and migration or abandonment as a result of war or state policies.

Improving quality. Educational quality comprises the material inputs and nonmaterial characteristics of schools that have been shown to improve learning. This relates to the physical condition of the classroom; to expendable supplies such as chalk, paper, pencils, and notebooks, as well as teaching materials such as textbooks, posters, and maps that are often in short supply or nonexistent; and to actual instructional procedures. It can also relate to threshold levels of health and nutrition that will allow children to take advantage of educational inputs.

Teacher characteristics are also an input related to quality. In many countries, teachers are poorly trained and there is little or no in-service training or administrative support available. Living conditions for teachers in rural areas are often harsh, and there is seldom active community support for the school. In indigenous areas, teachers may not speak the language of their students. All of these factors contribute to low teacher morale and commitment.

Increasing efficiency. Efficiency can be seen as the relationship between inputs and outputs, with a view to achieving the desired level of output at minimum cost. The principal output of an efficient basic education system is a primary school graduate who completes primary

education in the prescribed number of years. Some causes of low efficiency are internal factors such as the poor quality of instruction and the lack of instructional aids discussed above. As a result of poor instruction, children fail repeatedly until their parents become discouraged and the children drop out. External factors relate to the overall economy, the community, the family, and the individual. They include perceived opportunity costs to families for children in school, cultural characteristics that inhibit learning in the school setting, and a deficient nutritional and health environment in the home, which affects student performance. All of these factors are reflected in dropout and repetition rates.

Improving administration of education. Ministries of education are responsible for providing many of the inputs to the basic education system; thus, they are key in determining efficiency. Ministries in most LAC countries are enormous bureaucracies carrying out administrative actions such as procurement of commodities, budget planning, personnel management, contracting, supervision of field activities, and public information in traditional, often inefficient ways. As a result, projects and programs experience delays, and resources do not reach the local level. Information is not available to inform decisions or to enable coordination of multiple international donors.

LAC Bureau Regional Strategy

Within these broad goals, the LAC Bureau has developed a regional strategy for investment in basic education (AID/LAC/DR/EHR 1989). The strategy document is both a statement of the Bureau's commitment to support basic education activities and guidance to field missions in designing and implementing basic education programs. The strategy outlines two activities in which missions should focus their efforts: policy dialogue and project implementation. In each of these areas, A.I.D.'s comparative advantage is its ability to initiate improvements in the quality and efficiency of basic education through small-scale interventions that, when refined, will be taken over by recipients or other donors. The document has three areas of emphasis — finance, instruction, and management — and is intended to be a broad flexible tool that should be tailored to individual mission strategies and the realities of the host countries.

The strategy emphasizes a general approach that includes:

- Focus on high impact activities such as textbooks and radio;
- Tests of innovative instructional approaches or technologies;
- Mobilization of private sector resources to support educational services and products;
- Use of public information activities to increase support for basic education;
- Creation of linkages between basic education interventions and participant training activities; and
- Coordination of activities with other key donors.

Missions have found this document useful in their planning process. It has been used for guidance in Honduras for designing a subsector assessment and for making adjustments in the Primary Education Efficiency Project. Both USAID/Guatemala and USAID/Jamaica have used it as a starting point for the development of mission strategy statements. USAID/Guatemala has developed an education strategy that focuses on quality and efficiency through improving primary education for the indigenous population, especially women; providing enrichment opportunities to classroom teachers; developing low-cost alternative delivery strategies; and upgrading educational administrative decision making (USAID/Guatemala 1989b). USAID/Jamaica has produced a human resource development strategy that "accords a high priority to assisting at the primary level." This priority will be met by supporting community participation efforts in education and by focused interventions, such as mathematics education, aimed at increasing primary students' success in the labor market (USAID/Jamaica 1989).

The areas of emphasis in the regional basic education strategy document have also been reflected in the development of several recent basic education design efforts in the region (e.g., Guatemala, Jamaica, El Salvador). The only negative aspect of the document is that it has not been produced in Spanish, so it cannot be

shared with local counterparts and technical assistance providers.

Policy Dialogue

The LAC strategy states that policy dialogue will be cast in terms of public expenditure and budget issues as well as educational concerns. The document stresses, however, that the budget implications of improved quality and efficiency are extremely significant. It is estimated that a reduction in repetition rates "could save 20% to 30% of the education budget" (AID/LAC/DR/-EHR 1989, 8). Thus, an emphasis on leveraging existing resources to influence policy reforms to improve the quality and efficiency of basic education is advocated.

There was general agreement among those interviewed as part of this review that data on the basic education system are crucial to meaningful policy dialogue. For A.I.D., one of the tools to assist the dialogue process and to serve as a precursor to project design has been the sector assessment.

A.I.D. has contracted for a series of sector assessments in education through the Improving the Efficiency of Educational Systems (IEES) project. These assessments are aimed at policy dialogue as an initial step in education planning and management. The assessments use a common framework and are completed in a relatively short time, about nine weeks (Pigozzi 1990). Data collection is done in a policy framework that encourages dialogue with host country decision makers. The assessment team works in collaboration with local officials to rank policy options and examine the rankings within the existing resource base (Pigozzi and Cieutat 1988). To date, only one assessment, that of Haiti, has been undertaken by the IEES project in a LAC country. Others have been conducted recently in Botswana, Indonesia, Liberia, Nepal, Somalia, and Yemen. These studies have had generally favorable outcomes in terms of strengthening local ownership of results, building local capacity, and creating a systems approach to planning.

The assessments, however, have met some difficulties in influencing finance ministries to collaborate with education ministries and in involving high-level national officials in the effort. In addition, the information is generally far beyond the needs of a given USAID field mission for its own project development work. However, the documents are seen as useful to other donors besides A.I.D. as they do not take a project approach.

The projects visited in the Latin American region as part of this evaluation have generally taken a project-specific approach to policy dialogue at the project planning and design stage. In each case, discussions were carried on for relatively long periods of time and involved working collaboratively with host country officials.

These cases point out two important considerations in project design. The first is the availability of data on which policy options can be weighed. The second consideration are the individuals involved and the confidence they engendered in host country decision makers. In each of the four cases, local professionals working collaboratively with USAID personnel led the way in making presentations to host country officials or, in the case of Jamaica, to private sector representatives.

As part of this collaboration, special studies were carried out by host country individuals or organizations in Guatemala, Honduras, and Colombia and by an international team in Jamaica prior to project design. These studies served as the basis for project design and also helped establish local ownership of the project in three cases. The interviewees generally felt, however, that the studies would have been more useful if they had focused on key interventions or questions.

Greater focusing of basic education assessments has been the tendency in Central American USAID missions in recent project development. Missions have moved away from sector assessments to fund studies of the basic education subsector prior to designing a project. These studies have generally been designed to examine specific interventions or areas of concern where A.I.D. might wish to invest. The Guatemala subsector assessment provided investment options in the areas of teacher training, bilingual education, interactive radio, management information systems, and achievement testing against a background of the cost of education, educational financing and the perceived value of education to parents (Seeley et al. 1988).

The Honduras assessment examined educational financing and the costs of increasing access and efficiency. It also looked at the strengths and weaknesses of existing facilities, materials, and teacher training opportunities as well as multigrade schools and local school administration. Because the document was to serve as a basis for dialogue with the Honduran government, options for A.I.D. investments were not included (USAID/Honduras 1989). El Salvador's subsector assessment began with studies of the legal, financial, and socio-cultural fabric in which the educational system operated. Using these studies as background, specialists examined the specific areas of achievement testing, teacher training, interactive radio, and management information systems (Schwab 1990).

Thus, in each case, specific areas of intervention in basic education were examined and investment options as well as potential constraints presented. This approach accelerated policy dialogue and helped direct the project design process.

Project Interventions

With increasingly scare resources and a tremendous debt burden, host countries must work with donor agencies to design educational interventions that promote equitable education opportunities. Increasing access to education in the LAC region will require working with fewer resources per student even if funding remains constant, because available resources must be spread among more students. Thus, both additional funding and improved instructional delivery are needed if children are to take advantage of their learning experience and move successfully from grade to grade.

In the area of resource allocation this means increasing the percentage of the education budget for primary education, which is generally considered to have the greatest social rates of return among education levels. Cost containment, finance decentralization, and cost recovery are other strategies that donors and host country governments can explore for reallocations within the education system. Intersectoral reallocation and increased government revenue through tax reform are also ways to increase funding for basic education. Finally, soliciting funds from the private sector or encouraging private sector management of basic education programs because of its emphasis on efficiency are potential strategies for reaching the goal of increased resources for basic education.

Donor assistance can help to increase equity of access through the design and implementation of innovative approaches to education or through new technologies that extend and support traditional formal school activities. These may include the piloting of bilingual education programs, developing programs that promote the education of girls as a variable in economic development, creating early education opportunities for poor children, or extending schooling opportunities through multi-grade classroom curricula that allow children in isolated areas to complete primary school.

The objective of international development assistance in improving the quality of education is to ensure that all children have a fair chance to be promoted to the next grade and of using school learning in their future lives. Of primary importance is ensuring that children have the minimal health and nutritional requirements necessary to profit from their experience in the classroom. Similarly, school facilities must be maintained at a minimal level, perhaps through community involvement programs that include school renovation, to allow learning to take place.

Other areas of donor concern in improving quality are designing and implementing activities to develop appropriate instructional materials such as low-cost interactive radio, providing low-cost professional enhancement opportunities such as distance education to teachers in the field, and creating measures to gauge student performance and teacher mastery in light of specific interventions aimed at improving quality.

International assistance can help to provide administrators with analytic tools to streamline administrative functions. These tools include successful models for reconfiguring organizational structure, computerized decision modeling to determine policy options, and computerized record filing and retrieval to allow rapid transactions and establish a database with which to make projections for long-term planning. A key element in many countries will be assistance in analyzing how administrative functions such as assignment of personnel, provision of materials,

planning, and budgeting can be increasingly moved away from the central bureaucracy to regional centers and eventually to communities, thus increasing local control of education.

It is obvious that these interventions are interrelated and must be integrated to some degree if the goal of increased efficiency is to be reached. Different combinations of interventions in varying magnitudes can help to reduce repetition and dropout rates. To successfully deal with a problem of such complexity, however, efforts must be coordinated and concentrated over a relatively long time frame.

Design Modalities

The packaging of basic education interventions has taken several forms in the LAC region. Design modalities have included pilot projects, large multi-faceted projects, targeted interventions, and sector loans.

Pilot projects. The LAC basic education strategy supports pilot projects in educational quality and efficiency as one focus for A.I.D. investment in the region. A.I.D. has been very successful in developing small-scale innovations that are later institutionalized on a national level. The *Escuela Nueva* project in Colombia and the bilingual education project in Guatemala are examples of successful pilot projects that became institutionalized.

In each case, ongoing activities in the country were incorporated into the designs. The Colombia project had a cadre of committed individuals and institutions with experience in the development of unitary school programs on which to call. The bilingual education project, on the other hand, had available individuals who had worked as bilingual preschool teachers and supervisors but had little experience in the design of instructional materials at the primary level. Thus, the time frames for project execution and the reliance on foreign technical assistance differed greatly in the designs. The Colombia design called for local implementing organizations to develop curriculum materials, whereas the Guatemala project brought in foreign experts in bilingual education to work with Mayan educators in developing prototype instructional materials. The Colombia project, therefore, was implemented over a two-year period, while the Guatemala project was a five-year effort.

"Pilot project" is perhaps a misnomer for projects of this type. They are really demonstration projects that are intended to show a degree of success to justify their continued development or expansion by host country governments themselves or through the assistance of international donor agencies. With this purpose in mind, they are generally designed to minimize implementation constraints. However, this approach runs the risk that the results of the pilot studies will not be replicable when the project is expanded. Therefore, the project design must include procedures for demonstrating the success of a pilot project and for determining its replicability on a larger scale. Both the social soundness and the economic analysis of the project paper should address possible constraints to the expansion of pilot efforts.

Each of the projects with pilot efforts gained support for expansion by presenting data demonstrating the success of the pilot intervention. A.I.D.'s collaboration in supporting the project to the Ministry of Education in the Guatemala case and to both the Ministry and other donors in the case of Colombia also aided the expansion effort. This argues for the importance of performance data as leverage for policy decisions and the allocation of resources.

Even where there exists government commitment to a program and donor assistance, the implementation of a pilot program on a national level may take a number of years. After fifteen years, the *Escuela Nueva* program has reached about one-third of the rural schools in Colombia and continues to rely on donor support. The Guatemala bilingual education program has expanded to a 1,200-school service area, of which 400 are receiving the complete intervention. This is coverage for about one-fifth of the indigenous student population (Seeley et al. 1988).

Large, multi-faceted projects. Projects of this type, including the Honduras Primary Education Efficiency Project and the new Guatemala Basic Education Strengthening Project, often have several implementing agencies carrying out interventions semi-autonomously. The interventions may include pilot efforts such as an interactive radio component in Honduras and both interactive radio and multi-grade classroom technology in Guatemala. The advantage to this design is twofold. First, it provides flexibility to move certain components forward under uncer-

tain conditions. If one implementing organization is delayed for political or economic reasons, other aspects of the project will continue. Second, this design allows interventions of national scope where there is sufficient demand, as in the case of textbooks in Honduras.

The difficulties in projects of this type are in the coordination of the components when there is a need for integration. If textbooks are not delivered on time, for example, scheduled teacher training activities on the use of the texts may have to be delayed or conducted without the books. Designers must also be aware that because components may not develop equally, there is a danger that the effects of the key intervention may not be measured until later stages of the project. This can occur if the project has an evaluation component that lags behind other interventions, as in the case of Honduras.

Targeted interventions. A third type of project design is that of a small-scale intervention that complements or reinforces critical areas of a basic education system. An example of this type of intervention is the strengthening of the mathematics curriculum to be carried out in Jamaica's second Primary Education Assistance Project. This type of intervention differs from a pilot project in that it is designed not to demonstrate the effectiveness of an entirely new technology but rather to fit within ongoing efforts. It differs from large-scale projects mainly in its size and scope.

Sector loans. A.I.D. has had a successful history of designing innovative projects that have contributed to strengthening basic education in Latin America and the Caribbean. The agency also has experience with non-project assistance in the region. Both Brazil and Colombia were the recipients of a series of sector loans in the late 1960s and 1970s. Sector loans were chosen because they were felt to permit assistance to essential elements of the entire area of concern, especially improved policies, planning, and management rather than the more limited project focus. The ongoing review and negotiation required to refine assistance and strategies as problems arise make this option an effective approach in seeking overall improved system efficiency.

In each country at the time of the loans, there was a strong commitment to educational reform. In addition, a base of trained personnel to carry out planning functions had been created before the loans were made. Although information on the design process is sparse, it appears that USAID worked closely with national planners to ensure that loan goals were consistent with overall country goals for the sector. The loans were found to be highly effective in improving regional and local management capability in both countries (Krueger 1980, 1982).

Despite the success of the loans, several questions about them were raised in Krueger's reviews. In Colombia, the degree to which funds reached regional and local implementing organizations in a timely fashion was questioned and the difficulty in monitoring results of the loans was raised. In Brazil, it was suggested that resources were distributed unequally as some states were better able to compete for the resources, although the author disputes this finding.

Summary. Project modalities were discussed above as distinct in order to point out design considerations specific to each. Project designs may include a combination of modalities, as is the case in the projects in Jamaica, Guatemala, and Honduras reviewed in this study. Each of those projects included one or more pilot efforts within the larger project design.

All of the design modalities also offer the possibility of private sector involvement either as a supplier of services or as an implementing organization for appropriate interventions. Each of the cases involved private sector organizations in activities ranging from suppliers of training in Guatemala, instructional materials in Colombia, and school construction in Jamaica and Brazil, to the implementing organizations for textbook production and distribution in Jamaica, instructional media in Honduras, and for a complete primary education service system in Haiti.

Objectives and Indicators

The A.I.D. logical framework — which establishes goals and objectives, verifiable indicators of progress, means of verification of indicators or data sources, and assumptions that have been made in establishing objectives — is a key element for measuring project progress.

However, in this review of recent project design experiences with A.I.D. personnel and other participants in the project design process, several suggestions were made for improving the utility of the logical framework. Interviewees suggested that indicators, which are generally defined in terms of outputs (e.g., ten new textbooks produced and approved by the Ministry of Education), should also be stated in the form of performance (e.g., ten new textbooks being used regularly by 90 percent of primary classroom teachers).

The assumptions made in the logical framework must also be carefully weighed in terms of the social and economic reality and should be examined throughout project implementation. For example, if an intervention is designed to complement efforts of another donor such as the World Bank or IDB, and the bank project is delayed or canceled, assumptions made about indicators of progress that might have been based on combined interventions will need to be reexamined. To increase the utility of the logical framework, it should be examined as part of the technical analysis in the project design process to determine if the progress indicators are appropriate and measurable.

Covenants and conditions precedent can be important management tools that should be carefully considered. They form, in a sense, an indicator of host country government performance and can be used, when appropriate, as leverage in project implementation. The appropriateness of their use might be explored as part of the social soundness analysis of the project design. The social soundness analysis is also critical to determining constraints that may bear on project assumptions and inputs. Therefore, it should be carried out after the project activities are well defined, so that each can be discussed in relation to the socio-cultural context.

As will be discussed fully in Chapter IV, there are multiple audiences for the indicators of performance and outcome, and these audiences have different information needs. The audiences include policy makers, who are concerned with national trend data; program managers, whose main interest is in input/output relationships at the project level; and implementors of interventions, who need program delivery information. During the last five years, the concerns of the first group have begun to be met through a computerized system for monitoring educational efficiency. The model, which has been provided to Central American missions by the LAC Bureau's Education and Human Resources Division, is presently being expanded to South America and the Caribbean. It focuses on a few indicators from national data, such as student population, enrollment, repetition, and dropout, and makes projections based on trends over time and assumptions about future resource allocation. The model has also been used at the mission level for developing trend data and, in at least one case, for engaging decision makers in policy dialogue through modeling exercises.

Evaluations have been the principal means of monitoring progress in greater depth. A.I.D. has developed guidelines for creating a comprehensive evaluation design as part of the project design process (Norton and Benoliel 1987). The process includes determining the questions of managers, designing alternative methodologies to answer those questions, creating a data management system that will make the data generated retrievable, and budgeting for this evaluation and monitoring system. The authors suggest that a person with experience in these areas be assigned to the project design team or brought in from outside the mission when necessary.

In conducting the basic education evaluation, discussions were held with several mission evaluation officers. When the issues of design of multi-methodological evaluations were raised, interviewees explained that often the evaluation officer is not a methodologist. In many cases, that individual is designated by the mission to hold the position and does not have a technical background in evaluation. Even when the evaluation officer does have methodological expertise, it does not extend across all technical areas. Similarly, a given technical office is unlikely to have a specialist in evaluation on staff. This suggests that, as in the case of social soundness and economic analyses, individuals who can develop a detailed multi-method evaluation plan will generally be hired from outside the agency.

Project Paper Preparation

In addition to the strategy and design conceptualization issues, there is also the practical consideration of producing a project paper. A.I.D. project managers in technical offices agreed when interviewed that ideally a project

should be designed by personnel in their offices with support from backstopping offices such as the project development office. Technical assistance was seen as most useful in supplying specific expertise in areas outside the technical background of mission personnel (e.g., distance courses for teachers or mathematics curriculum for grade school).

It was recognized, however, that because of workload and time constraints, it may be unrealistic for technical officers to take on most of the writing of a large, complex project paper. In such cases, a team of specialists will be contracted to prepare the project paper. Lessons learned from recent contracted project paper design efforts suggest that the role of the technical officer is still vital and that this individual must work closely with the team to ensure that the product meets mission standards. This requires that the mission release the officer from daily responsibilities for much of the design effort.

The participation of host country educators in the project design process is desirable (AID/PPC/CDIE/PPE 1984). Local educators can assist in specifying target groups and beneficiaries and in identifying potential cultural constraints to project implementation. As the case studies carried out for this evaluation show, there are several strategies for involving host country personnel in project design. One is to include them as education specialists who gather data, review the design, and assist in the project negotiations with the host government; this was done in Honduras. A second strategy is to involve both administrators and technicians extensively in the project design as members of workgroups, as was done in Guatemala and to some degree in Colombia. A third strategy is to carry out discussions with ministry personnel until mutual agreement on project design is reached, as in the Jamaican case. Foreign service nationals (FSN) should also be involved in the project design, since these individuals generally play a key role in the day-to-day monitoring of project implementation.

If consultants are contracted as team members, they should not be brought in until after the project implementation document has been approved or their work may be delayed. When turn-around time is short, deadlines must be negotiated and maintained for both contractors and USAID personnel reviewing the team's work. Teams must be supported logistically and need offices that allow round-the-clock work when necessary.

Project Complexity and Implementation Strategies

Because of the inter-relatedness of components in basic education projects (e.g., textbooks should reflect national curriculum objectives but may need regional adaptation; textbooks should be accompanied by teacher guides and training that maximize appropriate use of the texts), even projects with rather small investments, such as the *Escuela Nueva* project, have been highly complex. Such complexity can be accommodated through the creation of a special implementing unit and the provision of intensive training for the unit managers if a project is designed as a small-scale demonstration or pilot effort. Most countries in the LAC region, however, lack the organizational structure and trained human resources in the public sector to allow for the expansion of a pilot project to the national scale. Thus, many donor-funded projects run the danger of remaining what Verspoor (1987) called "permanent pilots" in that they cannot be expanded for lack of human and financial resources.

With A.I.D.'s increased emphasis on influencing improvements in quality and efficiency at the sector level, greater attention must be paid in the design phase to the existing organizational and administrative infrastructure in the host country and its ability to implement a large-scale, complex education program. The donor agency may need to provide administrative and management training in the early phases of project implementation to create the needed expertise within the ministry to carry out a complex project. In addition, the donor agency may need to encourage private sector involvement in basic education or to promote greater community participation so that the ministry can decentralize certain functions and focus on others that it performs well, such as curriculum development. The approach chosen will depend on the human resource base and the absorptive capacity of a given educational system in a given country.

A.I.D. has generally employed the strategy of a phased approach to the implementation of

projects to deal with the issue of complexity. The projects reviewed in this study fit what has been called an "incremental expansion" approach (Verspoor 1987) in which the innovation is started on a small scale (e.g., one grade level or one region of a country) and then expanded over time. Verspoor cautions that this strategy is best developed over a long time frame and requires consistent government commitment. A.I.D. basic education projects, however, have often had time frames of five years or less — too short to allow for the national expansion of pilot innovations.

There has been a growing recognition in A.I.D. (AID/PPC/CDIE/PPE 1984) and elsewhere (Lindblom 1990) that projects need longer time frames if they are to have a sector- country-level impact. This is especially true when the project involves multiple innovations. Thus, there appears to be a move toward basic education projects of more than four or five years in length. The projects in Honduras and in Guatemala, both of which are highly complex, are designed as eight- and ten-year interventions, respectively.

Program and Non-Project Assistance

In discussions with A.I.D. personnel in the LAC Bureau and with contractors assisting the Bureau, it became clear that although the terms *program assistance* and *non-project assistance* are often used interchangeably within A.I.D., they are not synonymous.

Program assistance is an integrated management approach comprised of strongly linked program goals, strategic objectives, program outputs, and project activities. A program assistance strategy is one that helps mission directors to more fully rationalize their existing and future portfolios by linking project activities and program outputs to the attainment of well-developed strategic objectives and program goals. The strategic objectives should be consistent with the development objectives of the individual developing country and in line with A.I.D. regional objectives. Ideally, program assistance should cause mission management to focus its finite resources on objectives of national importance that can be influenced by the mission's activities. That is, strategic objectives should be of a high enough level to have a national impact, but must be susceptible to influence by the interventions of the USAID mission. In countries where A.I.D. is a relatively small donor, collaboration with other donors may be required to a reach a strategic objective of national importance.

The movement toward program assistance is the result of increasing interest by both Congress and A.I.D. itself to demonstrate the impact of development assistance. It is no longer seen as sufficient to say that one thousand young adults from Guatemala have been trained. Rather, Congress wishes to know how that training has contributed to achieving an objective such as increasing nontraditional exports. In addition, by focusing on objectives of national impact, A.I.D. hopes to promote strategies that will maximize the use of scare resources and provide measures for tracking the success of the broad development strategies adopted by the missions.

The LAC Bureau has contracted with Management Systems International (MSI) to help with the development of both bureau-level and mission-level program assistance strategies. These strategies are to be incorporated into the FY 92 Mission Action Plans. In working to develop program assistance strategies, several potential constraints have been identified. First, there may be resistance from certain technical offices that experience reductions in funding as a result of shifting mission priorities to meet national program objectives. Second, congressional earmarking of funds reduces the ability of missions to operate freely under a program assistance strategy. Mission activities will be driven not only by program goals and strategic objectives but also by congressional priorities in a country. Third, external factors beyond mission control, such as natural disasters, counterproductive government policies, or injurious budget decisions, can influence ability to reach strategic objectives. Finally, the ability to develop measures of progress in attaining strategic objectives is fundamental to a program assistance strategy. While some broad measures will be collected as part of normal host government reporting, missions may be required to invest in a data collection system to adequately measure progress at the program level.

Non-project assistance differs from program assistance in that it is a form of development assistance involving cash transfers to governments by donors. These transfers may be of several types: those that are conditioned on the recipient implementing a number of agreed-upon policy reforms; those designed to compensate a

government for lost revenue (e.g., compensation to bureaucrats laid off during ministry reform); payments for improving information for policy decisions; support for progressive movements/forces; and direct assistance in implementing policy. Non-project assistance is often one of several inputs (others being project activities) used by a mission to achieve its strategic objectives under a program assistance strategy.

Non-project assistance can play a very significant role in designing successful education interventions. This is especially true for areas such as school repair that do not necessarily require any technical assistance, are quite well defined, and thus are easily visible.

If non-project assistance is used, conditionality in the sense of cash transfer for policy reform may present problems. While in most Latin American countries there are a number of policies that require reform, they are often not sufficiently well defined, measurable, or readily implementable to merit tying desperately needed aid to their achievement. International donor experience seems to have led to decreasing emphasis on conditionality in all sectors, given the problems encountered by developing countries in meeting any set of conditions and the strong developmental and political imperatives to disburse the aid. However, conditionality as simply targeting cash transfers to a certain end has been used effectively in development programs.

Conclusions and Recommendations

Context

Conclusions. Countries of Latin America and the Caribbean have been successful in expanding access to basic education to a majority of their children. However, the heterogeneous nature of LAC countries, disparities in the distribution of economic resources, and the ongoing pressure of debt servicing create a situation where resources are spread thin and all children do not have a fair chance of advancing from one grade to the next. The opportunities for learning the tasks required for grade promotion are further limited by poor teaching, lack of educational materials, and poor information about the process of education in the region's schools. Thus, a large number of students fail, especially those entering first grade, but because of the expectations held by families for schooling, they continue to stay in school, repeating grades for a number of years.

Improving the quality of instructional delivery, and thereby reducing the wastage in time and resources that results from repetition and dropout, requires multiple inputs to the basic education system. Well-conceived strategies must be developed and implemented to increase the allocation of resources to basic education, improve the logistical and administrative support for schools, promote instructional methods that involve students actively in the learning process, offer opportunities for the professional and personal development of teachers, and provide information for systematic evaluation and decision making.

There is a general recognition of and agreement on the problems of quality and efficiency in basic education within the region and among the donor community. However, there has traditionally been little collaboration among donors in mounting combined interventions to deal with these problems.

Recommendations. The scarcity of resources and the complexity of addressing problems of quality and efficiency in basic education make collaboration among donors imperative. A.I.D., with its extensive investment in basic education in the region, should take the lead in promoting collaborative efforts among donors to address the needs of host countries in this area.

The complexity and interrelatedness of the problems facing basic education in the LAC region require a system-wide approach to improving the quality and efficiency of basic education. Although phased implementation over a relatively long period of time may be needed to effect change, strategic objectives should target the entire education system.

A.I.D. Basic Education Strategy

Conclusions. A.I.D. and other donors working in the region have contributed to positive trends in access, coverage, and school attendance rates. However, A.I.D. has recognized that serious problems of quality and efficiency exist in the region, and it developed a series of goals that address these issues. These goals are to increase resources for primary education; increase

equity of access; improve quality; increase efficiency; and improve the administration of education. In order to meet these goals, the LAC Bureau has developed a regional strategy for investment in basic education. The strategy document, which serves as guidance to field missions in designing and implementing basic education programs, outlines two activities in which missions should focus their efforts: policy dialogue and project implementation.

This regional strategy statement has been a useful tool to mission managers for both strategic and project planning. In the LAC region, the Bureau's strategy statement has been used as a starting point by missions for the development of country education and human resource strategies and as guidance for carrying out background studies for project design.

Background studies provide a basis for policy dialogue both by presenting information needed for decision making and by creating a forum for collaborative interchange between USAID mission and host country personnel. The most useful background studies are those that are focused on the basic education system and provide statistical (descriptive or analytical) summaries of the existing situation in the education sector and offer options for interventions.

Policy discussions on project design can require a fairly long time frame to reach fruition. While the results of policy-oriented research are important in such discussions, the confidence and trust established among the negotiating parties is also critical to decision making.

Recommendations. Regional strategy statements should be updated as appropriate to provide mission personnel with general guidelines to assist in their strategy formulation and design efforts. Feedback on mission efforts should be incorporated into the updating and refinement of the LAC strategy documents.

Background documents for policy dialogue and project planning should be developed in the form of options for different levels of investment in basic education. Such options should include justification for the suggested size of the investment, an implementation plan, and discussion of the potential impact of the intervention. This allows A.I.D. and host country project managers to choose among potential interventions to maximize scarce resources.

Project Interventions and Design Modalities

Conclusions. A.I.D. education technical officers are the most appropriate individuals to coordinate project paper development. They are familiar with A.I.D. procedures and are involved in the day-to-day educational reality of a country. Specialists may need to be called in for technical input related to specific areas of expertise (social soundness, economics, evaluation) or technical areas to be included in the project.

The involvement of host country educators both in background studies to support a basic education project and as members of the design team is critical to project success. If these individuals are well-known technicians, their participation will add credibility to the project in the eyes of the government. Such involvement will also give the educators a stake in the project that can lead them to provide both formal and informal explanations of the project to new government officials during periods of transition.

A number of project modalities have been designed and implemented in basic education. These include pilot projects, large-scale multifaceted projects, targeted interventions, and sector loans. They are not, however, necessarily distinct, and designs may include a combination of modalities. All of the design modalities also offer the possibility of private sector involvement either as a supplier of services or as an implementing organization for appropriate interventions.

Pilot projects have generally been among A.I.D.'s most successful interventions. With a pilot project, a small investment can have relatively large effects if it builds on local efforts that are viewed as successful. This is especially true if the project is consistent with stated government policy. The implementation of even highly successful pilot programs on a national level will take a number of years and is likely to require continued international donor support. After fifteen years, *Escuela Nueva* has reached about one-third of Colombia's rural schools and continues to rely heavily on donor support.

Recommendations. Although technical officers in USAID missions often struggle with large workloads, they must be given time away from other duties to devote to project design. Their knowledge of the host country education environment and of the operations of the mission will greatly facilitate the development of a basic education project.

Project design teams should include host country educators whose technical skills are recognized in host country educational circles. These individuals' familiarity with and support for a project will help it continue in time of political change.

Local innovations that have the potential for improving educational quality should be identified through background studies and other project design data collection activities. Where appropriate, these innovations should be built into basic education efforts as pilot projects.

Longer time frames must be built into projects so that the strategy of time phasing, in which an innovation has its coverage expanded over time, can be employed where appropriate. A relatively long time frame also helps to develop the consistent support of host country officials.

The growing importance of the private sector in basic education projects suggests that a discussion of private sector involvement in a project should be part of all project papers. The mission should explain why the private sector is to be involved, and how such involvement will take place. If there is to be no private sector involvement, the reasons for not including this sector in the project design should be made explicit.

Objectives and Indicators

Conclusions. The A.I.D. logical framework is a key element for measuring project progress. Indicators, however, have generally been defined in terms of outputs and have ignored measuring performance. Evaluations are often the vehicle for examining the indicators and measuring progress. To be a useful management tool, evaluations must respond to the needs of multiple audiences. The provision of a detailed evaluation plan in the project paper will facilitate project monitoring and decision making. However, mission personnel are generally not trained in evaluation methodology; thus, the assistance of a specialist in evaluation will be needed during the project design process.

Recommendations. Performance indicators should be included as part of the verifiable indicators in the logical framework. The logical framework should be examined as part of the technical analysis of the project paper to determine whether the indicators identified are appropriate and measurable.

Evaluation is a specialized discipline. Thus, when information is needed to meet the needs of multiple audiences, technical assistance from an evaluation specialist should be sought to develop the project evaluation plan.

Program and Non-Project Assistance

Conclusions. There is a movement within A.I.D. away from project assistance toward program-level assistance in the LAC region. It is believed that this integrated management approach, comprised of strongly linked program goals, strategic objectives, program outputs, and project activities, will help mission directors more fully rationalize their investments. Although no existing basic education programs take a program assistance approach, several in the region are large enough to influence the entire basic education system.

Non-project assistance is not synonymous with program assistance; rather it is a form of development assistance involving cash transfers to governments by donors. The transfers may have conditions for policy reform included as part of the negotiation.

Recommendations. Current large-scale basic education projects should be monitored carefully for their impact on meeting broader goals related to the basic education system. Such information can be useful in determining what configuration program assistance might take.

Care should be taken in ascribing conditions to cash transfers in the education sector; poorly defined policies and the current economic situation may preclude national governments from meeting any set of conditions.

III Project Implementation

This chapter presents findings related to project implementation. It focuses on the five general goals that A.I.D. has for basic education interventions as implemented in the LAC region. These goals are to increase resources for primary education, increase equity of access, improve quality, increase efficiency, and improve administration of education. Each of the specific objectives related to these goals is treated separately in the discussion, as shown in Box III-1. A summary of conclusions and recommendations is presented at the end of the discussion of each goal and its related objectives and interventions.

BOX III-1
A.I.D. Goals for Basic Education in the LAC Region

Increasing Resources for Primary Education

- Reallocating government budget
- Reallocating education budget
- Obtaining resources from private sector

Increasing Equity of Access

- Providing preschool education for children of the poor
- Providing instruction in indigenous languages
- Addressing issues that constrain girls' attendance

Improving Quality

- Improving children's health and nutritional status
- Renovating or constructing school facilities
- Revising or reforming curricula
- Developing instructional materials and technologies
- Training and supervising teachers
- Developing achievement testing

Increasing Efficiency

- Improving management of education systems
- Enhancing quality of teaching and learning
- Reducing dropout and repetition rates
- Improving status of teachers

Improving Administration of Education

- Strengthening Ministries of Education
- Supporting decentralization of certain functions to regions
- Creating supervision systems that support teachers
- Improving school organization and capabilities of principals
- Building support for schools on part of parents and communities

A discussion of the administrative relationships commonly established to coordinate the implementation of interventions opens the chapter, and a discussion of the sustainability of project interventions closes the chapter. Throughout the chapter, the case studies are used to illustrate the findings and conclusions about the major goals, objectives, and interventions.

Project Administration

The implementation of A.I.D.-supported basic education projects and programs in Latin America has traditionally involved a partnership among one or more host country organizations, the USAID mission, and an international technical assistance provider. Because A.I.D. has generally focused on the public sector when supporting interventions for school-age children, the ministry of education has been the usual implementing organization. Min-

istries of education, however, are constrained by financial considerations, which generally include allocation of over 90 percent of expenditures to personnel; lack of analytic input to decision making regarding resource allocation and finance; inefficient procedures for channeling resources to state and local institutions; and political interventions that may replace senior education officials and often alter policy. Thus, A.I.D. has also employed other approaches to implementation that are discussed below.

Host Country Institutions

Project designs have developed a number of strategies to overcome constraints to implementation faced by most ministries of education in Latin America. These strategies include the establishment of special implementing units within the ministry; the strengthening of existing capacity within regular ministry operational units; and recently, the implementation of programs aimed at the public sector through private sector entities.

Special implementing units have the advantage of bypassing many of the bureaucratic procedures and infrastructural deficiencies that tend to bottleneck service delivery in the public sector. Special units do not face the competition for resources common among ministry operational units, and they generally develop their own channels of communication for service delivery at the regional and local levels. They are especially important in establishing new services not previously provided through a ministry of education. The case of bilingual education in Guatemala illustrates this use of a special implementing unit (see Box III-2).

With the completion of projects, if further international support is not forthcoming, ministries often lack the resources to support the unit. Thus, a special implementing unit may continue to exist, staffed by a few professionals who are regular employees of the ministry, but without the resources or personnel to continue the unit's operations.

Special implementing units are also subject to personnel changes as a result of political appointments, as are other ministry divisions. They may face jealousy from other units within the ministry because they are relatively well endowed with resources, at least during the life of projects.

BOX III-2
Establishment of a Special Implementing Unit in Guatemala

Challenge. Most of Guatemala's rural children are members of Mayan indigenous groups and speak a language other than Spanish. Because teachers generally did not speak the language of the children, the ability to transfer information was limited, and children were ill-served by the school system. Few individuals within the Ministry of Education, however, had experience in the provision of dual-language instruction.

...roach. As neither the infrastructure nor the human resources ...ted within the Ministry to implement bilingual education, ...ID funded the creation of a new unit that was attached to the ...l education division of the Ministry. This unit, PRONEBI, ...loped bilingual/bicultural curricula, trained teachers, and ...blished a supervisory system and a distribution system for ...icing, first, 40 pilot schools and then 400 schools in the four ...cipal Mayan language groups. The success of the program led to its institutionalization by national decree.

Implementation. Despite its success, PRONEBI continues to face a problem common to special implementing units — a reliance on external funding. After ten years, USAID still funds much of the unit's operating costs. Such funding continues under the new Basic Education Strengthening Project.

A second strategy to overcome implementation constraints is to identify existing units within the ministry of education with the appropriate expertise or autonomy to implement project activities. This may be a special office in a ministry, such as the planning office that housed the *Escuela Nueva* program in Colombia during its project stage, or units that have built up experience through previous international assistance efforts. Additional examples are the teacher training unit in Honduras and the national planning unit for secondary education in Brazil.

In Honduras, the teacher training unit that developed a system for national in-service training under a previous USAID-funded project was able to use the same procedures in training teachers to use textbooks developed under the

Primary Education Efficiency Project. In Brazil, a series of projects had prepared teachers and administrators in school management and created central-level planning teams to assist states in educational planning. These teams were institutionalized as the national planning unit under the education sector loans. This unit then served as the implementing mechanism for the loans.

Multi-component projects, while coordinated through the ministry of education, often have a number of implementing organizations, including the private sector. Again, the normal approach has been to take advantage of existing resources. For example, in the Jamaican Primary Education Assistance Project, the Ministry monitors construction and community action components, while the country's principal newspaper produces and distributes textbooks to the nation's public schools. In Honduras, activities related to textbooks, teacher training, testing, research, the management information system, and school renovation are implemented through the Ministry; a private voluntary organization was responsible for developing an interactive radio program for public schools. Even in a relatively small intervention, such as the USAID-funded *Escuela Nueva* project in Colombia, universities and pedagogical institutes were contracted to develop curriculum materials and training packages.

The Incentives to Improve Basic Education Project in Haiti has taken a new approach to the delivery of basic education services in the LAC region. This project is attempting to overcome the instability of the local political situation and reach rural and urban low-income children by improving the delivery of services in private primary schools. The USAID mission has contracted with a U.S. university to administer the project while building the capability of local religious school organizations to implement educational interventions in a cohort of religious schools (see Box III-3).

The combination of technical assistance with project management is being approached in a slightly different way in the Guatemala Basic Education Strengthening Project (BEST). In this case, an international institutional contractor is entering into subcontract agreements with host country universities and private voluntary organizations (PVOs) to implement several components of the project, while supplying technical assistance to other project activities. The entire project, however, is aimed at strengthening public sector primary education.

USAID Missions

The A.I.D. technical office personnel interviewed for this study see their role largely as one of monitoring. This includes financial monitoring to check on the disbursement of funds by implementing organizations and technical monitoring of both the implementing organizations and technical assistance providers. Project monitoring takes place through regularly scheduled meetings of the USAID mission, the imple-

BOX III-3
Private Sector Participation in Haitian Education

Challenge. Although Haiti has a long history of formal schooling, all levels of the education system have been characterized by insufficient facilities, inefficiency, and poor quality. Public primary education, which is concentrated in urban areas, is relatively stagnant owing to economic conditions and political instability. Private primary schools, generally supported by religious groups, have grown rapidly and account for a majority of primary school enrollments in general and the vast majority of such enrollments in rural areas. There is, however, little coordination among private school systems, and the schools are poorly equipped and rely on untrained, poorly paid teachers.

Approach. The project has blended institution-building with instructional improvement by assisting the private sector to organize itself coherently and by providing pedagogical and material resources to private schools in targeted areas. In addition, support was provided for research and development activities to test low-cost educational technologies and pre-primary school approaches.

Implementation. The project was implemented through a grant to an international technical assistance contractor. This contractor then entered into contracts with Catholic and Protestant coalitions that developed service centers, which, in turn, entered into performance contracts with local schools. Midway through the six-year project, the private sector organizations formed an umbrella group and had developed sufficient organizational capacity that USAID restructured the project to provide grant funds directly to the private sector umbrella organization.

menting organization, and the technical assistance provider. Official and informal discussions are held as needed to resolve problems. In some projects, annual or semi-annual planning and review seminars have been established by the implementing organization, and these are attended by USAID and technical assistance representatives.

Foreign service nationals (FSNs) in the USAID education or human resource development offices play an important role in monitoring project implementation. They are often responsible for monitoring the progress of individual components of a project. They also provide continuity in project oversight functions when there is changeover in USAID direct-hire project monitors during the life of the project. In some cases, for example Honduras, they may also fulfill an informal technical role, offering advice or participating in the development of instructional delivery in areas where they have special expertise.

The presence of a USAID field mission was generally seen by implementing organization personnel as a positive factor in program implementation. The ability to meet quickly with USAID personnel to resolve day-to-day problems can be extremely important in time of crisis, as it was in Guatemala, where the presence of a USAID official showing concern was helpful in gaining military cooperation for the implementation of the bilingual education program in a period of extreme rural violence.

Host country officials, however, did identify the difference between their own fiscal schedules and that of A.I.D. as causing occasional problems by increasing workloads. There is a general feeling that greater flexibility in terms of the timing of funding and of evaluation would aid project implementation.

An additional difficulty identified was the A.I.D. policy of rotating its U.S. technical officers. This policy at times results in the loss of a close working relationship in the middle of project implementation. Although an equally competent technical officer may replace the individual who leaves, time is needed to establish personal bonds.

Technical Assistance

Technical assistance forms the third element of project administration. Traditionally, technical assistance has been supplied by specialists from the United States who have been contracted individually or through institutions by a competitive bidding process. In recent years, however, there has been an increasing emphasis on using host country professionals or specialists from other countries in the LAC region as part of a technical assistance effort. Local professionals may be included as team members in the bid made by a U.S.-based university or consulting firm, as in the case of Honduras. In this case, part of the contract agreement was that a Honduran would assume the chief-of-party role for the technical assistance team as the project was implemented. The host country specialists may also be contracted apart from international technical assistance teams, as was the case in the Guatemala Improving Rural Education Project.

In each of these projects, as in the Colombia, Jamaica, and Brazil cases, too, technical assistance was a component in project design. Technical assistance providers worked with colleagues in implementing organizations, but because these organizations were in the public sector, no contractual agreement was signed between the implementing organizations and the technical assistance providers. The Haiti case, as mentioned previously, uses a different arrangement; the implementing private sector organizations have entered into a contractual relationship with the institution providing technical assistance. Similarly, in the Guatemala BEST project, the international technical assistance provider has entered into subcontracts with private sector organizations to implement certain components of the project. Thus, not only are individual host country professionals forming part of technical assistance efforts but technical assistance providers are, in some cases, forming institutional ties with local organizations for project implementation.

Because the competitive bidding process can be time-consuming, technical assistance may not begin at the same time as project implementation. To avoid delays, a mission may contract directly with certain professionals on a short-term basis, as was done in Honduras with a

textbook production specialist. This strategy allows the project to continue implementation while the bidding process is underway.

There is an increasing emphasis on short-term technical assistance provision in A.I.D. basic ...ication projects. With the development of ...al expertise that has occurred throughout the ...ion, host country professionals can often ...ry out the work with occasional collaboration ...m international specialists. The difficulty with ...s approach is that it assumes that the same consultant will be available to make repeated visits. When scheduling conflicts occur, other ...sionals in the same field who offer different ...ons may be brought in, as was the case in ...iras. This may lead to confusion on the ...f the local professionals implementing the ...m and cause delays. Thus, a balance ...en long-term and short-term technical ...ance must be struck, and the scheduling of ... visits by the same short-term consultants ... be arranged with care.

The most successful method of providing technical assistance has been that of long-term experts working side-by-side with colleagues in the ...menting agencies' offices. Host country ...iewees felt that working together to resolve ...ems was the most effective way to learn ... the technical assistance providers. This ...llel" technical assistance was viewed by ... mentors as contributing directly to ... e international consultants have of ... s.

In cases where consultants were not paired with local counterparts, as in the Guatemala Improving Rural Education Project, such training did not occur. The lack of counterparts tended to result in direct participation in program activities by long-term national consultants and isolation of international personnel, which in turn resulted in an emphasis on products at the expense of local capacity-buil ...ng.

Conclusions and Recommendations

Conclusions. Ministries of education are often ineffective in rapidly implementing donor-assisted projects. The establishment of special implementing units has proven to be an effective means of overcoming the bureaucratic inertia of education ministries during project implementation. Such units may become ineffective when resources from donor agencies are no longer available, however. They may also face jealousy and lack of cooperation from other ministry divisions if these divisions perceive that resources are not adequately shared. It may take some time, or a series of projects, to fully integrate such a unit into the larger implementing organization of the ministry of education.

The use of multiple implementing units in both the public and the private sectors, coordinated by the ministry if necessary with technical assistance, can be an effective project administration strategy. Such an approach, however, requires careful study of the capability of the local implementing organizations to ensure that their efforts will complement one another in a cost-effective manner and to assess their commitment to basic education and to working with the ministry.

Increasing the capacity of human resources within the ministry of education and at the regional level is likely to require an extended time period. Projects that make use of personnel with permanent positions who have been trained prior to project initiation stand a good chance of successful implementation. This approach, however, implies the existence of a series of projects that have created and built on trained human resources.

The presence of a local USAID mission is a positive feature of A.I.D. that distinguishes the agency from most other international donors. The availability of USAID project managers, which allows the mission to respond rapidly to project needs, facilitates the implementation process.

Recent basic education projects in the region have emphasized greater integration of local expertise into technical assistance efforts by incorporating local individuals or organizations into international consortia. This has the advantage of creating a technical assistance team with knowledge of local problems. Where subcontracting arrangements are needed, however, it may result in delays while local subcontractors adapt to the prime contractor's organizational procedures and A.I.D. requirements.

"Bridge" technical assistance through personal service contracting or a buy-in mechanism can

be an effective way of providing expertise in specialized areas. This approach avoids the delays in implementation that often accompany the solicitation of competitive bids for technical assistance by allowing experts in key areas to work with host country technicians while the request for bids is being prepared.

Emphasis on short-term technical assistance can lead to implementation difficulties because of scheduling problems for short-term consultants who have other professional responsibilities. If different short-term consultants work with the same activity, the orientation of the work may change and local implementors may become confused as to the definition of tasks.

Recommendations. In implementing a project, care should be taken to distribute resources (e.g., bicycles or motorcycles for supervisors) throughout the system, even if they are concentrated in one unit, to avoid perceptions of favoritism and negative attitudes toward the special unit.

Where special implementing units are appropriate, they should be established with a view to their ongoing role in the ministry of education. This requires discussion and planning with the ministry to define a role for the unit beyond the administration of donor funds and to allocate the resources necessary for the unit to fulfill that role after donor assistance ceases.

Careful study should be made of potential local technical assistance service providers during the institutional analysis of the project paper. Commitment to basic education and ability to work within A.I.D. regulations, as well as technical capability, should be emphasized in the assessment.

In designing requests for proposals, A.I.D. must weigh the advantages and disadvantages of short-term technical assistance. To ensure consistency in short-term personnel, A.I.D. could require that bidders present a plan addressing the consistency issue or provide technicians from their core staffs to serve as short-term consultants.

In using international technical assistance, a balance must be struck between the production of instructional materials, such as textbooks, and building the capacity of a host country to carry out the activity. Training plans and measurable training objectives should be built into the terms of reference for both long- and short-term consultants.

Expert human resources to carry out project activities are often available in developing countries, especially in Latin America. Because there can be great cost savings in using local professionals, such individuals should be sought whenever possible.

Increasing Resources for Primary Education

Education, especially basic education, is generally considered a socially and economically productive investment. In many Latin American countries, it is financed predominantly by the government. The expansion of basic education, therefore, depends on the availability of increased fiscal resources. Since the early 1970s, however, most Latin American governments have not been able to continue expanding their support for education. Much of the problem relates to the debt crisis and to the impact of the two major world recessions of 1974-1975 and 1980-1983. There are also internal factors that influence the finance of education in Latin America. These factors include underinvestment in education as a whole; misallocation of resources among schooling levels; the inefficient use of resources within the education system; and inequity in the distribution of educational costs and benefits among various income groups (Psacharopoulos et al. 1986).

On average, public expenditures on education, expressed as a percentage of GNP, are lower in lower-income countries than in countries with higher incomes. Thus, developing countries are not providing as much for education as are more developed countries, even though the proportion of their population that is of school age is 75 percent higher (Lockheed and Verspoor 1989). This general trend in public expenditures has been exacerbated in Latin America by the debt crisis and chronic recession. The budget share of public education declined between 1970 and 1980 from 18.7 to 15.3 percent in Latin American and Caribbean countries (Psacharopoulos et al. 1986), and this share continued to drop throughout the 1980s. Reversing these trends will require recognition of the importance of investment in basic education by policy makers

(Reimers 1991), allocation of additional resources to basic education, and reallocation of existing resources to activities that promote quality and equity.

Reallocating Government Budget

It has been suggested that the present priority of Latin American governments should be to use resources in such a way as to maximize the quality of education achieved by students and to improve the efficiency of operating the primary education system. This change in focus would require additional investment (3 to 5 percent in real terms) to ensure that increased efficiency does take place (Schiefelbein 1988).

Several strategies are possible to increase overall government financing for education in general and basic education in particular. First, there is the possibility of intersectoral reallocations within the government budget. In most Latin American countries receiving donor assistance, the chief candidate for cuts would be defense, as the military and police together receive a disproportionate amount of the government budget. However, these funds have often been allocated to deal with insurgency or to battle drug production. And even if success were achieved in these efforts, much of the funding would likely be used to support demilitarization and reintegration efforts, at least in the short run.

A second strategy is for the government to raise additional revenue. This can come about through tax reform or through increased taxation. The general disarray and retrogressive nature of tax systems in Latin America may require extensive donor assistance in tax reform in order to increase tax revenues, even in an improving economy.

There is some evidence that where value is placed on education in Latin America, raising taxes for school quality improvements may be supported by taxpayers. For example, in Brazil, a 2.5 percent salary tax is levied on the wages of private sector employees and earmarked specifically for primary education. The federal government collects the tax, but two-thirds of the proceeds goes to the states (Lockheed and Verspoor 1989).

Reallocating Education Budget

Although primary education is considered to have the greatest social rate of return among education levels, it generally receives a disproportionately low percentage of the education budget. Thus, there has been considerable attention paid during the 1980s to the possibility of reallocating resources between education levels. In particular, it is argued that, in the absence of other sources of revenue, public expenditures on higher education should be cut back and those resources used to invest more in primary education. The justification for this reallocation is made on two main grounds: first, the higher return on investment in primary education, in terms of its effect on future salaries relative to its costs, makes more efficient use of scarce funds; second, since higher education is largely restricted to a small elite, it is in the interest of greater social equity to transfer money from higher to primary education.

Several problems exist in carrying out such reallocation among education levels. First, as a result of the historic autonomy of Latin American universities, many countries in the region guarantee a fixed proportion of government budget for higher education. Thus, reallocations may require constitutional amendment and could incur the political cost of university student unrest. Second, despite the inefficiency and poor quality normally attributed to higher education in most Latin American countries, it is generally agreed that there is an economic payoff to some level of university training in all developing countries. Thus, the amount of funding must be examined in relation to that which is required to operate a quality higher education system as well as in terms of the comparative differences between levels in per-student costs.

Cost containment, finance decentralization, and cost recovery are other strategies for reallocations within the education system. In most of Latin America, there is little possibility for cost containment in primary education. Basically, the only resource provided to students is a poorly paid teacher, and teachers' salaries account for up to 95 percent of some budgets. Thus, not only must teachers' salaries rise to attract and retain qualified teachers, but additional resources must be found for school maintenance, instructional materials production and replacement, and staff development.

Finance decentralization is seen as a way to achieve greater efficiency in the allocation of educational resources. Most public school systems collect and distribute revenue in a highly centralized manner. The consumer — that is, the student and his or her family — has little to say about how the resources ought to be allocated. Administrators are accountable not to the community, but to the centralized ministry of education.

Inequality is exacerbated when children from the higher-income groups are overrepresented in the educational system and receive relatively more of the public expenditure than lower-income students. In Latin America, students from white collar families accumulate five times as much public education expenditure as do the children of rural workers (Psacharopoulos et al. 1986).

In Brazil and Mexico, the responsibility for financing primary and most secondary education has already been delegated to state and local governments, although major reforms are needed to give the lower tiers of government fiscal authority commensurate with their responsibility (Mahar and Dillinger 1983). In Chile, as of the mid-1970s, the administration and control of almost all the primary schools outside Santiago were transferred to local municipalities. The central government pays the municipality a sum (calculated to cover personnel and running costs) for each regularly attending student. The poorest regions receive almost twice as much as the richest. A similar strategy is in place in some regions of Brazil, where subsidies are distributed according to the economic need of localities or neighborhood groups.

Several Central American countries, including Guatemala and El Salvador, are attempting to decentralize administrative functions, and Nicaragua has already done so to some extent. One of the difficulties, however, is that financial issues are dealt with by finance ministries, which have control over the education budgets. Thus, without a structural change of financial control, regional or local education offices will have, at best, discretion solely in the use of funds budgeted from higher levels of the ministry of education.

Colombia has been successful with a school improvement fund. The central ministry or state education office establishes a financing program for school improvement, delegating authority to the intermediate level to make grants within guidelines in response to proposals from individual schools. These funds supplement the regular budgetary support for the school (Lockheed and Verspoor 1989).

During the past decade, Mexico has used "Community Instructors" to solve the problem of attracting teachers to the rural areas (Schiefelbein 1988). Rather than enter into conflict with powerful teachers' associations, the National Educational Development Council (CONAFE) transfers funds to local commissions or committees that hire and pay the community instructors, who live in the community and are likely to want to stay there. While this strategy has lower unit costs than those of the traditional school, it entails increasing the total budget in the corresponding amount needed to hire and train the community instructors and provide students with texts.

Decentralizing finance by encouraging community contributions is hindered in Latin America by widespread poverty. For similar reasons, cost recovery from individual families through a user fee is difficult. What appears to be possible, however, is supplying funds or materials to local communities, which in turn supply the labor for school construction. In the Philippines, it was found that schools that rely on local funding are generally more cost-effective than those more dependent on central funding (Jimenez et al. 1988). This is consistent with the Jamaica case study where local communities receiving USAID grant funds were able to accomplish more in terms of renovation than the Ministry of Education.

Obtaining Resources from Private Sector

There is an assumption in the development literature that using private sector organizations as implementing agencies is a viable approach to reducing costs and increasing sustainability. These organizations are perceived to be sensitive to consumer demand because of their inherent profit motive, and less cost and risk are attributed to using an existing delivery system than creating a new one. Most of the evidence of success in self-sufficiency comes from sectors with specific sellable services or products such as agriculture or health. The experience with provision of basic education services through private sector entities has been limited.

The Haiti case study is the best example of success. It required, however, building an administrative structure for coherent action in the private sector. Also, most of the success of the program to date has been with religious private schools, which were founded with altruistic motives rather than for profit. Participation of schools whose motive is primarily profit-making remains limited. Expectations of self-sufficiency for a private sector implementing organization may also be unrealistic if experience with educational endeavors and possibly a commitment to basic education are lacking, as with interactive radio instruction in Honduras.

In cases where the services supported by donor agencies were complementary to the ongoing activities of local private sector organizations, such as textbook production through the local Jamaican newspaper, the implementing organization was relatively successful in sustaining the intervention. Even in this case, however, questions about cost-efficiency were raised.

Government intervention — through vouchers or, as in Colombia, through pressure on private schools to provide free schooling for a limited number of low-income students — is another strategy for private sector involvement. While the quality of private versus public schools varies from site to site, research in Colombia, Chile, Bolivia, and Paraguay indicates that students in private schools achieve higher levels of performance than their counterparts in public schools, even though private enrollees cost less per student to educate (Schiefelbein 1985; Jimenez 1986).

Conclusions and Recommendations

Conclusions. There appears to be little possibility of intersectoral reallocation to increase government financing of basic education. The chief candidate for cuts is defense, and since many of the region's countries are attempting to deal with insurgency and/or drug trafficking, such reallocation is unlikely. Tax reform and levies for education offer some possibility for increasing funds in countries where education is highly valued.

The transfer of funds from higher to basic education is a commonly suggested reallocation strategy within the sector. This, however, may necessitate constitutional modification, engender student unrest, and endanger the quality of the threshold level of higher education needed for development. Other strategies for intrasectoral reallocation, such as cost containment and cost recovery, offer little possibility of success because of the inelasticity of the primary education budget in the first case and the large-scale poverty of the region in the second. Finance decentralization offers the possibility of making more efficient use of available resources. This strategy, however, is constrained by the control exerted over the education budget by the ministry of finance in most LAC countries.

To date, experience using private sector organizations as basic education service providers has been limited. While several innovative activities have been undertaken with the private sector in different parts of the LAC region, questions remain about the commitment to basic education of profit-making private sector organizations and their willingness to sustain educational endeavors.

Recommendations. Discussions of tax reform and raising additional taxes to support basic education should be included in donor programs that support improvement in the quality and efficiency of basic education.

Careful review must be made of the conditions of higher education in a country before a strategy of reallocation of funds to basic education is proposed. This review should examine the political and social ramifications of implementing such a strategy as well as the economic consequences.

Decentralizing the finance of basic education requires cooperation between ministries of finance and ministries of education. Both policy dialogue and attempts to improve educational administration must take into account this relationship, and the degree to which A.I.D.'s investments in basic education are sufficient to provide leverage for policy change must be weighed.

Philanthropic investment by the private sector should be monitored carefully to ensure cost-effective implementation. Competitive bidding is a means of ensuring cost-effectiveness. If the competition is international, all associated costs, such as warehousing and distribution, should be included in the bid specifications.

Increasing Equity of Access

Latin American countries have made great strides in the past twenty years in improving access to primary education. Gross enrollment rates show that most countries are now providing access to at least 90 percent of each new cohort of students reaching school age. However, there are certain groups — such as children of the urban and rural poor, girls, and linguistic minorities — that may fall outside the coverage of the school system or, if enrolled in school, may not have an equal chance for success. Reaching these children has become an area of donor interest.

Providing Preschool Education for Children of the Poor

Of the cases studied, only the bilingual education program in Guatemala and the Haiti project deal with preschool education. The former provides instruction in Mayan and teaches school-readiness skills to indigenous preschoolers. Moveover, project in-service training has upgraded the skills of bilingual aides working with preschoolers throughout the country. The latter is developing innovative preschool approaches.

In each country visited for this study, school personnel emphasized the importance of preschool education, and some individual schools were starting preschool programs. A.I.D. funded a number of preschool pilot programs in Latin America in the 1970s (e.g., AID/LAC/DR/EHR 1976). However, despite the emphasis on child survival in other A.I.D. sectors such as health, preschool education has not been a priority area in the education sector in recent years.

During the past twenty years, governments throughout Latin America have shown increasing concern with child survival in terms of cognitive development, nutrition, and physical health (Smilansky 1979; Halpern 1980; Myers 1983). Government attention has turned to this issue largely because of population and economic pressures. By the year 2000, the number of poor children in Latin America is expected to increase to 60 million (Myers 1983). Poor women are joining the labor force in unprecedented numbers. The demographic and economic pressures in Latin America, coupled with the results of longitudinal research in the United States documenting positive effects from early childhood education on educational achievement and employment, have resulted in policy pronouncements, laws, and government-supported experiments related to child care and child survival.

Preschool enrollments in Latin America have doubled or even tripled in some countries during recent years. For example, in Brazil, the coverage for child care programs has increased from one to three million children (UNICEF/Brazil 1984). In Peru, the coverage by the formal and nonformal programs of "Initial Education" increased from 140,000 in 1974 to over 500,000 in 1984 (Fugimoto and Villanueva 1984). In Mexico, the number of preschools rose from 3,237 to 13,021 between 1970 and 1980 and doubled to 26,000 by 1982. The number of students enrolled in Mexican preschool programs increased from 422,682 in 1970 to 1,898,303 in 1982 (Gorman et al. 1988). While these figures are encouraging, it must be noted that preschool programs throughout Latin America reach less than 10 percent of the population and most of the children reached are from the middle class (Halpern and Fisk 1978).

Although interest has grown and experimental programs have increased, few systematic evaluations of these programs exist. There is little documentation of what works for whom and how. There is even less information regarding the long-term impacts of these interventions. The information that is available from Latin America comes from nutrition-based preschool studies and preschool intervention studies.

The effects of nutrition-related programs may vary according to the degree to which the program emphasizes nutritional supplements, parent tutoring, and health surveillance. The Cali (Colombia) project worked with extremely poor children during the preschool years, providing them with six hours daily of center-based preschool education, nutritional supplement, and health surveillance, as well as nutrition and health education for their parents. While treatment children showed significantly greater growth than control children in general cognitive activity during and immediately after the treatment periods, long-term effects as measured by academic achievement were very modest. This led some researchers to conclude that even with prolonged multiple interventions, the poor are not likely to close the gap between themselves and upper-class children (McKay and McKay 1983).

In Bogotá, malnourished pregnant women received different quantities of nutritional supplements, maternal tutoring, and early stimulation of children from birth to three years of age. Researchers concluded that by age seven, nutritional supplementation had more general long-term effects on children, while maternal tutoring and early stimulation had more selective effects, such as children's "familiarity with a school-like learning paradigm of interaction with adults." The largest effects in both domains appeared among the most disadvantaged children (Herrera and Super 1983).

With respect to preschool intervention studies, differences across countries appeared to be highly related to the socioeconomic status of the different countries (Argentina, Bolivia, Chile, and Colombia) and to the different curricula. Positive effects, however, were generally reported for enrollment and promotion within different social classes, with primary benefits for families of low socioeconomic status (Halpern and Myers 1985). An evaluation of 2,000 Peruvian *Programa No-formal de Educación Inicial* (PRONOEI) Centers in 1984 found a modest but significant impact on the cognitive, social, and motor development in some, but not all, communities studied. Primary school repetition rates remained high, despite the children's participation in PRONOEI. These high repetition rates may be structural and inherent in local school situations. Findings such as these illustrate the importance of a concentrated, coordinated effort that focuses on both early childhood intervention and primary education.

In Chile, the *Programa Padres Hijos* (Parents and Children Program) used locally chosen volunteer facilitators to bring parents together to discuss childrearing issues of common interest. Primary school children who participated in this program received higher ratings from their teachers on their reading skills than did children who did not participate in the program. In Haiti, the Community Integrated Nutrition and Education Centers (CINEC) reported that 86 percent of program participants completed the fourth year of primary school, compared with 30 percent "general" completion (Halpern and Myers 1985).

Nicaragua, under the Sandinista National Liberation Front (FSLN), began a national preschool program focused on rural children. The program increased access to preschool from about 3 percent of the eligible population in the late 1970s to about 20 percent by the middle of the 1980s. War and the declining economic situation reduced current enrollment to about 17 percent of the eligible population. Despite such a tremendous increase, preschool education had little or no impact on system efficiency; first to second grade completion rates did not improve in relation to increased gross preschool enrollment, even when variables such as pupil-teacher ratio and percentage of certified teachers were controlled for in the analysis. Authors suggested that a threshold percentage of gross preschool enrollment higher than 20 percent may be needed for preschool experience to make an impact on national statistics (Chesterfield et al. 1991).

These studies point out the difficulty in documenting that participation in preschool is related to long-term educational or professional achievement. One explanation is that early childhood education has not been well established in Latin America for sufficient time to conduct longitudinal studies. A second explanation is that programs have not been of sufficient scale to demonstrate impact. A third reason may be that the negative effects of the primary school system — including poor teacher attitudes, low quality education, lack of resources, and school policies on promotion — may erase any possible benefits acquired in the preschool years. In addition, as has been noted, differences in curricula, level of parent involvement and socioeconomic status, and other school quality indicators have resulted in differing outcomes for recipients of early childhood interventions.

Providing Instruction in Indigenous Languages

Language of instruction is a difficult equity question to resolve. Although it is generally accepted that monolingual language minority students will learn better in a language they understand, the long-term effects of such instruction on achievement are debated. Although there is substantial evidence that children's achievement is not held back in the classroom by beginning instruction in the native language, arguments exist for total immersion in the second language. In situations where children are not monolingual but have some ability in the second language, the question of choice of language of instruction becomes even more

difficult. The political and economic considerations of the appropriateness of dual-language instruction and its role (e.g., maintenance versus transition) also come into play in language planning (Dutcher 1982). The Guatemala bilingual education program has elements of both a maintenance and transition model: it provides basic literacy in the native language while improving students' proficiency in Spanish (see Box III-4).

Even when commitment is made to a dual-language program, its implementation may present difficulties. As the case of PRONEBI in Guatemala points out, a bilingual program cannot be implemented without bilingual teachers. Government bureaucracy may be such that bilingual teachers are not assigned to schools participating in the bilingual program.

The development of bilingual texts will require individuals who are literate in their first language, but such individuals may be difficult to find if the first language has never been taught in schools. Likewise, teachers may be bilingual but not biliterate. Further, a successful pilot program with bilingual teachers working with largely monolingual students may require adaptation of instructional approaches and materials in communities with varying degrees of bilingualism.

Individuals who are bilingual will be constrained not only by lack of literacy in their native language but also by their previous educational experience. Thus, curriculum developers who have been trained in a teacher-centered model of instructional delivery are likely to replicate that model in their own work, as was the case with PRONEBI.

BOX III-4
Dual-Language Education in Guatemala

Challenge. Most of Guatemala's rural population is made up of Mayan indigenous people who speak 22 different languages and are engaged in subsistence agriculture pursuits. They have traditionally been ill-served by the educational system in which few teachers speak the native languages or are familiar with local customs and learning materials are in Spanish. Because instruction was given in a language students did not understand, up to half of them dropped out by the end of first grade.

Approach. A bilingual education program (PRONEBI) was created with USAID support to develop a linguistically and culturally relevant curriculum in which the language of instruction was gradually shifted from the indigenous language to Spanish over the first four grades. The program included the development of texts and teachers guides, a training system to prepare teachers in their use, a supervision system made up of bilingual supervisors, and an evaluation unit to monitor program impact. The Ministry of Education agreed to supply bilingual teachers to the program's schools.

Implementation. Indigenous curriculum specialists, linguists, writers, and illustrators were hired to develop texts in four Mayan languages that reflect Mayan culture and images and are consistent with the Guatemalan national curriculum in objectives and content. The implementation strategy was to develop texts for one grade level at a time in each of the four languages. Bilingual teachers, however, have not been assigned to many of the classes where the program is being implemented. Many of the bilingual teachers are not biliterate because their own schooling experience did not teach them to read their native language. This has resulted in the need for additional training. In addition, the texts reflect many of the problems of the national curriculum in that they are teacher-centered, do not promote active learning, and assume literacy.

Outcomes. Parents were generally favorable toward children learning two languages, although they feel that Mayan could be learned at home. Even though teachers expressed some difficulty with the bilingual program because they lacked literacy skills in their native language, more Mayan was spoken to children in PRONEBI schools than in the comparison schools serving indigenous children. There was also a greater adherence to a planned schedule, and children spent more time on task in program schools.

Addressing Issues That Constrain Girls' School Attendance

The importance of formal education in women's lives is not recognized in all communities of the world. However, education does assist women to achieve equity, to fulfill their individual and collective potential, and to increase their lifelong earnings. Women who are educated play a stronger role in their families and have more power in decision

making. Current research (Cochrane 1979; Levine 1983; King 1990) indicates that girls who have been to school think and act in ways that influence their marital and maternal behavior, particularly with respect to enhanced child survival and lower fertility.

In comparison to women in other developing countries, more women in most countries of Latin America receive some level of formal education. In general, the educational attainment of females reflects a country's level of income and the characteristics of its educational system (Bustillo 1989). In the early school years, girls may participate at the same rate as boys. However, many girls who start primary education fail to continue beyond the fourth year. Chang and Ducci (1977) estimate that the average educational attainment of all children in South America is about five years of schooling. Komenan (1987) found the following percentages of female cohorts reaching fifth grade: Bolivia, 45 percent; Colombia, 43 percent; El Salvador, 36 percent; Guatemala, 28 percent; and Honduras, 37 percent. As with males, years completed in school correlates highly with socioeconomic status. Furthermore, females show attainment levels consistently lower than males, particularly in countries like Bolivia and Peru where ratios demonstrate a wide gap between males and females in both enrollment and literacy (Chaney 1984).

Obstacles to female education can be attributed to a number of factors, including uneven distribution of primary schools; shortage of female teachers and a general reluctance among certified female teachers to work in isolated rural areas or in urban slums; perceived irrelevance of primary school curricula to women's employment possibilities; demand for girls' household labor; late entry of girls complicated by early withdrawal owing to increased likelihood of pregnancy and/or marriage; and increased restrictions placed on physical mobility of older girls (Chamie 1983).

Girls may also face discrimination stemming from teachers' beliefs about female incompetency. Armitage and colleagues (1986) found that Brazilian teachers (predominately female) believed that girls were less capable in mathematics and consequently used teaching techniques that did not foster achievement in that area.

There is evidence that textbooks in the LAC region reinforce the negative stereotypes of females in society. For example, a comparison of Costa Rican primary school textbooks used in 1975 and 1985 reveals that a gender bias persists. Sexist images were as prevalent in the 1985 commercial textbooks as in the 1975 commercial textbooks. In both samples, 75 percent of the figures were male, and they were portrayed as historical figures or as engaged in intellectual, agricultural, or ranching pursuits. The figures that were female did domestic tasks, took care of children, or were students (Gonzalez-Suarez 1987). Although there is no demonstrable evidence of the impact of gender stereotype on girls' participation or scholastic achievement in elementary schools, such biases presumably affect girls' aspirations and expectations for the future.

With respect to female literacy in Latin America, there are wide differences between rural and urban populations, with the largest gaps found in Bolivia, Guatemala, Peru, and Haiti. For example, in Guatemala, the problems of low enrollment, attrition, poor attendance, and high repetition are particularly severe for females. In the poorest villages, girls rarely begin school before age eight, and the majority leave by age thirteen (Richards 1987).

Females may stay out of school, drop out, or repeat grades for the same reasons as boys. In addition, indigenous females are constrained by other cultural and economic values that prevent their receiving formal education. Prescriptive cultural norms dictate that women are limited in their social movements. There is, for example, considerable social pressure among rural parents to have adolescent daughters out of school — that is, off village paths and away from same-age males — by age fourteen (Richards 1987).

In addition, indigenous females have a heavier workload than do same-age males (Minge-Kalman 1980). This is especially true in societies based on production of cereal crops, such as the highland Maya (Paul and Paul 1952; Balderston et al. 1981; Rogoff 1981; Ember 1983; Loucky 1988). This is a result of the additional domestic work associated with processing food and providing fuel and water for the longer cooking of cereals such as corn, which is stored dry and hard. Women will have more

work, too, due to increased child care if fertility is higher because of the perceived value of child labor (Loucky 1988).

In addition to cultural constraints, educating women, especially indigenous women, may be seen as a threat to the existing power structure. The Basic Education Strengthening Project in Guatemala has attempted to overcome possible resistance by casting the education of girls in terms of its importance to economic development (see Box III-5).

The educational opportunities for all Latin American females are generally better than in many other parts of the developing world. For example, in Chile, 32 percent of women are employed in semiprofessional and higher-level occupations (Schiefelbein and Farrell 1982). Argentina, Chile, Costa Rica, and Uruguay all have illiteracy rates close to or below 10 percent and relatively high income. The difference between male and female illiteracy rates is less than 1 percent (Bustillo 1989). As shown by the case studies, enrollment rates are similar for both sexes, and there seems to be little intentional teacher bias in classroom interactions. However, in the one study for which evaluation data was available, boys in *Escuela Nueva* schools significantly outperformed girls in mathematics. Girls in the *Escuela Nueva* program, however, appeared to do better than their male counterparts in traditional schools.

BOX III-5
Education of Girls in Guatemala

Challenge. In Guatemala, problems of low school enrollments, poor attendance, high repetition, and attrition for females are among the most severe in the LAC region. These problems are especially acute in the rural areas, where the majority of the country's indigenous population resides. A variety of economic and cultural factors have resulted in a situation in which less than one-third of indigenous girls complete one year of schooling, and rural women make up at least 48 percent of the illiterate population.

Approach. USAID/Guatemala undertook a "development-from-the-top" strategy to alert policy makers to the implications for economic development of failing to provide basic education for girls. The strategy was aimed at reaching policy makers by using national data to show the relationship between girls' primary schooling and development indicators such as child survival, mortality/morbidity, fertility, and agricultural production. This focus on broad policy related to economic development allayed the gender and ethnic threats to the status quo that might normally have been perceived by the largely male, nonindigenous policy makers.

Implementation. Consensus was built through individual and small group meetings with decision makers, in which the Guatemalan director of the Women in Development (WID) activity of the new USAID-funded basic education project took a leading role. The outcome of these efforts was a national conference of leading Guatemalans entitled *"Educando a la nina: lograremos el desarrollo de Guatemala"* (Through educating girls, we will achieve Guatemalan development). At this conference, participants formed a commission to draft a national emergency plan for addressing the primary education of girls. The WID component of the Basic Education Strengthening Project (BEST) was redesigned to focus more directly on the issues of girls' education by carrying out national and regional seminars; implementing small group meetings with policy makers; preparing publications and manuals on girls' education in Guatemala; and monitoring the impact of interventions carried out under the BEST project on girls' education.

Outcomes. Although the effort was in its initial stages at the time of this review, the commission was drafting the national emergency plan and had met with the President of Guatemala and received assurances of his administration's support for girls' education. Manuals for teachers, participatory seminars, publicity campaigns, and the like were all in the process of being planned.

Conclusions and Recommendations

Conclusions. Many of the preschool education efforts in Latin America have been focused on middle- and upper-class children. Programs for children of the poor have generally been limited in scope and have shown inconclusive results in terms of effects on academic achievement, repetition, or dropout rates. The negative effects of traditional primary education may offset the benefits of the preschool experience, or programs may not be of sufficient scale to demonstrate impact.

Nutrition-based studies have clearly documented that preschool intervention can have a positive effect. Even severely malnourished children have demonstrated impressive physical and mental recuperation upon early intervention (Montenegro et al. 1977). However, the interventions must be continuous for the positive effects to continue.

Bilingual education provides children from indigenous groups with the opportunity to acquire content in their own language and thereby not fall behind while learning a national or predominant language. Program effectiveness depends primarily on the availability of bilingual teachers. Once bilingual teachers have been assigned to a program, improving the quality of instruction calls for dealing with many of the general problems of LAC basic education systems such as teacher-centered instruction, lack of learning materials, and poor classroom management.

The process of recruiting and training bilingual teachers, developing instructional materials, and adapting methods and materials to differing linguistic environments will take a number of years and requires a time frame that is beyond that of the usual donor-assisted basic education project in the LAC region.

A positive relationship has been consistently shown between women's levels of basic education and indicators of economic development. Women in Latin America are better educated than are women in other third world countries. However, this varies for certain population segments, such as rural and indigenous females. In addition, even in urban areas, both boys and girls tend to lag far behind developed countries in educational attainment.

Among the explanations for the poor academic performance of females are the following: girls have low status; girls must protect their honor by being modest; girls marry at a young age; teachers reinforce the low status of girls; teachers socialize students in the cultural norms of the society. Yet, little research exists to confirm these hypotheses.

Couching education for girls in terms of national economic development can be an effective strategy for winning high-level support for educating women. Data to support the relationship within a given country will be needed to convince decision makers of the importance of girls' education and to further policy dialogue.

Recommendations. Investment in preschool education should be coordinated with improvements in educational quality in the early primary grades. In addition, any interventions should be carefully monitored to address the complex issues surrounding classroom interaction, classroom characteristics, and teacher and school organizational variables that affect preschool effectiveness.

Health, nutrition, and stimulation interact and are all important in preschool education. Interventions must address all three domains. Thus, interventions could best be implemented through the combined efforts of several A.I.D. technical offices.

In designing bilingual education interventions, designers need not be overly concerned about a philosophical description of the bilingual education program. Rather, the emphasis should be on those aspects that contribute to increased equity of opportunity. These include developing reading materials in native languages so that future generations of bilingual teachers will be truly biliterate, and making curriculum materials more flexible so that they can be used with children of different levels of first and second language proficiency.

The development of textual materials for young children in dual-language environments requires more than expertise in the cultural and linguistic nuances of the population to be served. Expertise in curriculum development, child development, and textbook design should be included in bilingual education curriculum development efforts to ensure appropriate level and sequencing.

As women are relatively better-educated in the LAC region than in many areas of the developing world, donor agencies must take care to examine within-country differences and the absolute levels of education of the school-age population. Research must also be undertaken on a country-by-country basis to show the relationship between girls' education and economic development, so that the resultant data can be used as a management tool.

If investment is to be increased in basic education for girls, it is important to understand the external factors affecting efficiency as well as classroom interactions that affect quality and to incorporate these factors into project design. This might best be accomplished by systematic research and monitoring of current basic education projects in the region.

Improving Quality

Despite gains made in providing universal access and increasing coverage in the LAC region, many students are unable to take advantage of the minimal levels of schooling now available to them. Repetition and failure rates remain high, suggesting serious problems of educational quality.

Improving Children's Health and Nutritional Status

The success that children have in taking advantage of improved educational delivery and content depends to a great extent on their health when entering school. There is a high correlation between nutritional status and academic achievement (Lockheed and Verspoor 1989). With the general economic decline experienced in the LAC region, it is likely that the caloric and protein intake of the region's population has declined substantially in the last decade.

If protein and calorie deficiencies are increasing in the general population, then a significant portion is probably suffering from some degree of malnutrition or is at risk of becoming malnourished. The groups most likely to suffer severe effects are children and pregnant or lactating women, who have higher nutritional requirements. The higher nutritional needs of children together with the growing levels of poverty in LAC countries suggest that many children in the region who are attending school have insufficient diets.

The seriousness of the problem may not be readily apparent to teachers and school personnel, as the effects of malnutrition may manifest themselves as stunting rather than wasting. Recent data from Nicaragua illustrate this point. In 1989, the Ministry of Health undertook a nationwide study of 7,905 randomly selected schoolchildren aged six to fourteen, using the standard anthropometric measures of height for age, weight for age, and the ratio of weight to height, as shown in Table III-1.

As shown by the ratio of weight to height, severe malnutrition or wasting is not a major problem in the school-age population, although almost one-quarter of the of the six- to nine-year-olds are at risk. The rate of low weight for age is under 20 percent for all three age groups, except thirteen- to fourteen-year-old males, where it reaches almost one-third of the sample. By far the most severe nutritional problem among Nicaraguan schoolchildren is stunting, as indicated by the large percentage of children who are short for their age, indicating deficient skeletal development. When those at risk of becoming stunted are added to the percent of stunted children, the percentages are alarmingly high: all are at least 50 percent, with those for the oldest age cohort at or very close to 75 percent.

The percentage of children who are underweight or suffering from physical wasting as a consequence of malnutrition is not particularly high. As a result, the vast majority of Nicaraguan children do not appear malnourished, and it is only when height for age is measured that the extremely high rates of stunting become apparent.

The educational consequences of stunted growth in school-age children include poor cognitive abilities, decreased aerobic activities, and significant reduction in alertness. Important health effects are increased morbidity and mortality rates, a 30 percent increase in time needed to recuperate from frequent diarrheal episodes, and increased chances that acute respiratory infections turn into pneumonia. All of these consequences have immediate bearing on learning ability, school achievement, grade repetition rates, and school desertion.

This problem can be largely overcome through the intake of protein in dairy products. While school lunch programs may involve distribution and other logistical problems, they do offer an opportunity for raising children's nutritional status and allowing them to take greater advantage of their schooling experience. Lockheed and Verspoor (1989) cite a number of studies that suggest that investment in vitamin supplements, snacks, and parasite treatment can substantially improve children's ability to learn at a relatively low cost.

Renovating or Constructing School Facilities

In Latin America and the Caribbean, the high capital and recurrent costs of building and operating traditional formal school systems, combined with enrollment rates of almost 100 percent, have led most donor agencies to decrease financing for the expansion of physical school infrastructure. This investment strategy extends beyond Latin America, because enrollment rates for primary school-age children have increased worldwide in the last twenty years — from 57.7 to 83.5 percent in Latin America and the Caribbean, 32.7 to 65.9 percent in Africa, and 54.4 to 73.6 percent in Asia (Hunger Project 1986 in Anderson 1988). It has been argued that even when investment in school construction was at its height, it was directed toward higher levels of education and regional centers where the products of investment would have greater visibility than would individual primary schools (Lockheed and Verspoor 1989). These authors suggest that while some low-income countries will continue to require donor assistance to expand access, there should be a shift away from buildings and furniture to critical pedagogical materials.

School maintenance and renovation are important, however, especially in poorer countries, to ensure that minimum conditions are present in a school so that children are able to take advantage of material inputs related to quality. A school renovation activity can also serve as a catalyst to increase community involvement with the school.

Care must be taken that a minimum standard of school facilities exists, or it is possible that the potential benefits from material inputs may be seriously impaired. The following example illustrates this point.

TABLE III-1
Malnutrition in Nicaraguan Schoolchildren, Ages 6-14

	Age Groups					
	6-9		10-12		13-14	
	Males	Females	Males	Females	Males	Females
Nutritional Classification	Height for Age (percent)					
Normal	45.5	47.9	33.6	35.8	23.7	26.3
At Risk	32.7	36.1	37.6	33.5	32.8	38.9
Malnourished	21.8	16.0	28.8	30.7	43.4	34.7
Risk + Malnourished	54.5	52.1	66.4	64.2	76.2	73.6
	Weight for Age (percent)					
Normal	46.7	46.2	33.9	37.3	26.3	46.3
At Risk	37.9	42.9	48.6	45.5	42.0	38.7
Malnourished	15.4	10.9	17.5	17.2	31.7	15.0
Risk + Malnourished .	53.3	53.8	66.1	62.7	73.7	53.7
	Weight/Height (percent)					
Normal	73.8	76.3	86.2	100	99.1	100
At Risk	22.5	19.5	12.1	0	0.9	0
Malnourished	3.7	4.2	1.7	0	0	0
Risk + Malnourished	26.2	23.7	13.8	0	0.9	0

Source: SVEN October-November 1990 (in Chesterfield et al. 1991)

Twenty-three children are squeezed together sitting on the earthen floor or on small stones in the made-over chicken coop of approximately 10 x 12 feet. It is drizzling and a cold wind whips through the cracks in the slats as the children cough and shiver. The teacher pulls forward a small, badly flaked blackboard. The children squint through the dim morning light trying to make out the numbers as the teacher writes them.

(Standing in the rear of the small building, I have difficulty making out the numbers.)
(Fieldnotes, Guatemala, February 1987)

Thus, while this is a situation where, as Fuller (1986) points out, even material inputs such as writing pads or pencils could enhance achievement in some sense, improved facilities are required for meaningful improvement.

Investment in classroom refurbishing can also help overcome local conditions such as vandalism, build support for an intervention among local communities, encourage community participation, and help create a new structure for classroom learning environments. In each of the cases where furniture was provided as part of the project, this aspect of the program was viewed positively by teachers and parents. In one case, however, delay in receipt of furniture created negative attitudes toward the entire program, which then had to be overcome once the furniture was delivered. In the case of Colombia, *Escuela Nueva* calls for special furniture or special arrangement of tables by grade level. In addition to supplying new furniture, this arrangement breaks down the traditional teacher-centered environment of the classroom.

The School Community Outreach Programme (SCOPE), a component of the Jamaica basic education project, provides an example of the use of participant training to build community support for school renovation (see Box III-6). The Honduras project has also tied school renovation to communities' efforts at self-help, and the USAID basic education project in El Salva-

BOX III-6
Community Participation in Jamaican Schools

Challenge. Jamaica has made tremendous strides in providing access to primary education, with 96 percent of the school-age population enrolled. The education system, however, is of poor quality; approximately half of the primary school graduates are considered illiterate. This causes a substantial economic drain on the nation because of the need to provide remedial education or training at higher levels of the education system or in the labor market. Among the constraints contributing to poor quality of the primary school system are overcrowding in buildings that were deteriorating and suffered from the effects of vandalism, lack of school furniture and sanitary facilities, and little in the way of basic equipment.

Approach. School principals, teachers, and local community leaders were trained in community organization techniques to deal with vandalism in their schools. Participants spent three weeks in the United States, where they visited communities that had experienced vandalism and discussed strategies for involving the community to combat the problem.

tation. Teacher-parent organizations were provided with ategies that included starting clubs for out-of-school youth, ı among classes within a school to maintain the school's :, and soliciting financial support from local businesses dopt-a-School" programs. An additional aspect of the was a pilot effort designed by USAID and the Ministry of in which grants of $10,000 were given to ten school- organizations that had participated in the training program t their own school renovation projects. Because the partic- ıe training program had been given bookkeeping training, ble to keep thorough records of payments. They worked) and the Ministry of Education to develop a bidding process g local contractors and special procedures for contracting the work.

Outcomes. All of the schools in the program reported a reduction in vandalism, and over 90 percent of the teachers thought that both they and the schools had benefited from participation. Renovation activities were completed somewhat faster in SCOPE than in the overall program. The communities were also able to use the grants as leverage to encourage community members to assist with the renovations. SCOPE has been incorporated into the Ministry of Education and operates on a regional basis throughout the country.

dor furnished repair kits to communities to assist with school maintenance.

While investment in renovation may serve as a catalyst for community participation, it must also be monitored carefully. The opportunities for financial gain by unscrupulous construction contractors is a reality in developing countries. Thus, specialists such as engineers may be required to monitor both the contracting and the conduct of the work. Qualified individuals, however, may be unavailable at the salaries paid in the public sector, as was the case in Jamaica. This may result in construction irregularities or lack of completion.

Revising or Reforming Curricula

In most cases, the content of a public school program in Latin America is determined in broad terms by governmental decree. This theoretically limits to some extent the changes that can be made in the content of the national curriculum. In actuality, however, much "refining" of a curriculum can take place within the basic parameters set forth by a country's governing body. The Honduras textbook intervention provides an example of making curriculum adjustments while staying within a mandated framework. It is often possible to make adjustments without national curricular reform in instructional materials that portray subgroups such as females or minorities in negative ways or do not reflect a given cultural reality, as with the Mayans in Guatemala prior to the bilingual education program.

It is also possible to increase the relevancy of materials by adjusting them to the local environment, as was done through the use of local materials and regional variations of the *Escuela Nueva* student guides in the different regions of Colombia. Making such adjustments, however, requires careful study of the instructional materials and of teacher-student interactions in the classroom.

National curriculum reform, because of the political issues of national culture and values, is likely to involve donor agencies only at a program level, as was the case in Brazil. The general goals of equity, quality, and efficiency, however, are ongoing areas of policy dialogue.

Developing Instructional Materials and Technologies

Interventions related to the delivery of instruction in basic education have generally been of four types: physical improvements in the school environment through school construction, renovation, or equipment provision, as mentioned above; development or provision of instructional materials such as textbooks, teachers guides, and supplementary materials; introduction of innovative technologies such as interactive radio or programmed learning; and preparation of personnel to use new materials and techniques.

In much of Latin America, instructional quality in public primary schools is poor. This is especially true in rural and low socioeconomic urban areas where there may be a single textbook for an entire classroom. Chalk, pencils, and notebooks are in short supply, and supplementary teaching materials are scarce. Teachers are often ill-trained to face the variety of situations they encounter in their teaching assignments, such as the scarcity of materials, large classes or multi-grade classes, or poor physical facilities. Teachers receive little in-service support, because principals are also poorly trained and supervisors are unable to visit rural areas frequently due to the difficulty of travel. In-service training, when provided, is usually in the form of special workshops that are not directly related to the reality of the classroom. Teacher morale, therefore, is often low, and teachers may not know how to use interventions to promote positive learning outcomes in students.

Implementation of an instructional intervention will require the development or adaptation of the material, its production and distribution to schools, preparation of teachers in its use, and assessment of its effectiveness. Because research has demonstrated the positive effects of textbooks on student achievement, donor agencies have tended to focus on texts in the last decade. But the recurrent costs for texts are relatively high, especially if children are permitted to take books home, and technologies that provide alternative instructional modes have also been sought. Those that are relatively easy for teachers to employ and have a high impact on student achievement at a relatively low cost, such as programmed learning or interactive radio instruction, have the most promise.

Instructional Materials

Textbooks. There is a strong commitment to the provision of textbooks for primary schools in donor-assisted projects in Latin America. Each of the cases reviewed included an activity related to textbook provision. In Honduras, the principal component of the Primary Education Efficiency Project was the development of a national textbook series. Jamaica also made texts available nationally through using a newspaper company to produce existing texts cheaply on newsprint. Colombia and Guatemala each developed texts for schools dealing with particular segments of the student population, rural children in multi-grade classrooms and bilingual children in particular. The Brazil education sector loans contributed to curriculum reform and the production of texts, while the Haiti project is providing texts as part of its options package to participating schools.

Worldwide, textbooks have been one of the major educational interventions by donor agencies to improve educational quality in developing countries. Forty-eight textbook development projects in developing countries have been supported by the World Bank in the last two decades. Between 1979 and 1983, twenty-nine World Bank projects had textbook components (Searle 1985b; Farrell and Heyneman 1988). In the last decade, A.I.D. has supported at least four major textbook development projects, and texts have been a component of a number of others (Anzalone 1988).

It is easy to understand this investment in textbooks. Research findings tend to support the relationship between textbooks and increased academic achievement. In recent years, researchers have documented the positive effects of textbooks in a range of developing countries, including several in Latin America (Heyneman et al. 1981; Heyneman and Loxley 1983). These effects are generally of a greater magnitude than those of other interventions such as teacher training or change in class size (Fuller 1986).

The relative success of texts in the classroom, however, will depend on a number of factors related to implementation. First, as Lockheed and Verspoor (1989, 31) point out, "Textbooks are the major — if not *only* — definition of curriculum in most developing countries." Thus, the development of textbooks has political ramifications as, to a degree, the texts will embody the political philosophy of a country.

Second, the quality of texts in terms of pedagogical issues — such as focusing instruction, activating prior knowledge, previewing concepts, engaging students in the learning activity, and demonstrating comprehension and extending knowledge — as well as in terms of structural issues, such as visual organization and style, will influence the usefulness of the texts. The texts must be relatively intuitive if teachers are to use them effectively. This requires that text development personnel have an understanding of subject matter and textbook layout.

Third, as Searle (1988) has shown in a review of nine major textbook projects throughout the world, production and distribution may be major stumbling blocks to the provision of texts. The inability to produce or distribute books on time will result in teachers beginning the school year without materials or teacher training activities that are out of phase with the availability of books in the classrooms.

The national textbook development effort in Honduras illustrates how one project dealt with these concerns (see Box III-7). This example shows that it is possible to maintain rigid design and production schedules. Doing so, however, may require the use of international experts and thus result in some loss of local capacity-building. This example also points out that modern computer technology is required if reasonable progress is to be made in developing textbooks for publication.

The case shows that textbooks also serve as a valuable tool for teachers and will be used extensively. Texts can be used to encourage active learning but may also substitute for the blackboard for copying and memorization activities if teachers have not received sufficient training or the texts are not sufficiently intuitive.

The other cases used other approaches for meeting production demands. Jamaica used existing books produced cheaply through the private sector, while Colombia and Guatemala developed local expertise in textbook design. In all of the cases except Jamaica, teacher training systems for preparing teachers in use of the texts were developed.

Responsibility for the texts has been addressed by each program. In Jamaica, texts are given to each child. In the other countries, the texts remain in the school in an attempt to lower costs. *Escuela Nueva*, however, allows children and community members to borrow books from the 100-book library that is part of each school in the program.

Searle (1985b) has suggested that the most serious impediment to textbook programs is the failure to establish institutions to provide textbooks after project completion. Although the production of texts has been incorporated into the Ministry of Education in Colombia, *Escuela Nueva* continues to rely on donor funding for much of the cost of revisions. In the other programs, response to date has also been to seek continued donor funding.

Lockheed and Verspoor (1989) argue that where the textbooks are produced is of little importance as long as the production can be done cost-effectively. Honduras contracted with a Costa Rican firm to produce its texts. Countries must be careful to include distribution costs in soliciting for international bids and to consider the effects of foreign purchases on the politically sensitive issue of balance of payments.

Teachers guides. Teachers guides are relatively common in Latin America and were produced in conjunction with texts in each of the cases studied. Guides can assist teachers in their presentation of textual materials as well as classroom management and monitoring of student learning. The availability of teachers guides in most developing countries is, however, limited (Lockheed and Verspoor 1989).

In order to be an effective tool, guides, like texts, should be straightforward and intuitive. It is also important that the guides be made a part of in-service training activities so that teachers learn how to use them in conjunction with the texts, as discussed in the Colombia case. In Colombia, the developers of the guides also created the training package. This did not occur in Guatemala or Honduras, where the trainers did not stress the use of the guides. Thus, teachers seldom use the guides in these countries. In Jamaica, teacher training was not included as part of the text production package.

BOX III-7
Textbook Development in Honduras

Challenge. Honduras, the poorest country in Central America, faced an inefficient primary education system in which only 28 percent of the children entering school were able to complete sixth grade. Lack of textbooks was seen as contributing to poor quality of instruction as only 23 percent of rural classrooms had any textbooks at all in 1985. The books that did exist had been in use since 1965 and were viewed by teachers as pedagogically obsolete, difficult to use, unattractive, and lacking in Honduran content and images.

Approach. Textbook development was made a priority component of the Primary Education Efficiency Project funded by USAID in 1986. The books and accompanying teachers guides were to be developed in phases: each year a series of texts for a grade level was to be developed and distributed nationally. The textbooks were to be supported by a teacher training component in which the Ministry of Education's teacher training unit would organize a national training system utilizing supervisors and school principals to train teachers in the use of the texts and guides.

Implementation. In order to avoid the issue of curricular reform that would have required governmental involvement and possible delays, the process of textbook writing was considered an enhancement of existing curricula. The production target of developing a text series for a grade each year was considered unrealistic by textbook experts. The production schedule was met, however, by using international consultants for long-term technical assistance in textbook production to support the Honduran writers and illustrators and by supplying computers with word processing and desktop publishing capability early in the project. In addition, a Costa Rican printing company that could handle the volume of books within the restricted time frame was selected through competitive bidding.

Outcomes. Textbooks have been distributed and were observed in use in classrooms. Teachers were favorable toward the texts because they motivated the children and relieved the parents of a financial burden because the texts were supplied free of charge. Teachers used the texts most effectively in large-group, teacher-directed activities. In seatwork activities, however, the teachers used the texts as a substitute for the blackboard and had children copy material verbatim.

Other instructional materials. With the exception of pencils and notebooks supplied by parents and blackboards, instructional materials are generally lacking in primary school classrooms in Latin America and other developing countries. As with texts, however, such materials can provide resources for student practice. Teachers' investment in the rural newspaper *El Agricultor* in Honduras to obtain additional reading materials for children and the centerpiece poster demonstrates teachers' enthusiasm for instructional aids. The small library and learning centers developed from materials in the local environment, which are key features of the *Escuela Nueva* program in Colombia, are other examples of relatively low-cost instructional materials that have been used effectively in Latin America.

It has also been suggested that instructional games can be a highly motivating, self-contained, small-group instructional material (Thiagarajan and Pasigna 1988). They are seen as a cost-effective means for students to master basic skills, especially at higher primary grade levels. With the exception of Belize, however, there is little research on the use and effects of games in primary school classrooms of the developing world.

Instructional Technologies

Interest in the field of instructional technology in Latin America has been growing. The use of innovative instructional technologies stems from the concerns of decision makers who want to know how to determine and how to achieve the best outcomes from instruction, how to deal with large classes (typically 40-60 students), how to resolve issues of high recurrent costs, and how to adapt approaches to widely differing populations (Chadwick 1986). Common areas of the field of educational technology include programmed instruction, microcomputers, distance education, interactive radio, and instructional development and design; these technologies are discussed below.

Programmed instruction. Programmed instruction (PI) is defined by the following features: it can be mediated and replicated; it is self-administrable and self-paced; it includes frequent overt response categories; it allows for immediate feedback; and it consists of highly structured sequences (Boileau 1983). The programs will vary greatly depending upon the method and the topic area. Many techniques embody either the constructed-response programming of B.F. Skinner or the multiple-choice programming of N.A. Crowder.

Programmed teaching/learning systems, based on PI principles, demonstrate a high degree of correlation between materials and means of delivery and a high degree of attention to the systematic application of various principles of instructional development and design. In general, they include both step-by-step scripts for teachers' presentation of a session and instructional materials for children to use individually or in groups (Anzalone 1988). Programmed instruction is particularly appropriate for multi-grade classrooms as it allows children to work on their own, at their own pace, while the teacher is involved with other grades.

One example of an education system in which programmed teaching/learning is integral to curriculum design is Colombia's *Escuela Nueva* (see Box III-8). Another application of programmed teaching/learning is found in Project PRIMER in Jamaica (Cummings 1986).

Computers. Programmed learning principles are commonly being used in Computer-Assisted Instruction (CAI). Although implemented largely on an experimental basis, the use of computers for classroom instruction is increasing. Mexico, Costa Rica, Chile, Peru, Argentina, Colombia, Trinidad and Tobago, Belize, and Brazil are experimenting with computer-assisted instruction (Anzalone 1988). Costa Rica has mounted a major initiative for using computers in primary and secondary education. In Mexican primary schools, the focus is on computer literacy, and in Brazil and Argentina, educators use computers to "open up" the instructional process to foster critical thinking, creativity, or problem solving (Lockheed and Verspoor 1989).

Information on the costs associated with computer education in developing countries is rare. However, where data are available, the costs are found to be quite high. In Belize, for example, the per-student costs for a single computer education course were found to range from 59 to 149 percent of total per-student public expenditure in secondary education (A.I.D. Learning Technologies Project, preliminary data).

Four sources of high costs include hardware, software, infrastructure, and teacher training

(Anzalone 1988). Both hardware and software have to be imported. Moreover, the software may not fulfill the particular needs of a specific country. Problems relating to electrical current, weather, dust, and access to replacement parts also increase the costs of adoption. The costs for retraining teachers increase the expense of computer use as well.

Distance education. Distance education covers methods ranging from educational television and radio programming to correspondence courses. It has commonly been used for teacher training. For example, "Logos II" in Brazil is a self-paced learning program that combines subject matter and pedagogy. All students are unqualified primary school teachers. The curriculum contains a number of "modules" (short courses printed in separate pamphlets). Students study the pamphlets at home and then return to learning centers to be tested on the modules. Other activities offered by the learning centers include micro-teaching sessions, tutoring, professional socializing, and study groups. The entire Logos II program is expected to take from thirty to fifty weeks to complete, after which students take a certification examination (Lockheed and Verspoor 1989). Distance in-service teacher training has also been implemented in Chile (Chadwick 1986).

Interactive radio. A.I.D. has provided support for interactive radio instruction (IRI) in a number of Latin American countries, including Nicaragua, the Dominican Republic, Honduras, Bolivia, Costa Rica, Belize, and Guatemala. IRI activities have also been financed in other areas of the world such as Thailand, Kenya, Nepal, Papua New Guinea, and Swaziland. IRI is generally viewed as a supplementary technique to be used where teachers lack sufficient knowledge of the subject matter to successfully carry out instruction. English in the Kenya English-as-a-Second-Language program is an example of this use of interactive radio instruction. In addition to this supplementary role, IRI has been used to provide the entire primary school curriculum in the Dominican Republic.

As the name implies, this technology uses a structured technique based on "action." The emphasis is on frequent student responses to the radio lesson, which in turn provides immediate feedback and reinforcement. A series of related segments provide practice with certain concepts over the course of a lesson (generally half an hour long). This practice may be spoken, sung, written, or acted out, with accompanying printed materials.

BOX III-8
Programmed Instruction in *Escuela Nueva*

Challenge. The rugged terrain and low population density in much of rural Colombia created a situation of small dispersed schools with only one teacher in each. Thus, if children were to remain in school to complete primary education, teachers had to be able to work with up to five grades simultaneously. Teachers had to travel from urban centers, often in inclement weather, which resulted in delays or absences and led to children being dismissed without class.

Approach. Programmed learning was adopted as a means to enable students to work in small groups independently of the teacher as much as possible. A curriculum with programmed student guides, organized to allow flexible promotion, was developed. It is simple and sequential with an emphasis on problem-solving skills.

Implementation. Student guides and teacher manuals were developed through local Colombian institutions that had experience working with multi-grade schools. In the initial stage, guides were distributed to project schools in mimeographed form, so that they would be available in the schools when teacher training took place. In addition to the guides, a 100-book library was assembled for each school. This was accomplished through donations and special rates negotiated with Colombian publishing houses.

Outcomes. A national evaluation of *Escuela Nueva* found that children in the program, when compared to students in traditional rural schools, generally performed better in Spanish and mathematics and had higher self-concept. Classroom observation confirmed the emphasis on small-group work: children were engaged in this type of activity in 72 percent of the observations, compared to traditional schools where children were engaged in large-group, teacher-centered activities in 73 percent of the observations. When a teacher was absent, children continued to work in the *Escuela Nueva* schools, whereas children were generally sent home in the traditional schools.

The results of evaluations of IRI in those countries where sufficient development of the program had been completed for evaluation to occur show consistent achievement gains over children in traditional programs. Significant gains have been made in mathematics, language, reading, and writing (Radio Learning Project 1990).

The complexity of the technology has generally required international technical assistance in the development phase. In addition, although IRI has been shown to have relatively low per-student costs, start-up expenses are relatively high. This factor, combined with the potential political uses of the technology, may make decision makers hesitant to invest in the program or to develop it outside of the public school system. However, the success of implementation through the private sector may also be problematic, as illustrated by the Honduras case discussed in Box III-9.

In addition to the need for technical and financial support, IRI faces problems in regard to the distribution and maintenance of radios and the recurrent costs of batteries in areas where electricity is not available. IRI also requires scriptwriters who are culturally attuned to the environment in which the target children live. The interactive nature of the curriculum makes it ideal for the lower grades; it has yet to be tested systematically at higher primary grade levels. And, as shown above, in Latin America where multi-grade classrooms are common, there must be adaptations in IRI's generally grade-specific approach to make this technology useful in those settings.

Care must also be taken that the IRI program is consistent with other ministry of education programs but not duplicative. The Honduras illustration shows that the original mathematics program had to be redefined as mental mathematics in order to complement the mathematics texts being developed under the same USAID project.

The IRI developers suggest a number of ways to help keep the recurrent costs of the program manageable. These include distributing expenses among various ministries, charging users for some of the costs, and encouraging international donor and private sector support. The Honduras project's success in selling the radio mathematics program to Costa Rica suggests another possibility: using the U.S. public broadcasting model and building programming through

BOX III-9
Interactive Radio Instruction in Honduras

Challenge. The Honduran population is dispersed throughout thousands of communities, many of which are tiny and remote. Schools in such communities are cramped, crowded environments staffed by ill-trained teachers. Even with textbooks, providing active, lively, and pedagogically modern instruction is beyond the capability of most teachers.

Approach. Math and language programs for delivery through interactive radio instruction were to be developed to complement and reinforce material presented by teachers. The programs would provide drill and practice for students and enrich the school environment through songs, stories, and learning activities designed to encourage student participation. The program was to be implemented through a private voluntary organization (PVO) to permit the flexibility needed for effective, creative mass media activities.

Implementation. The PVO developed a mental mathematics program with technical assistance from a centrally funded A.I.D. contract to support IRI. The mental mathematics program was developed because the math program originally envisioned was not consistent with the new textbooks. The program used ministry supervisors as sales agents for the radios, which were sold directly to teachers. The PVO was to support the interactive radio program through the purchase of a rotary press; after complaints from the Honduran printing industry of unfair competition, however, this plan was dropped.

Outcomes. The mental math program was highly successful and was used in more than half the country's schools. Children using the program performed significantly better on mathematics tests than children not in the program. Observations showed children actively involved in the radio activities. Because of interference from other classes, however, the program was less effective in multi-grade classrooms. The mental math program was sold to Costa Rica. Because the PVO was not able to make sufficient progress toward self-financing, however, USAID halted the interactive radio program.

grants, product spin-offs such as "Family of Numbers" dolls, and sales of international broadcast rights including technical assistance.

Instructional development and design. Several systems approaches to instructional delivery (i.e., the production of materials and methods) have been tested in developing nations outside of the LAC region. The process generally consists of analysis, design, implementation, evaluation, and revision. The approach is designed to identify learner characteristics and resources, and then produce specific materials and training to meet existing needs. The resulting learning package is subjected to formative evaluation and revised to improve efficiency (Thiagarajan and Pasigna 1988).

Instructional development projects have been conducted in a number of developing countries, primarily in Asia and Africa. They are generally attributed with producing low-cost materials that contribute to student academic gain (Cummings 1986). The lack of trained local personnel and the heavy reliance on multidisciplinary teams that are generally not available even in developed countries have combined with high initial costs to limit the wide-scale use of the approach in developing nations.

The principles of this approach as applied on a micro-scale can be seen most notably in the Guatemalan case study. PRONEBI conducts ongoing formative evaluations of its bilingual curriculum materials and reviews the text of each grade level with teachers prior to production.

Training and Supervising Teachers

Teachers have ultimate responsibility for changing students' behavior in the classroom to promote positive learning gains. The previous training and attitudes of teachers influence the way in which they use textbooks and other technologies. In-service training and support given by supervisors can contribute to the effectiveness of the implementation of innovations in the classroom.

The depiction of teachers as uninterested in their work and profession is generally contradicted by the case studies. The examples of *Escuela Nueva*, where teachers gave up their time to attend microcenters in Colombia, and Honduras, where teachers purchased radios with their own funds, suggest that teachers are interested in acquiring new tools to assist them in their work.

Teachers in Latin America and the Caribbean do, however, face low salaries, poor working conditions, and few opportunities for professional advancement — circumstances that characterize much of the developing world (Lockheed and Verspoor 1989). Such conditions account for a lack of motivation that contributes to poor performance.

The inadequacies in teacher preparation in Latin America are highlighted in a series of classroom ethnographies funded by the International Development Research Center (IDRC) of Canada (Avalos 1986). The research found the classrooms to be drab, authoritarian environments which made children "sad."

Pre-service teacher training. In Latin America, primary teachers are generally prepared for teaching in secondary institutes that specialize in training teachers. Much of this "normal" school training focuses on preparing good professionals. In Latin America, this training may include judgment, ethics, good mental health, creativity, and the like. Thus, courses in philosophy and psychology are often emphasized together with pedagogy.

Donor agencies have made extensive investments in normal schools in the past, through the construction of schools and curriculum reform aimed at increasing emphasis on subject matter and modernizing pedagogical approaches. Such efforts have generally not been tied to other interventions in the primary system, nor have other primary education programs sought out normal school involvement. In Guatemala, for example, the normal schools training bilingual teachers do not use the national bilingual education program's texts in their pedagogy classes, nor do students undertake their practice teaching assignments in the bilingual education program's schools.

Normal school training does not prepare graduates for the different environments in which they will be teaching. Urban, rural, and multi-grade schools require different teaching methodologies, but the normal school curricula seldom deal with these variations. Little preparation is given in the development of instructional materials or in

classroom management when dealing with large classes or multi-grade situations. Practice teaching, if given at all, often consists of observations in demonstration schools. Preparation in content to overcome the paucity of instructional materials that teachers face is also lacking.

Lockheed and Verspoor (1989) suggest improving pre-service training by shifting the general education component of teacher training to general secondary schools and focusing teacher training institutes on pedagogical skills that include practice classroom teaching. There should also be an effort made to tie pre-service training, especially when funded by donor agencies, to other interventions being funded by the same agency.

There is also the problem of the external efficiency of normal school systems in Latin America. Normal schools graduate more potential teachers than can be absorbed into the primary school system. In Honduras, for example, there were 18,817 normal school graduates between 1983 and 1988, but only 9,900 available teaching positions (USAID/Honduras 1989). In Guatemala, 25,000 normal school graduates have not found teaching positions.

An official competitive process exists for acquiring a teaching position in most LAC countries. It is, however, often influenced by political considerations or financial pay-offs to retiring teachers that have little to do with candidate quality. Thus, primary schools may be staffed with unqualified or underqualified teachers, while superior candidates are unemployed or enter other occupations.

In-service teacher support and training. For teachers already in the work force, adequate salaries, opportunities for professional advancement, performance incentives, as well as improved working conditions through instructional aids and strengthened supervision and support have been identified as necessary steps for upgrading the teaching force (Lockheed and Verspoor 1989). The authors recognize, however, that with the expansion of the teaching force in the last two decades in developing countries together with the percentage of government recurrent expenditures in primary education already allotted to teachers' salaries (generally above 90 percent in poor countries), there is little margin for monetary improvement. This is especially true given international donor agencies' reluctance to support salary expenditures. The one example among the case studies of an attempt to provide bonuses for performance is that of Haiti. This effort was quickly seen as a salary supplement and thus was distributed to all teachers (Tietjen 1990).

In-service teacher training is used as a means to overcome the defects of pre-service training and to build mastery of new interventions. Often, in-service training is supplied through a trickle-down strategy in which central-level trainers provide workshops to regional personnel such as supervisors who return to their regions and train school principals or master teachers. These individuals, in turn, train their colleagues in the schools. Difficulties with this approach include a lack of direct contact with the realities of the schools on the part of the training developers; concentration on the transfer of knowledge and skills that ignores training the regional and local trainers in training techniques; and a lack of follow-up on the training to make local adaptations.

A second approach is that of a series of training sessions conducted as short-term residency programs. In Colombia, the removal of teachers from their local environments for training was seen as a motivating factor in showing rural teachers that they are valued by the Ministry of Education and thereby in winning their collaboration in creating a "New School." Creating incentives was also one of the goals of the Haiti project's teacher training program. As Box III-10 illustrates, the teacher training program also had the objectives of overcoming pre-service deficiencies and lessening teacher isolation.

With the exception of the Haiti project, newsletters, distance education, and in-service programs were not part of the project design of any of the cases under study. Many *Escuela Nueva* teachers, however, take university courses through correspondence in Colombia. Distance education is seen as a cost-effective approach to upgrading teaching skills and will form a part of the new USAID/Guatemala Basic Education Strengthening Project.

Enhancing teachers' instructional approaches is, of course, fundamental to improved student learning. Lockheed and Verspoor (1989) have argued convincingly from research in developing

BOX III-10
In-Service Training in Haiti

Challenge. Haitian primary school teachers in the private sector are poorly trained and lack basic competencies in both academic subject content and pedagogy. They work in isolated schools with few material resources and have little opportunity for interaction with other teachers. Low literacy levels make printed support materials alone problematic.

Approach. The project developed annual workshops geared to applied learning and skills that are easily replicable in the classroom. The workshops incorporate team-building into training to strengthen local contacts. Supplementary materials are provided to build on the materials and concepts presented in the workshops.

Implementation. Training is highly interactive and participatory using group-learning and team-building techniques. Classroom situations are simulated using local children. Teachers receive newsletters, and project field monitors visit the schools monthly to walk the teachers through the use of materials presented in the newsletters.

Outcomes. The project reports a 30 percent increase in the number of teachers achieving minimum competency in mathematics, and students achieved significant gains in French and Creole. Teachers not in the project are requesting access to the training program, and teachers who have been trained are receiving offers of higher-paying jobs.

countries that time to practice with subject matter is highly related to achievement gains, as is active student participation in the classroom. Thus, the organization of learning experiences to encourage such opportunities, through teacher training or the provision of materials that develop alternate methodologies to the teacher-centered lecture format prevalent in Latin America, is an important intervention.

Several methodologies that have been employed in developing countries to assist teachers in moving away from a focus on students' memorization of factual material include programmed teaching, small-group interaction, and individualized instruction (Thiagarajan and Pasigna 1988). Because these are interventions that might be presented in conjunction with either content or delivery in an in-service training program, they are reviewed here.

Programmed teaching is a variation of programmed instruction discussed earlier. It employs simple, straightforward teaching modules that lead the teacher through lesson content, student response elicitation, and correction or feedback. The method has been used successfully in several primary school settings in Asia (Pasigna 1979; Claveria 1982; Dilts and Mudjiman 1984).

Peer-teaching or tutoring, in which upper-grade children instruct younger ones, has been used to provide greater individual practice to children in developing countries. Peer-teaching has been employed in the Philippines (Cummings 1986) and forms part of the approach used in the *Escuela Nueva* program. In *Escuela Nueva*, the tutor is not necessarily an upper-grade child but may be a reading or math group leader from the same class or grade level.

Small-group learning activities, in which students work cooperatively on a task with programmed learning materials, games, or some other learning aid, are also seen as effective in maintaining motivation and achieving high levels of instructional efficiency (Thiagarajan and Pasigna 1988). This technique is the basis for many of the learning activities of *Escuela Nueva*. Children work together by subject matter at a table assigned to a certain grade level. Different children may be involved in a given activity as the program allows students to move through subject matter at their own pace. Thus, a third grader in most subjects may work at the fourth grade table during small-group mathematics activities.

Individualized instructional methods provide comprehensive learning systems in which students select materials appropriate to their own abilities and experience. Although this methodology is seen as highly efficient in terms of providing practice for individual learners, its cost makes it impractical for developing nations still attempting to provide access to large percentages of their school-age populations.

An additional approach that is not instructional in nature but which aids teachers in providing greater time on task to students and gives students practice in problem resolution is a student government program. Teachers view

this aspect of *Escuela Nueva* as one of the principal reasons for the program's success (Rojas, C. 1990). All of the students in each class are elected to committees that are responsible for school maintenance, distribution of materials, and the like, as well as for decisions about school functioning. Teachers see the accomplishment of the committees' tasks as creating a sense of responsibility in students and making classroom management more efficient, thereby increasing time spent on subject matter.

Developing Achievement Testing

Testing is important for the monitoring of student achievement. Achievement testing can improve classroom pedagogy, provide standardized criteria for choosing those who qualify for further training, produce tangible criteria to be used to hold a system accountable, and aid in monitoring the impact of particular interventions (Lockheed and Verspoor 1989).

Lockheed and Verspoor argue that a central testing agency, sufficiently staffed to provide testing extension services to schools and school districts, can provide important support for school improvement programs. Experience with testing, however, has suggested that developing a national system is expensive and time-consuming. Refining instruments that will be standardized reflections of national curriculum objectives requires a major investment. There are additional expenses of administration and of making the instruments "teacher proof" since teachers will tend to teach for the tests or assist children in the test environment. In addition, teachers must be trained to use tests as a diagnostic tool.

It is vital, however, to have measures of student performance if the questions of quality and efficiency of programs are to be answered. Although no country in Latin America has yet created a national testing agency, all are involved in test development. Prominent educators met in Santo Domingo in 1988 to discuss issues in educational evaluation and called for national educational evaluation systems to be created in each participating country (Memoria del Segundo Congreso 1988).

In order to reduce the costs of test development, the existing work of these groups can be used to monitor donor-assisted educational interventions. Part of the monitoring effort can help to refine the instruments while addressing questions of quality and efficiency for specific interventions.

Related to testing is the question of applied research. Many of the issues of quality, such as the classroom experiences of girls, the availability and use of instructional materials, or ways of increasing teacher motivation, must be studied through specialized research. While it may be difficult to build the capability for this type of research in a ministry of education, as suggested by the Honduras case, each of the case studies shows that capable specialized institutions such as universities or consulting and research firms exist throughout the region. These organizations can carry out commissioned research for the ministry.

Conclusions and Recommendations

Conclusions — Health and Nutrition. Health and nutrition must be considered in attempting to improve educational quality. Poor nutrition will contribute to poor cognitive development, decreased attention, and lower aerobic ability. Thus, a minimum level of health and nutrition must be reached if children are to take full advantage of such interventions as active child-centered learning that promote educational quality.

Malnutrition among schoolchildren may be underestimated if both stunting and wasting are not considered. Similarly, the at-risk population is likely to become malnourished in a declining economic environment such as that which has characterized much of the LAC region in recent years.

Recommendations. Interventions in educational quality should be combined with nutritional enhancement such as school lunch programs, where appropriate, to ensure that children can take full advantage of improved educational delivery. The school offers an environment where nutrition efforts can be maximized; therefore, greater integration of donor-assisted child survival efforts with programs in basic education is needed. In addition, teachers should play a role in the detection of nutritional deficiencies through training in taking height- and weight-by-age measurements.

Conclusions — School Renovation and Maintenance. School maintenance and renovation are important, especially in poor countries, to ensure that minimum conditions to take advantage of material inputs related to quality are present in a school. A school renovation component can also serve as a catalyst to increase community involvement with a school.

Involvement of local communities can be an effective means of implementing school construction and maintenance activities. Grants directly to the schools can stimulate community involvement. Such decentralization also supports A.I.D.'s development goals: it is democratic in that more people become involved in the decision-making process, and, to the extent that the community members identify the school as their own, it enhances the resource base through monetary or in-kind contributions.

Recommendations. School physical conditions must be assessed to ensure that minimum conditions exist to implement interventions to improve educational quality in the classroom. Where appropriate, interventions should include efforts to stimulate community involvement in the effort.

Conclusions — Instructional Materials and Technologies. The provision of textbooks has been the most common approach to improving educational quality in the LAC region. There has generally been a correlation between the provision of texts and student learning gains. It is unclear, however, what factors are related to such gains. Increased learning may be a result of providing any kind of instructional input beyond the teacher and a blackboard. Texts may provide additional models for students even when they use traditional teacher-centered approaches and are employed as a substitute for the blackboard.

Textbook design and production have presented difficulties because of the lack of experience of personnel in text design and the lack of modern production technology. Delays may cause textbooks not to be ready at the beginning of a school year or not allow for teachers to be trained in the use of the books. Logistical problems in distribution can add to delays.

Teachers will make an effort to obtain and use instructional materials that they think will help them in the classroom. However, they will tend to teach in the way that they have been taught. Since most rural educators have had little experience with textbooks or other instructional materials, they are unlikely to use such items in innovative ways. Thus, teachers guides and student texts must be made intuitive to encourage their use.

Innovative technologies such as programmed learning, computer-aided instruction, and interactive radio instruction have been used at least on a pilot basis in the region. While each has been relatively successful, only programmed learning has been carried out at a low cost. Although radio has the potential to generate low per-student costs if used on a national basis, LAC countries that to date have used this technology have faced sustainability problems. In addition, radio programs have not always been designed to complement other interventions.

Recommendations. Personal computers with word processing and desktop publishing software will greatly enhance the efficiency of activities that require extensive editing such as textbook production or radio script development. In the design of a project including these activities, procedures should be specified for obtaining required software and hardware and for providing training in their use early in project implementation.

Where both textbooks and interactive radio interventions are being implemented, it is important that the two complement each other. This type of integration is likely to require a greater investment than adaptation of existing materials and will also require close coordination among implementing organizations.

Teachers are willing to purchase instructional aids such as newspapers and radios when they feel these aids will help them in the classroom. In order to encourage this practice, some of the costs of such materials can be subsidized by private sector firms through advertising in the printed materials or during airtime.

Conclusions — Teacher Training. The teacher is a major factor in improving educational quality in Latin America. The poor quality and lack of relevance of teacher training institutes, combined with patronage systems that may rule

against new teachers finding jobs in education, suggest that emphasis be placed on motivating teachers already in the work force to remain in the basic education system and on upgrading their skills.

Teachers, at least in the cases studied are not disinterested and unmotivated. Rather, they are frustrated and discouraged by a lack of infrastructure, few instructional aids, and low salaries. They can be motivated through the provision of training and instructional materials that lead to visible improvement in student outcomes. Initial increased motivation through the provision of relevant in-service training and instructional materials can be maintained through the implementation of support systems that allow teachers to periodically exchange ideas and experiences.

The emphasis on children taking charge of their learning through student government and individual or group programmed learning activities can promote active learning and democratic practices as well as improve the morale of teachers. Students take responsibility for their learning and view the school as their own. Thus, they can carry out learning activities even in the absence of a teacher.

As an education program expands in a developing country, support personnel are likely to be spread thin in order to keep down recurrent costs. Schools that have been in the program longer may receive less support once they are perceived as successfully implementing the program.

Recommendations. Given the need to motivate teachers and the lag time inherent in the development and production of texts, the activities of a teacher training unit must be broader than simply training teachers in the use of the textbooks and teachers guides. These activities could include motivating teachers through national competitions and the development of supplementary instructional materials. In addition, schools should be studied to develop training sessions on appropriate classroom management techniques to complement the training given in using the texts.

Efforts at school improvement should include the involvement of students in classroom administration to assist the teacher and provide students with experience in democratic processes and decision making.

Conclusion — Achievement Testing. Achievement testing is a vital factor in monitoring the implementation of educational interventions aimed at improving instructional delivery. On a national level, however, the development of a national testing system is extremely expensive and time-consuming and no LAC country has as yet developed an adequate national testing system.

Recommendation. Testing systems must be developed in a phased manner, building on the efforts to monitor the progress of donor-assisted interventions. This requires long-term planning to build capacity in test development and diagnosis at the local level and test analysis and feedback at the national level.

Increasing Efficiency

As has been discussed, efficiency is the relationship between inputs and outputs that will achieve the desired objectives at a minimum cost. The principal output of an efficient basic education system is a primary school graduate who completes his or her schooling in the prescribed number of years. Improvement of efficiency depends on the ability of children to take advantage of educational opportunities and the value placed on education by the children's families, as well as on the creation of learning situations that offer children a fair chance to make normal progress from grade to grade and to make use of their learning experiences in their daily life. It requires, in addition, an administrative infrastructure that can deliver and sustain relevant educational interventions and that can build on investments such as in-service teacher training by keeping trained personnel in the basic education system.

Improving the Management of Education Systems

Improvement in quality and ultimately in efficiency at the classroom level is dependent on sound management structures that ensure logistical support. If ministries and regional offices do not have the capability to supply human and physical resources to schools, or to assist communities in supporting educational reform, it is unlikely that classroom interven-

tions to improve quality and thereby lower repetition and dropout rates will be effective.

As will be discussed in greater detail in the following section on administration of education, education managers in LAC ministries are generally unprepared to manage the innovations that form projects. Objectives for project interventions are not set, nor are personnel management goals. Since these two processes are closely related, if measurable objectives are not set for projects, it is likely that they will not be set for employees. Without such objectives, performance cannot be evaluated on either an individual or a project basis.

This is not entirely the fault of the managers. Confused and contradictory legal foundations often impede reform, regulation, and clear lines of authority in LAC ministries of education. In addition, the structure of most ministries does not allow for the integration and coordination of activities across functional units. Managerial processes and organizational operations are ill-defined, and management tools such as job descriptions and systematic memoranda are often nonexistent. Mid-level managers are often
[illegible]bers of the teaching corps who have been noted for long service or loyalty to a political
[illegible]y, hence they lack the training, education, experience to effectively direct the operations
[illegible]inistry functional units.

Efficiency is defined as the relationship of inputs to outputs. Inputs to education systems — for example, teachers, desks, or textbooks — can be expressed in monetary terms. The cost of desks and textbooks can be measured by their prices, and the cost of teachers by their salaries. Systems that track inputs generally use money as their main measure; these are financial management systems.

In the private sector, it is relatively easy to express outputs in monetary terms, too; thus, outputs and inputs can be measured in the same terms. Measures such as revenue and profit are accurate reflections of output in business. Accordingly, the financial management system is the most important ongoing system in a business, and accountants are the most important system designers and operators.

The same is not true of the outputs of education systems. The outputs are difficult to express in monetary terms. The value of literacy in a single case, or the ability to perform simple calculations, is difficult to relate to financial value. But focus on the output or result side of the management system could greatly enhance ministry administration. Reasonably accurate systems exist for accounting for inputs and tracking them by cost, although these systems often need to be modernized and improved and need to be more strongly and formally tied to the output systems.

Improving output management could be accomplished in two interrelated ways. First, attention needs to be given to the operations that convert the inputs to outputs. Here one important process is communication with and direction of people on a day-to-day basis, especially during project implementation. Another important aspect is the refinement and strengthening of administrative operations themselves, subsystems of the organization such as personnel or planning. Second, the tracking and reporting of discrete outputs need to be targeted for the sake of both effectiveness and, later when related to costs, efficiency.

Management-by-objectives (MBO) systems have been useful in the LAC region to strengthen the overall management and administration of central ministries. The use of participatory systems such as MBO encourages the development of democratic values in a management cadre. MBO is distinguished by the setting and tracking of goals in face-to-face meetings. Thus, it encourages communication, motivation, team-building, coordination, and planning. These systems are especially useful in environments where managerial outputs change from year to year and where there is a short-term project orientation. Several organizations in the LAC region specialize in MBO training, and such training could be an important first step for improving efficiency.

In addition, to assist in day-to-day management, decision making, and routinization of operation and planning, a Performance Management System should be installed. This is traditionally thought of as a Management Information System (MIS) and would provide the basis for developing and routinizing nationwide output measures and evaluating progress toward organizational objectives to reach national goals. These measures would eventually be tied to the financial management system.

Enhancing Quality of Teaching and Learning

Whereas the outcome of education quality interventions depends to some extent on the efficiency of overall administrative systems, the reverse is also true in the case of efficiency at the classroom level. Reducing repetition and dropout rates is directly related to the ability of children to successfully learn the tasks required for promotion from one grade to the next together with their age mates and the relevance of the tasks learned to life outside the school.

Most teachers in the LAC region use a teacher-centered lecture approach for instructional delivery. Schiefelbein (1991) suggests that this approach leads to teaching at the level of the average student in the classroom and causes teachers to fail those below the perceived norm; these are likely to be the students who are different because of poverty, gender, ethnicity, or physical handicaps. Thus, interventions that assist teachers to improve the equity of their instruction are likely to lead to greater internal efficiency. If such approaches are relevant to the students' daily life and future career opportunities, they have the possibility to improve the external efficiency of the school, too.

Both the teaching methods and instructional materials that assist children in learning appropriate grade-level tasks have been discussed in detail in the sections of this report related to the goals of improving equity and the quality of educational delivery. It suffices here to summarize the objectives of such interventions as follows:

- promote health and nutritional well-being;
- promote active, relevant learning opportunities through investigation and discovery;
- employ real-life situations in the classroom;
- assist teachers in recognizing individual differences and adjusting to different learning abilities;
- allow greater time on task and practice;
- individualize learning opportunities;
- involve students and community members in school government and decision making; and
- provide professional advancement opportunities for teachers.

Reducing Dropout and Repetition Rates

It is likely that if the quality of teaching and learning is improved, dropout and repetition rates will decline. There are, however, several structural accommodations that can be made to promote school attendance and thus increase time spent in school. These include alterations in the school schedule, modular learning, and multi-grade schools.

Several approaches to scheduling adjustments have been tried in Latin America. One approach is changing the schedule of vacations to allow children to be out of school during planting and harvesting seasons. This approach has, at times, met with opposition from teachers unions not willing to give up traditional vacation dates. A second approach, used in agricultural regions of southern Brazil, is to extend the length of the school day and have alternate grades attend on alternate days. This has the advantage of always leaving older children in the higher grades at home to look after younger children (for example, fifth graders with first and third graders on Monday, Wednesday, and Friday) and to assist with domestic chores. Widespread use may again be hampered by teachers unions, which would resist teaching additional hours for no additional remuneration.

Modular learning offers a student the opportunity to complete given modules in a school year. This procedure, used as part of the *Escuela Nueva* program, gives students credit for successfully completed modules. Thus, if economic responsibilities force a temporary withdrawal from classes, the student would be required to complete only those modules not finished previously in order to advance to the next grade.

Multi-grade schools or classrooms are a means of extending the learning opportunities for children to complete a country's basic education program. Students can undertake all five or six years of primary school with one or two teachers providing instruction to a number of grades. This approach can be facilitated through training

teachers in classroom management and developing materials that allow programmed learning, as was shown previously in the discussion of the *Escuela Nueva* program.

Improving Status of Teachers

The importance of motivating teachers and improving their morale was discussed in the previous section on improving the quality of education delivery. The question of salaries and maintaining teachers in the work force also has important efficiency considerations. If investments made to improve instructional delivery are to have a payoff, the teachers whose skills were upgraded through such investments must be kept in the education system. With the current economic crisis in the LAC region, teachers are likely to remain in their profession because alternative employment possibilities are lacking. Even small increases in teachers' salaries can have major implications on the total education budget, because the bulk of the education inistry's budget typically goes for salaries. ius, in a recovering economy, ministries might ot be able to respond as quickly as other ctors, and teachers might seek other employent options.

h as A.I.D. are constrained from pplements to teachers' salaries ject funds. Providing merit pay the Haiti project was not successful chers viewed such increases as lements and the bonuses had to be d. Strategies such as non-project argeted for teachers' salaries may romise of providing the incentive aintain teachers in the system after ining.

her types of incentives for teachers include ls such as instructional materials to do their s more effectively and better pedagogical pport systems through either supervision or r professional encounters, all discussed in vious sections. Media campaigns aimed at proving the image of the teaching profession an additional possibility; however, there is le evidence of the success of this type of social rketing effort. A final strategy requires local mmunity involvement in the quality of schools d a commitment on the part of local communis to pay teachers' salaries and be responsible the quality of teachers' work. The general verty of the local communities in the region that are most in need of greater equity and improved quality in their schools, combined with the centralized nature of many ministries, makes this an option only for the long term.

Conclusions and Recommendations

Conclusions. Strengthening the capacity of a ministry to manage and implement projects is a first step in improving efficiency. This must be accomplished through on-the-job or in-service training as ministries lack the human resources to allow managerial personnel to leave for extended periods of training. A management-by-objectives system, installed by specialists within the region through on-site workshops, offers a viable strategy to achieve such capacity.

This may need to be accompanied by policy dialogue on issues such as legal reforms to define lines of authority and procedures for hiring, employee rights, and grievance.

Once ministries have developed improved managerial capacity, operating systems for tracking outputs can be improved. The focus will be on key operating processes or subsystems such as personnel or payroll that have a direct relationship to financial reporting. The objective will be to increase the speed, accuracy, range, and comparability of data collected.

Educational efficiency, in terms of greater achievement and reduced repetition and dropout rates, will be increased by improving the equity of instruction and the quality of instructional delivery so that each child has a fair chance to learn the skills required for promotion to the next grade level. Adjustments in scheduling of classes and instructional format such as modular units and multi-grade schools can also enhance children's opportunities to complete primary school.

The lack of flexibility in the ministry of education budget is likely to drive underpaid teachers who have received training from the teaching ranks, thereby squandering the investment made to improve educational delivery. Strategies must be sought to keep teachers in the system and thereby maximize the investment made in improving educational quality through teacher training.

Recommendations. Donors should include analysis of the organizational capacity of the ministry of education as part of the design of any project or program. Where deficiencies are found, on-the-job training should be a component of the project to ensure capability to support classroom-level interventions.

Management-by-objectives techniques should be examined for their appropriateness in institutional capacity-building. Such techniques have the advantage of increasing communication among managers, and expertise exists within the region to carry out such training.

Efforts to raise efficiency in the classroom should focus on dealing with individual differences among students; promoting active, relevant learning opportunities through investigation and discovery; and instilling democratic practices through student decision making in school government. Donors should also explore with host country officials the feasibility of modifying school schedules to offer children who must be absent for economic reasons at certain times a better chance of completing each school year.

Incentives are needed to keep teachers who have received training for improved instructional delivery in the education system. Donors should explore the feasibility of non-project assistance targeted to salary supplements for teachers and of media campaigns to improve the image of the teaching profession as mechanisms for keeping teachers in the teaching profession.

Improving Administration of Education

This section discusses the administration of education from several perspectives. First, institutional capability and experience in institution-building as they relate to implementation are reviewed. This is linked to decision-support mechanisms for management. Given the increasing emphasis in the development community on local empowerment and parental involvement in children's schooling, information on perceived economic benefits from schooling by parents is also examined, as is the experience with building positive attitudes toward education in general or toward specific interventions through information campaigns or social marketing efforts.

Strengthening Ministries of Education

Ministries of education in many developing countries are enormous bureaucracies carrying out administrative actions such as procurement of commodities, budget planning, personnel management, contracting, supervision of field activities, and public information in traditional and often inefficient ways. As a result, projects and programs experience delays, and resources do not reach the local level. Information is not available with which to make decisions or to coordinate the activities of diverse divisions across funding by multiple international donors.

Many of the difficulties in achieving efficiency in education administration are related to the lack of management skills among central-, regional-, and local-level administrators. Rapid expansion of the education system in most developing countries has spread thin the available management resources. Institutes that train managers are often geared to the private sector and rarely admit those from the fields of education (Lockheed and Verspoor 1989).

As shown by the case studies, technical skills may also be lacking. In the case of Honduras, for example, individuals with subject matter knowledge were available but not with experience in textbook development. Thus, they had to work closely with international specialists to learn how to develop the textbooks. Similarly, in Guatemala, because the textbook teams were of Mayan descent, they understood the culture with which they were working and were able to reflect it in the texts. But because they lacked experience in early childhood education, the texts are too difficult for young children to use effectively.

Donor response to developing managerial skills has generally been to create international training programs. The difficulty with such programs is that they often take the most capable individuals away from a ministry for extended periods of time. This argues for local training institutes that prepare managers in specialized fields or for technical assistance to improve administrative skills. Such efforts will require a relatively long time frame and successive interventions, as illustrated by the Brazilian education sector loans (see Box III-11). Training at a national teachers institute also helped the Brazilian teachers implement the reforms of the loans at the local level.

Internationally, Lockheed and Verspoor (1989) cite the National Institute of Educational Management in Malaysia as a successful example of a similar program. This institute trains managers from different levels of the education system together, thus facilitating communication. The institute has enrolled increased numbers of participants each year since it opened in 1985 and now serves more than double the number of managers envisioned.

Within a ministry, there may be a need to improve organizational structure by defining functional responsibilities. The Honduras project has tried to increase management skill and ensure sustainability by implementing the project through existing units of the ministry of education and by using short-term technical assistance to train personnel. As mentioned, the Guatemala bilingual education project was implemented through a special management unit attached to the rural education division of the ministry, and the Colombia project was implemented through the planning division of the ministry. Thus, in each of these projects, attempts at institution-building were at the individual manager and unit level. There was no attempt to improve overall organizational structure; rather, the projects provided training and other resources to strengthen just those units implementing project interventions.

The exceptions are the Haiti project, which provided technical assistance that allowed for the formation of a new private sector coordinating organization, and the management information system (MIS) developed as part of the Honduras project. The MIS component will be for the general strengthening of the ministry and will be complemented by testing and applied research activities.

BOX III-11
Technical Assistance in Brazilian School Reform

Challenge. Prior to the 1960s, Brazil was a largely agricultural country with a traditional school system. With the economic boom and diversification of the 1960s, characterized as the "Brazilian economic miracle," it was felt that a modern school system to meet the needs of an industrializing society was required. Such a reform required trained planners and managers at the central, regional, and local levels.

pproach. Two sector loans were designed to fit into the razilian national education plan. The first supported the evelopment of middle schools, which broke away from the aditional academic curriculum to include training in practical ts. The second provided for a varied program of interven- ons that supported a national education reform begun in 1971.

Implementation. Both loans were administered by a Brazilian technical assistance unit for planning that had been established and supplied with international technical assistance through donor-assisted projects in the 1960s. This unit had provided assistance to most of the state governments at the time of the loans. State governments were required to submit plans for loan funds that included time-phased implementation methods for human and material resource development.

Outcomes. State education systems were strengthened in their capacity to plan. The national planning unit was regarded as so successful that it became a permanent agency of the Ministry of Education and Culture. The number of teachers tripled, enrollments grew from 54 to 86 percent of the school-age population, and curricula for all grades were redesigned during the loan period.

Developing Management Information Systems

Management Information Systems (MIS) provide administrators with analytic tools to streamline administrative functions. These tools include successful models for reconfiguring organizational structure, computerized decision modeling to determine policy options, and computerized record filing and retrieval to allow rapid transactions and establish a database with which to make projections for long-term planning and to provide the information donor agencies need for their reporting requirements.

Establishing an MIS in a developing country involves many of the same problems that were originally faced in developing such systems in the United States. Data collection is done manually, so there is a tendency to rely on aggregate figures provided by the teacher or principal at the classroom or school level. Tabulation is also done manually, resulting in six months to a year for processing and an inability to respond rapidly to

special information requests. Thus, data are generally not available when needed for decision making or planning.

When computers are provided, the available human resources with expertise in their use are normally software or hardware specialists rather than information or management specialists. These individuals may not have the appropriate skills to determine the information requirements and uses of a ministry of education. They can, however, prepare the computer models and equipment needed, once an educational management specialist has assisted the ministry in determining its information needs.

An additional difficulty is that international donors may view an implementing agency's information needs from a different perspective than the agency itself. A primary concern of most ministries is personnel transactions, whereas the donor may be more concerned with long-range planning. This situation is exacerbated by the fact that donor agencies usually have technical personnel who are specialists in education but not in computer technology. This increases the difficulty of monitoring interventions in MIS development or of engaging in dialogue about the necessary levels of intervention.

Personnel administration is generally a manual system maintained at the central level. Thus, teachers often must travel to a capital city to resolve problems, seek salary scale increases, or apply for transfers or leave. This takes instructional time away from students because such transactions must be conducted during ministry business hours.

Supporting Decentralization of Certain Functions

Although there is considerable variation in the degree of centralization in educational systems in Latin America and the Caribbean, most have centralized decision-making structures. A.I.D. has generally supported decentralization policies in the region, especially when they invoke community participation in educational planning. As shown in the Colombian *Escuela Nueva* case, the program worked with departments in implementing the planned interventions. The program did not become institutionalized, however, until there was sufficient support for it within the Ministry of Education. In addition, the program still suffers from lack of infrastructure in some regions (Rojas, C. 1990).

The Brazilian education sector loans also worked with state governments. Extensive assistance in planning had to be given at the state and local levels to prepare human resources to plan and monitor interventions. In Guatemala, bilingual supervisors of the PRONEBI program have been incorporated into the regional decentralization of education efforts.

Winkler (1988) identified three broad areas for justifying educational decentralization efforts: educational finance, efficiency and effectiveness, and redistribution of political power. Financial decentralization is seen as a strategy for continuing to expand educational opportunities in the face of the severe fiscal constraints suffered by most developing countries. It shifts the burden of funds for schooling to local governments or communities. Chile's municipalization of education in 1980, in which responsibility for both primary and secondary education was shifted to the municipal level, is an example of this approach.

Efficiency strategies argue that costs can be lowered by allowing decision making to take place close at hand rather than in a distant capital. This strategy also recognizes local price differences and leverage possibilities that will make funds go farther, as was the case in Jamaica. Effectiveness arguments suggest that administration and accountability can be improved if schools are made more responsive to parents and local communities.

Democratization or the inclusion of marginal groups is an additional rationale for decentralization. The regionalization and nucleariization of education in Peru in the early 1970s was an effort to increase the participation of indigenous groups in schooling and educational decision making. It has been argued that decentralization can also be used to increase the power of the central government. The example cited is that of Mexico, where regionalization decreased the power of the teachers unions by transferring salary negotiations to the state government level (Winkler 1988).

Financing decentralization efforts is a major impediment to implementation. If regional or

local authorities must still rely on central resources, decision making is in effect curtailed, as occurred in the Peruvian case. The support of local interest groups is also critical to success. Where teachers, ministry officials, or local officials are not included in the planning process, they are likely to oppose changes.

Political instability can also influence decentralization efforts. In Venezuela, although support for educational decentralization was constant, frequent changes in the Ministry of Education kept the policy from being clearly defined.

Rondinelli et al. (1984) argued that to overcome such constraints, a plan of action containing at least four steps is needed. The plan must concentrate initially on small-scale activities that have popular support; gradually expand the scope as local managerial and financial capability increase; encourage central government support rather than control; and train local and central administrators to value shared decision-making responsibility. The Brazilian case best illustrates these principles: initial training focused on the local levels, and a climate was created for shared decision making which reached fruition with the sector loans.

Creating Supervision Systems That Support Teachers

Pedagogical supervision can be a positive influence in motivating teachers and helping them master new materials or approaches to instructional delivery. Supervision and support in Latin America, however, have generally been seen as administrative rather than pedagogic functions. Often supervisory positions are awarded for administrative skills, longevity, or political connections rather than pedagogical merit. Supervisors are responsible for initiating requests to hire, transfer, exchange, or dismiss teachers and for providing statistical and payroll information. Therefore, they generally have little time for giving pedagogical advice.

The case studies of Honduras, Guatemala, and Colombia suggest that supervisors can be made responsive to teachers' pedagogical needs through training that gives the supervisor a stake in the new intervention. The positive attitudes and pedagogical knowledge created through training can be enhanced by incentives such as making supervisors agents for the intervention, as in the case of interactive radio in Honduras, or through the provision of vehicles, which in Guatemala enabled bilingual supervisors to reach isolated schools. If training and vehicle support are not generalized throughout the supervisory system, however, the result can be charges of favoritism.

Involving supervisors in the training of teachers in the use of an intervention, as was done in Colombia, Honduras, and Guatemala, can also help build rapport with local teachers. The training of supervisors will not necessarily prepare them to train teachers, in turn, in specific pedagogical techniques. As shown in Guatemala, supervisors developed innovative child-centered techniques with the bilingual teachers, but these techniques did not involve the textbooks that were the principal intervention (Chesterfield and Seeley 1987).

Clustering of schools is another means of improving school supervision. In such arrangements, a core school services a group of isolated schools in supervision, staff development, and provision of materials. The *Escuela Nueva* schools supported by this type of arrangement generally received more frequent assistance than those not involved in a nuclear situation (Rojas, C. 1990).

Improving School Organization and Capabilities of Principals

In addition to central-level administration and supervision, the administration of individual schools is key in the implementation of interventions. School principals, especially in rural areas with one- or two-teacher schools, are generally promoted from the teacher ranks and do not have administrative training. They continue to have teaching duties, yet are also expected to process records, initiate personnel actions, provide in-service training for teachers, and interact with the community. Thus, they must be trained in school management and be committed to an intervention if it is to succeed.

In the *Escuela Nueva* program, it was found that the most effective schools were those where the principal took an active role in training teachers and interacting with the community (Rojas, C. 1990). Similar results are found in the Haiti program, where school organization was the best single predictor of successful teacher perfor-

mance. This is consistent with most research on school management, which finds the principal to be a key factor in school improvement. The in-service training supplied to the principals as part of the *Escuela Nueva* and Haiti programs is seen as one reason for the success of the interventions.

Building Support for Education on Part of Parents and Communities

Recent studies in Central America on the perceived benefits of schooling suggest that parents are in favor of schooling for their children (Richards 1988; Chavez 1989). Parents generally see education in the concrete terms of reading, writing, or speaking (a second language), whereas teachers tend to see schooling in the more abstract terms of "good citizenship" or "critical thinking." The positive attitudes of parents can be lost through the behavior of "poor or bad" teachers, who are viewed as often absent or as not teaching the concrete skills mentioned above.

Some parents see disadvantages to their children remaining in school through the sixth grade. Among such disadvantages are decapitalization of the household economy because of opportunity costs and rural technological illiteracy. Opportunity structures are limited for both boys and girls, which may negate parents' perceptions of economic payoffs from education.

Most parents do not object to the enrollment and matriculation fees they pay. In poor rural areas, however, there is little possibility of parents giving more to the schools than in-kind contributions of labor. The case studies show that parents are willing to support their children's schooling when provided with tools that allow them greater involvement. The training program in Jamaica provided parents with techniques for raising money and combating vandalism. Teachers' suggestions for involving parents in the functioning of the school and their children's schoolwork served the same purpose in Colombia.

In each case, however, there were reports of negative attitudes on the part of parents to a proposed intervention, generally because the parents did not see the intervention as consistent with their educational objectives for their children. Similarly, the potential of a specific educational intervention or program may not be understood by elected officials who use the educational system for political gain or by private sector members who view basic education as having little relationship to their endeavors. The resistance of each of these groups might be overcome through an information or social marketing campaign about the intervention's potential contribution to different segments of society.

Although called for in the evaluations of several of the case studies, information campaigns are uncommon in education. The only example occurred in Honduras where a social marketing campaign, focused on a very specific product, was conducted to promote the use of interactive radio instruction. Even the exhaustive review by Lockheed and Verspoor (1989) cites no examples of the use of social marketing in basic education. Thus, the first widespread attempt at employing this technique in education appears to be the new Basic Education Strengthening Project in Guatemala.

Social marketing is a strategy for changing behavior. The term "social marketing" was first used in 1971 to describe the application of marketing principles and techniques to advance a social cause, idea, or behavior (Kotler and Zaltman 1971). Social marketing has been widely utilized in health promotions such as contraceptives, cancer information, smoking reduction, seatbelt use, and drug and alcohol abuse. A.I.D. has supported social marketing programs in health and population in many areas of the world, and other government agencies have used them extensively in the United States.

Social marketing uses marketing concepts such as market segmentation, consumer research, product concept development and testing, directed communication, facilitation, incentives, and exchange theory to change beliefs, attitudes, values, and social practices (Kotler and Roberto 1989). Thus, while the methodology offers potential for education, it has not been used to promote education interventions in either the United States or Latin America.

Conclusions and Recommendations

Conclusions. The development of capable human resources to administer basic education programs in the public sector at national,

regional, and local levels will require a relatively long time frame and successive interventions that provide training locally.

There must be agreement among ministry of education, USAID, and technical assistance personnel as to the information needs of the ministry prior to project implementation. Although timely computerized statistical analyses are important to international donors for determining investment options in education, such analyses may not be viewed as vital by host country decision makers, who often use other criteria in making decisions. It is important to determine who the audience is for an MIS and how information will be used before developing specifications for the system.

Decentralization efforts have been successful in several Latin American countries. The principal requirement is local control of funding. Personnel and facilities can be regionalized, but dependence on central funding removes decision-making power. Decentralization can create a problem in project monitoring for international donor agencies, which are normally based in capital cities.

The support of an intervention by school principals can be an important factor in teacher motivation and community involvement. This, however, requires training school administrators, preferably through in-service or on-the-job training activities that do not remove them from their duties for extended periods of time.

Parents can be a powerful force in improving school quality. Often, however, they have little interaction with the school and may see little relevance in the education that their children receive.

Recommendations. The development of human resources in administration needs to be made an explicit objective of interventions. Measurable criteria beyond numbers trained should be developed to ensure that administrative skills and decision-making capacity are improved.

In-service training programs for school administrators should be a part of program design. Training should be aimed at helping principals to improve their skills in school management, teacher support, and community interaction.

The lack of understanding of interventions by parents and the indifference sometimes found on the part of government personnel suggest the need for broad communication and information efforts. These should include multi-level campaigns based on social marketing techniques aimed at creating an understanding of the program and winning support of local communities as well as teachers and political groups.

Sustainability and Institutionalization

The question of the sustainability of basic education projects in Latin America and the Caribbean is a difficult one. The relatively high recurrent costs associated with basic education projects, the frequent turnovers in political leadership, and the economic crises resulting from debt-servicing all combine to limit the ability of governments to support interventions once international donor funding has ended.

A number of different strategies have been employed in project design to overcome the external factors that affect sustainability. These include building human resource expertise and commitment, as was done in Brazil, Honduras, and Haiti; developing a pilot project to test interventions and win government commitment, as occurred with the *Escuela Nueva* program in Colombia and the bilingual education program in Guatemala; implementing activities through the private sector, as took place with the interactive radio program in Honduras and the private school effort in Haiti; and building local community participation, as was done in Jamaica.

Strengthening Existing Human Resources

In Brazil, management and planning expertise was built up at both the central and state levels through a series of projects over a fifteen-year period. Thus, the human resources were in place to develop well-conceived plans for creating a new type of middle school (grades 5-8) and implementing other aspects of national education reform through two sector loans. The program also profited from the government's strong commitment. Thus, although worsening economic conditions in the mid-1970s made it difficult to reach target levels in some areas, a trained cadre of managers committed to modern education practices remained in the public sector when USAID terminated its assistance to Brazil.

The Honduras project was also designed to enhance the skills of personnel already within the Ministry of Education and thereby institutionalize textbook production and teacher training skills without increasing costs. This capability would then be available every seven to ten years when new texts were to be developed. In actuality, the use of Ministry of Education permanent resources only occurred with the teacher training unit; other personnel had to be hired on a contract basis. The textbook production personnel are likely to remain in the education system, however, as many were recruited from the university. They also may be able to apply their new skills in other sectors; USAID envisions using them to design take-home school health booklets that would also include math exercises. Thus, these individuals are likely to be available for future textbook design efforts. Their contracting, however, will entail costs for which funds must be allocated.

The printing of the texts will also be a recurrent expenditure that is likely to need international donor support. Project designers hoped that Honduras would see the importance of the texts and begin to reallocate funds from other areas. Such adjustments in policy are usually easier to make when there are data to support the impact of the texts on children's achievement and when the local economy is growing. Honduras' economy at the time of this study was worsening, and, because of delays in establishing the evaluation activity, data on impact of the texts were not available.

The Haiti project has greatly strengthened the administrative capabilities of private school systems, and a recent evaluation found that these organizations are likely to continue despite political instability. The same study reported, however, that maintaining the incentives and classroom-level interventions supported by the project would require international donor assistance for the foreseeable future.

Designing Pilot Projects

Both *Escuela Nueva* and PRONEBI were designed as pilot projects to test an approach to multigrade classroom instruction in the former case and a bilingual curriculum in the latter. The *Escuela Nueva* project, which was implemented in 224 schools in three different departments of Colombia, generated a great deal of favorable publicity. This led to requests from universities in Colombia and from other Ministry projects for the participation of *Escuela Nueva* in their activities. It also encouraged donations from private institutions such as the Coffee Growers Federation.

In addition, as USAID was cutting back its operations in Colombia, the agency worked with the Ministry of Education to present the results of the project to other donors, which resulted in a half million dollar grant from the Inter-American Development Bank (IDB). This grant extended the project to three additional departments and allowed for the revision of the student materials over a two-year period.

A second grant from IDB followed for the years 1980-82 and extended the program to an additional 1,000 schools. In the period 1982-83, a third version of the materials was developed, and the project incorporated another 1,000 schools and was institutionalized within the Ministry. Most of these schools were in the Pacific Coast region of the country. This expansion was financed through funds for rural integrated development, the department secretariats, and UNICEF. Between 1984 and 1987, the *Escuela Nueva* program expanded to 8,000 schools in Colombia with the help of World Bank funding. In 1988, Colombia negotiated a loan from the World Bank to expand the program to all 26,000 rural schools in the country. Thus, although the pilot and subsequent program have been highly successful, *Escuela Nueva* continues to rely on international donor support.

The successful results of the bilingual education pilot project (1979-1984) in Guatemala led to its institutionalization as a program within the Ministry of Education in 1985. With the exception of counterpart funds for teachers' salaries, however, the program is maintained by USAID support. The new USAID Basic Education Strengthening Project will continue to fund the bulk of PRONEBI's activities. The program has yet to build strong support among government officials, who were generally described as indifferent toward PRONEBI.

These results suggest that even in the case of highly successful pilot programs, relatively long time frames may be needed for host governments to assume their funding. Without continued donor support, these programs may be in danger of remaining internal pilot projects or of failing completely.

Incorporating Private Sector Involvement

The Honduras interactive radio experience suggests that reaching self-sufficiency is a difficult process for a private voluntary organization dedicated to educational pursuits. The proper blend of management experience is difficult to achieve because those involved in technical operations will be educators with little background in income-generating activities. Board members, on the other hand, will have a profit motive foremost in their thinking and may not understand the social aspects of the organization's activities. Thus, separation of educational endeavors from those designed for profit is fundamental in assisting the PVO to develop appropriate strategies.

The USAID mission worked with AVANCE, the PVO, to develop a matrix that distinguished income-generating activities from those with social development goals. Those development-related activities that are likely to always need support were identified and the degree to which they could be supported through other types of activities aimed at producing income was determined. AVANCE management personnel stated that from producing 20 percent of the operating capital in 1988, the organization had accounted for 50 percent in 1990. Despite these results, the organization was viewed as not making sufficient progress toward self-sufficiency, and USAID funding was withdrawn.

The Jamaica Primary Education Assistance Project had as a component training principals, teachers, and local community leaders in techniques to deal with vandalism in their schools. Part of this effort included strategies for soliciting support from local businesses. An additional aspect of the program was a pilot program designed by USAID and the Ministry of Education in which grants of $10,000 were given to ten school/community organizations for renovating their schools. Both of these endeavors were successful in that support from local businesses was obtained and renovation funds went farther in the hands of the local community organizations than when disbursed through the Ministry of Education. However, neither endeavor made the schools self-sufficient.

Enhancing Institutionalization

The factors that influence sustainability — including host government policies, management, financial factors, and social as well as environmental conditions — have been recognized by donor agencies. A compendium of donor experience on the sustainability of development programs (AID/PPC 1988) identifies these factors and makes suggestions for dealing with sustainability issues in project design and evaluation. As in the LAC cases above, it is suggested that time frames of ten to fifteen years may be needed to develop sustainable institutions. It is also noted that continuity of funding through follow-up efforts can help sustain interventions during a transition phase and that competent managerial leadership is essential to successful implementation and problem solving. The document also stresses the importance of including sustainability issues in all stages of program monitoring and evaluation.

Institutionalization is one aspect of sustainability. At the national level, it relates to decisions that will strengthen the continuation of a program. It may include new laws that support the program's continuance, as in the cases of *Escuela Nueva* and PRONEBI, as well as regular funding, training, or management mechanisms established for the program. At the central level, institutionalization also includes positive attitudes toward a program and "ownership" of it. As shown by the case studies, this commitment is built through collaborating in the design process (Guatemala, Honduras, Brazil, Colombia), tying interventions to national priorities (Brazil), and using existing organizations and expertise to implement the project (Guatemala, Colombia, Brazil, Haiti).

At the school and classroom levels, institutionalization has a slightly different meaning. It is the consolidation of the intervention within the school. That is, the program becomes a routine part of the school's life, and there is general agreement that it will continue indefinitely at the school. Institutionalization includes teacher mastery of program components and the support of the program by key people such as the principal and the district supervisors. A final requirement is that funds, equipment, materials, and personnel needed to implement the program are guaranteed at least for the immediate future.

Each of the cases studied contained some indicators of local institutionalization. For instance, student learning materials were available in the schools in each program visited. Only in the Colombian program, however, were

all aspects of the program used routinely, and the schools visited were long-time participants in the program. Again, the importance of planning for long implementation periods is illustrated by this result.

Conclusions and Recommendations

Conclusions. The LAC experience suggests that long time frames will be needed for basic education interventions to become sustainable at the national level. A phased plan in which the national government takes on increasing responsibility for an intervention has worked successfully in the region.

The expertise developed through a project, such as textbook production, can be used for other activities within a sector or in other sectors, even when a given capability has not been institutionalized in the ministry of education. To take advantage of this capability, however, requires the existence of a resource utilization plan based on an assessment of the skills being developed and the need for such skills in other sectors.

Contextual factors affect the degree to which planned change, such as reallocation of funds from tertiary education to textbooks, will take place. A worsening economy, for example, may reduce the possibility of policy dialogue on this issue, as well as the ability of parents to pay for books.

Separation of educational endeavors from those designed for profit is fundamental in assisting private sector organizations to develop appropriate strategies. Certain activities with social ends are unlikely to be appropriate candidates for profit-making endeavors.

Recommendations. In monitoring the progress of sustainability, careful attention should be paid to external factors such as the state of the national economy. This, together with other assumptions made about sustainability, should be made explicit at the design stage of an intervention and tested throughout project or program implementation.

Sufficient time for a PVO to develop appropriate operations is important. Donor project managers should not be too quick to decrease or suspend funding without examining the assumptions made about cost recovery to determine if they were realistic.

Donor agencies should distinguish income-generating activities from those with social development goals. Those development-related activities that are likely to always need support should be identified, and the degree to which they can be supported through other types of activities should be determined in judging the feasibility of self-sufficiency.

IV Project Evaluation

This chapter deals with current thinking on evaluation practice and its application to international development projects. The importance of determining the audience for evaluation findings, of establishing measurable indicators that are useful for judging the impact of basic education interventions, and of building local capacity to collect and use evaluation results in decision making are discussed. The chapter concludes with lessons learned from the case studies and literature review.

Current Approaches to Evaluation

A.I.D., as well as the other donor agencies, has long been concerned with approaches to project and program evaluation. A.I.D. was a leader in establishing systematic monitoring and evaluation procedures using the logical framework model. Recently, it has developed a number of materials that reflect advances in evaluation methodology and provide guidance for evaluation design (White 1986; Norton and Benoliel 1987; A.I.D. 1989). It also contracted for a critical review of the methodologies employed in evaluating A.I.D. projects (Hopstock et al. 1989). The A.I.D. evaluation literature exhibits a growing emphasis on evaluation methodologies that respond to the needs of program managers.

In an effort to determine the effects of A.I.D. interventions in the education sector, the agency commissioned evaluations of twelve education programs in the developing world. The findings from these evaluations were used as the basis for discussions at a conference to determine why certain interventions had been effective (AID/PPC/CDIE/PPE 1984). Several crucial points for evaluation design emerged during the review of these findings. They included:

- The need to build systematic feedback mechanisms into project design in order to assist managers in making appropriate adjustments and applying leverage during implementation;
- The need for greater involvement of host country personnel in project design and evaluation; and
- The importance of including a review of implementation plans and their underlying assumptions — as well as human, social, cultural, institutional, and economic factors — in evaluation designs.

Subsequent documents focused on the methodology to meet these requirements. White (1986) described the qualitative methods and team-building approaches used in what she called A.I.D.'s "rapid impact evaluations." Norton and Benoliel (1987) focused on A.I.D.'s use of evaluation results in suggesting alternative methodologies. They argued that most A.I.D. project evaluations had not been extremely useful to project managers due to inappropriate evaluation designs and the lack of explicit data collection plans in project papers. Norton and Benoliel provided guidance for evaluation designs driven by the decision-making needs of managers and described a combination of quantitative and qualitative data collection methods necessary to meet these needs. They suggested that an information plan be developed at the project design stage or soon after the start of project implementation by an evaluation specialist working with USAID and host country managers to ensure that information needs are met.

The A.I.D. *Evaluation Handbook* (1989) incorporates the lessons from these earlier documents and stresses the need for multiple approaches to evaluation because of the decentralized management style of the agency. The document emphasizes the importance of involving host country managers in evaluation design and project monitoring. The *Handbook* also delineates A.I.D.'s policy of including in the design phase the development of an information plan specifying the data collection, monitoring, and evaluation activities to be conducted during a project.

An analysis of the quality of A.I.D. evaluations from the years 1987 and 1988 (Hopstock et al. 1989) supported the criticisms found in the A.I.D. evaluation literature. The review found that:

- Most evaluations were conducted by contracted evaluators with USAID staff and host country evaluators participating in only about one-fourth of the studies;
- The majority of the studies relied heavily on key informant interviews because of the short turn-around time given for the completion of the evaluations;
- Data availability made outputs the primary focus of most of the evaluations, whereas purpose, goals, impact, or assumptions were seldom addressed;
- Cost-effectiveness or cross-cutting issues such as women in development, environment, and sustainability were seldom addressed; and
- Evaluations were conducted as either midterm or final evaluations rather than with flexible scheduling to meet implementation needs.

The World Bank has also been increasingly concerned with its approach to evaluating education projects. A case study methodology similar to that employed by A.I.D. in determining lessons learned in the education sector, but limited to the evaluation and monitoring of education projects, was used to extract lessons about program evaluation (Searle 1985a). The study conclusions stressed the importance of collaboration among decision makers, technicians, and consultants/evaluators in conducting evaluations. The author argued for building a constituency of policy makers by developing a monitoring and evaluation system that allows them to initiate appropriate inquiries and provides rapid responses to such questions. The author maintained that this can be accomplished only by training evaluators in developing countries in a wide range of evaluation methodologies.

Middleton et al. (1989) examined both the success of Bank projects in implementing monitoring and evaluation (M&E) systems and the lessons to be learned for developing countries from U.S. experience in education M&E systems. The authors' review of World Bank projects found that:

- Where M&E systems have been supported, the systems have generally been designed for collecting information needed by the Bank to monitor its projects;
- Little progress has been made in establishing sustainable evaluation capacity in developing countries; and
- There has been little or no staff development to enable host country technicians to apply multiple evaluation techniques to provide decision makers with useful information for improving education practices in schools.

Fuller (1986), in a World Bank discussion paper, reviewed the findings on school quality and suggested many of the approaches discussed by other A.I.D. and World Bank authors. He stated that while there is a body of knowledge on inputs, such as textbooks and teacher quality, that relate positively to student achievement, little is known about the relationship of classroom management practices to achievement or about the relative cost-effectiveness of alternative school inputs. To answer these questions, Fuller argued for rigorous small-scale, quasi-experimental studies; naturalistic observation of school management; and longitudinal designs. He also suggested that the external efficiency of schools or students' accomplishments after leaving school should not be ignored.

A summary report by the Organization for Economic Cooperation and Development (OECD 1988) provided the results of a seminar on the status of evaluation in OECD's development programs, which included participants from Asia, Africa, Latin America, Europe, and North America. The professionals involved in the seminar reached an agreement that is generally consistent with the views found in the literature of other agencies. The relevant points included:

- Evaluation exists as an accepted technique in many developing countries although the degree of expertise, the resources available, and the utilization of the results vary;
- Donors can assist in overcoming lack of resources by providing evaluation funding as an integral part of project financing; and
- Developing countries must be involved in designing the types of evaluation that best

meet their needs if results are to assist in implementation rather than solely meet specific donor reporting requirements.

The academic literature on evaluation of education programs has shown increased concern for results that can contribute to policy and program implementation. Benson and Michael (1987), in reviewing the design of evaluation studies in the United States over a twenty-year period, concluded that the use of quasi-experimental designs in combination with surveys and naturalistic investigations provides an alternative to experimental designs in field settings. They argued that such alternate approaches permit simple, replicable studies of selected aspects of complex programs.

Other scholars have provided detailed procedures for carrying out alternative evaluation methodologies. Patton (1980) described different qualitative methodologies and discussed their appropriateness for evaluation research. Fetterman and Pitman (1986) demonstrated the utility of qualitative and multiple evaluation methods in meeting policy needs. Miles and Huberman (1984) developed guidelines for the reduction and analysis of qualitative data.

In summary, the literature on the evaluation of development assistance in relation to recent approaches to evaluation points out several issues to be considered in the evaluation of education interventions in developing countries. First, there are a number of audiences for evaluation results; program managers in development agencies, host country policy makers, and local project implementors all have information needs. Because these needs may differ, flexible evaluation approaches that provide timely information for decision making for each audience are necessary.

Utilization-focused evaluation (Patton 1978) employing a variety of methods has emerged as a particular approach that can meet many of the information needs of managers of education projects. As shown in its literature, A.I.D. is aware of the potential of this approach and its relevance for education in developing countries where program strategies and implementation processes influence the effects of the program on individual children. To date, however, there has been little reflection of this approach in actual evaluations of donor-assisted programs in developing countries.

This leads to the second point made in the literature, that evaluation of development assistance has focused on quantitative outputs (e.g., number of teachers trained) rather than on the quality of the services (e.g., teaching behavior in the classroom). Evaluations remain tied to the inflexible schedule of midterm and final evaluations focused on the output data needed to meet donor reporting requirements and to the use of key informants as the principal data source. Current evaluation methodologies offer the opportunity to examine the quality of education service delivery and to provide information for refining interventions during the implementation process. Similarly, new technology for quantitative monitoring and evaluation allows more precise estimates of program effects.

The third main point made in the literature is that there have been few attempts to design evaluations around the information needs of host country implementing organizations or to build local capacity to carry out evaluation research.

In the remaining sections of this chapter, each of these three points will be examined in detail, using information from the case studies for illustration.

Audiences

For evaluations to become useful management tools, decision makers and information users must be active participants in determining relevant evaluation agendas. Although the case studies suggest a recognition by project planners that donor-assisted development projects have multiple audiences, the primary audience for each project was the USAID manager monitoring the project activities. The questions to be answered were those pertaining to the outputs expected at the end of the project. Although host country personnel were to be involved in the data collection process in each project, it is not clear if the data to be collected through the evaluation plans would have met the information needs of local managers and host country policy makers, as such needs were not addressed by the evaluation plans.

The cases of Colombia (see Box IV-1) and Jamaica illustrate the focus on monitoring outputs; however, both of these projects developed their evaluation plans before release of the A.I.D. guidance on evaluation (Norton and Benoliel 1987; A.I.D. 1989).

As school construction and rei· ·ation was the primary activity of the USAID/Jamaica project, the project paper evaluation plan limited evaluation efforts principally to monitoring this component. Two engineers, one from the United States and one from Jamaica, were contracted to monitor the construction, and a USAID mission project committee was to review their findings. The inability of the Ministry of Education (MOE) to locate an engineer who would work for the salary offered in the public sector delayed some monitoring activities.

Evaluations of the other project components were to be carried out by several local entities. As part of the project agreement, the Canadian International Development Agency had provided for evaluation capability within the MOE, and yearly studies of satisfaction with the texts were conducted. However, no student achievement data were collected because no national student evaluation system existed. A local consulting firm evaluated the school-community outreach component of the project and collected attendance data in addition to information on participant satisfaction with and perception of reduction in vandalism.

These studies were each limited in scope and were not intended to form an overall project evaluation. Thus, they were not designed to test the assumptions of the project paper or to measure progress toward project objectives. Because the requirement for external project evaluations had been waived, project managers were left with a combination of studies not designed to systematically meet their information needs.

Thus, in both Colombia and Jamaica, evaluation data focused on outputs related to project objectives. While both used local professionals to carry out evaluation studies, such studies were not designed to provide information to local personnel implementing the programs.

Other donor agencies have faced similar problems. Middleton (in Searle 1985a), in a review of the evaluation of a pilot radio study in the Philippines, showed that even a well-designed experimental study may be of limited use to some audiences if their questions and information needs were not made explicit and incorporated into the evaluation design.

A useful evaluation must define both the audiences and their information needs. In addition to the USAID and host country managers mentioned previously, audiences may include host country government officials and policy makers, A.I.D. central offices, the U.S. Congress, and members of the development community. The questions that each group has may vary,

BOX IV-1
Evaluation Design and Outcomes — USAID/Colombia and *Escuela Nueva*

Evaluation design. USAID/Colombia's activities in support of *Escuela Nueva* included a survey to provide baseline data on a sample of *Escuela Nueva* and traditional schools. The survey assessed the availability of materials and the feasibility of *Escuela Nueva* activities in different schools. It did not, however, gather data on student achievement levels. Midterm and final evaluations of the USAID activities were also carried out. In each, an initial step in the workscope was to examine the assumptions made in the project paper to determine if they were still valid.

An evaluation committee, made up of host country
ng personnel and representatives of USAID and the
ssistance team, met every six months to review the
indings and other documents on project progress. This
efore, was the primary audience for the evaluation
e evaluations were considered formative because their
:tive was to determine how project activities were
g to the improvement of unitary school programs. The
evaluations, however, was on the delivery of inputs
production of outputs such as the number of teachers
ined, materials produced, and schools participating in the
)ject. There was no attempt to examine project activities as they
:urred naturally in the classrooms of sample schools.

Outcomes. The actual evaluations were designed by contracted evaluation specialists of both Colombian and international origin, who provided USAID and the Ministry with reports. Thus, host country evaluation capability was not developed, and timely information for decision making was limited. The favorable evaluation results, however, were used to convince other donors to support *Escuela Nueva* when USAID decreased its activity in Colombia.

overlap, or at times lead to conflicting results. As Chapman and Windham (1986, 100), in discussing educational efficiency evaluation in developing countries, point out:

> *Participation in the evaluation process should be inclusive and the major stakeholders should play an active role in the debate over assumptions and specification. It is necessary for the stakeholders in the evaluation to be identified clearly and to have their views incorporated — even if this requires multiple specifications of a single goal construct. Often this may result in an evaluation that suggests a particular project or program is valued positively for some stakeholders and negatively for others. This interpretative ambivalence is a reflection of the political reality of the educational process.*

The authors went on to state that if evaluation results are to be used, evaluators must be aware of their own biases and restrain them, recognizing and articulating instead the values imposed on the evaluation by stakeholders. While this is an important point for instilling confidence in the results of an evaluation, it is also important that the evaluator, as a specialist in the discipline, help stakeholders to articulate their assumptions and goals. This would include reviewing the program design with stakeholders to determine if original assumptions still hold and to decide what components can be meaningfully evaluated.

In this dialogue, evaluators should work with stakeholders to determine the usefulness of answering certain questions. A screening device that can be used in this process is to assess the level of knowledge about a given question and the extent to which leverage is available to introduce change (Bernbaum 1989). If, for example, information is already available to answer a question or if the information in question would not facilitate changes being made, little investment should be made in evaluation. On the other hand, where uncertainty exists and information would provide a great deal of leverage for making changes, a relatively high investment in evaluation is warranted.

Indicators

A.I.D. has made a substantial effort to establish indicators for monitoring progress in basic education. Through Project BRIDGES (Basic Research and Implementation in Developing Education Systems), A.I.D.'s Office of Education has developed a computerized system for tracking and projecting educational progress in developing countries. The Education and Human Resources Division of the LAC Bureau has used this model for monitoring educational efficiency in Central America and is presently expanding the effort to South America and the Caribbean. The model is designed primarily to meet the needs of Congress and A.I.D. administrators in Washington, D.C. Thus, it focuses on a few indicators from national data, such as student population, enrollment, repetition, dropout, and the like, and makes projections based on trends over time and assumptions about future resource allocation.

The Office of Education has also funded studies of the evaluation of educational efficiency through its Improving the Efficiency of Educational Systems Project. Monographs have been produced on approaches to the evaluation of efficiency (Chapman and Windham 1986) and on indicators of educational efficiency (Windham 1988). The latter study presented an outline of efficiency indicators that could form the basis for an educational management information system. This model, which is oriented toward decision makers at the ministry of education and USAID technical office levels, includes inputs such as teacher characteristics, facilities, materials, equipment, and administrative capacity; process variables such as administrative behavior and student- and teacher-time allocation; outputs in terms of student attainment and achievement; and outcomes such as further schooling, employment, and attitude change.

The author also included indicators of external efficiency such as reduced unemployment, improved mix of manpower skills, and increased social mobility. Indicators of this type provide measures of the individual and aggregate effects of the intervention on society. Although they are often included in log frames, these indicators are generally not studied because they require longitudinal data collection beyond the life of a given project and a relatively sophisticated evaluation design. This situation could be overcome through the design of projects of longer duration or by developing local institutional evaluation capability to track cohorts of primary school graduates in later life.

Windham argued that despite such constraints as local decision makers' lack of familiarity with computerized systems, fear of redistribution of bureaucratic power, and the costs associated with collecting relevant and timely data, there is a trend toward developing education data bases. Thus, the author stated, if such systems are oriented toward the needs of decision makers and managers are trained in the use of efficiency indicators, decision making will be enhanced.

In addition to the question of efficiency, there is also that of quality, which, as discussed earlier, helps to determine efficiency. Issues of quality are especially important in formative evaluation efforts. While many of the outcome measures described by Windham are assumed to be a result of the context in which learning occurs, without specific contextual knowledge it is difficult for program implementors to make constructive choices in refining given interventions or programs. It is important to measure the degree of implementation and factors related to the process of implementation. The school setting — including schedule, physical space, and materials — may have a significant influence on the learning process.

In every country in Latin America, schools differ in location, demographic make-up of the student body, reasons for wanting an intervention, and relationship of staff with the community. As most schools have more than one classroom, variability both within and across schools in any evaluation effort should be expected. Thus, there is a need for a careful definition of an intervention and its implementation process to aid in the interpretation of outcomes.

Achievement testing generally has been considered the best indicator of children's progress in mastering subject matter. As pointed out previously, however, national testing systems, because of their cost and complexity, have been difficult to develop in Latin America. In addition, tests, though indicating change among program participants, usually assess children's abilities in restrictive contexts (i.e., the typical test situation). The test situation, however, may be different from the school contexts in which children master skills (Cole and Scribner 1974; Doyle and Ponder 1975; Cole et al. 1976; Doyle 1977). Therefore, in addition to pre- and post-testing, it is important to assess children in conditions that match or parallel those under which they learned the specific skills that interventions are trying to impart. Observing children under such conditions also adds to the understanding of the classroom dynamics that may cause the measured effects.

In addition, when evaluating educational programs, the assumption is often made that by providing a well-delineated intervention such as textbooks, and by training teachers in their use, uniform outcomes in teacher and, therefore, in student behavior can be expected. Often, however, training will vary with the availability of the materials, as in Honduras where, because of delays, training was carried out before the books arrived, or in the Guatemala case, where very innovative training was conducted but seldom involved the use of the textbooks, which were the principal intervention (Chesterfield and Seeley 1987). Also, teachers have little time to thoroughly review teachers guides and rely heavily on trainers' interpretation of program goals and objectives.

When such training is transferred to the classroom, it is applied in terms of a teacher's own previous experience, the characteristics of the physical setting, and the make-up of the student population. Thus, despite similar training and experience, teachers may develop different approaches in meeting the objectives of the intervention they are to implement. Without an examination of the program as implemented in individual classrooms, there is the danger of attributing no impact to an intervention which may have not been used correctly or at all.

Quality is also determined by the commitment of staff and administrators and their mastery of the various components of an intervention. Thus, attitudes and behavior of teachers and administrators toward the intervention must also be examined.

Similarly, the influence of family and the community must be taken into account when assessing the effects of a program. The formal educational setting assumes that certain learning patterns are developed through early socialization experiences, especially in the home. For rural and minority students, especially girls, the behavioral patterns developed in the home and community may be quite different from those of the school. Such differences may interfere with the mutual understanding necessary for appro-

FIGURE IV-1
Illustrative Quality Indicators

PHYSICAL SETTING
- Electricity
- Water
- Number of classrooms
- Number of classes per classroom
- Ratio of desks to students
- Square feet of space per child
- Blackboards (present/observed in use)
- Chalk (present/observed in use)
- Student notebooks
- Pencils

UCTIONAL MATERIALS
- books (present/observed in use)
- hers guides (present/observed in use)
- ning centers (present/observed in use)
- ary (present/observed in use)
- ers and maps (present/observed in use)
- o (present/observed in use)
- Television (present/observed in use)
- Computers (present/observed in use)

SCHEDULE
- Planning time
- Science
- Reading
- Math
- Art
- Recreation
- Large group/lecture
- Small group
- Use of texts
- Individual work/seatwork
- Use of learning centers
- Use of library

INDIVIDUALS
Teacher
- Plans activities with children
- Lectures to class/group
- Reads to class/group
- Writes on board
- Has students work alone at seats
- Walks around class serving as resource
- Encourages active learning
- Uses community/local references

Student
- Listens to teacher lecture
- Works with teacher (others wait)
- Reads silently
- Reads aloud
- Writes
- Disengages
- Shows products to teacher
- Converses with peers (on-task)
- Converses with peers (off-task)

SCHOOL-COMMUNITY
- Loss of labor
- Annual planting and harvesting schedules
- Daily work schedules
- Lack of money to buy supplies/uniforms
- No perceived benefit from school-based skills
- Teachers seen as "foreigners"
- Students not taught in native tongue

priate instructional approaches and effective teacher-student interaction and may thereby engender the ill-will of the community.

Thus, there is another set of educational indicators, those related to quality, that are vital to adapting education programs to meet the needs of their clientele. These include the categories of setting, materials, individuals, schedule and organization, and home-school continuity. Figure IV-1 provides an illustration of a set of possible indicators of educational quality.

nt audiences will be concerned with
t indicators and different levels of aggre-
Collecting information related to both
ional efficiency and quality requires a
of methodologies, which, as A.I.D. has
ted (Norton and Benoliel 1987), are
ted within an overall evaluation plan.
Because of the high cost of data collection and especially of data analysis, information on the effects of an intervention cannot be collected at all levels from all participants taking part in the learning experience. Thus, evaluators must identify meaningful samples that will provide various information users with sufficient data for making decisions but that are not overly costly or time-consuming. This can best be accomplished by building data collection into ongoing project activities. The information should dovetail so that what is collected for a certain audience will also feed into the larger information base for the entire project. Ideally, the information should be collected so that it can be disaggregated to the level of the individual child.

The USAID/Guatemala project attempted to incorporate data collection for evaluation purposes into the project design. Box IV-2 illustrates the experience of the project in these efforts.

incorporation of evaluation data collection into project activities was a strategy also employed in the USAID/Honduras basic education project. The project included funding and technical assistance for a permanent program of project evaluation. Most of the components, as part of systematic field testing of the interventions, were to generate data that could be summarized for overall project evaluation purposes. The evaluation component was to develop measures of academic achievement that would be used with a national sample to measure quality, whereas efficiency would be measured through cohort analysis of rates of dropout, repetition, sixth grade completion, and the like, through the MIS component.

Lack of definition of both the testing and the MIS components had prevented the development of the envisioned evaluation system for most components at the time of this review in mid-1990. The AVANCE component of the project, however, had been evaluated using a variety of methodologies. Prototype tests designed by the evaluation component of the project were used to collect data on achievement of a sample of student and nonstudent participants in the radio program. Focus groups were used to examine the acceptance of the newspaper, *El Agricultor*, and teachers' use of the radio mathematics program. In addition, classroom observations were employed to evaluate teachers' manipulation of the radio program in multi-grade classrooms.

Capacity Building

As shown by the review of current approaches to evaluation, the likelihood of evaluation results being utilized is enhanced when potential users take ownership of the evaluation. Thus, stakeholders must be incorporated into all levels of the evaluation effort. This requires conscious planning to build local capacity in evaluation design, appropriate methodologies, and utilization of results by policy makers, program managers, and implementors of a particular intervention. The USAID LAC missions are beginning to follow this recent guidance (Norton and Benoliel 1987; A.I.D. 1989), as shown by the collaborative approach taken in Guatemala's new Basic Education Strengthening Project (see Box IV-3).

Several cautionary notes must be made, however, if a number of performance measures rely on work to be undertaken during a project. The Honduras project had data collection activities

BOX IV-2
Evaluation Design and Outcomes — USAID/Guatemala and Bilingual Education

Evaluation Design. The evaluation plan for the USAID/Guatemala basic education project called for formative curriculum evaluation, longitudinal evaluation in the original 40 pilot and 40 comparison schools, and evaluation of efficiency through comparison of dropout, retention, and promotion rates in PRONEBI and non-PRONEBI schools, as well as external midterm and final evaluations. In addition, building local capability to carry out systematic evaluation was part of the evaluation design.

Audiences. The evaluation plan is laudable in that it recognizes that both USAID, with its monitoring needs for indicators of repetition and dropout, and the implementing organization (PRONEBI), with its need for formative evaluation results on the bilingual curriculum, are audiences.

Outcomes. A number of problems were encountered in carrying out this ambitious plan. Lack of greater specification at the design phase led to many of the 40 original comparison schools being integrated into the current project, thereby contaminating the evaluation design. The project planners also overestimated the degree to which the multiple evaluation technologies could be transferred to inexperienced host country implementors by a single international consultant.

Thus, with the exception of the longitudinal data on the academic achievement of children in the original 40 experimental schools, the evaluation data collected by PRONEBI are not complete enough to be useful to project managers, nor do they serve USAID's monitoring needs. The external midterm process evaluation of the PRONEBI program was useful to both USAID and PRONEBI as a baseline for measuring administrative and technical progress. Given the lack of student performance data beyond the original 40 schools, however, the evaluation focused only on instructional delivery and institutional strengthening.

built into many of its components, which were then to be integrated into an educational management information system. As both the testing system and the MIS were delayed, the planned evaluation system has not been utilized to date. There is a tendency to delay obtaining student achievement data until a national testing system is developed. Because testing does not have the potential immediate impact of other interventions such as radio or texts, it may lag behind other interventions in the implementation stage.

It is crucial for evaluation purposes, however, that some baseline measures of performance as well as output be made if educational quality and efficiency are to be monitored. This may mean using existing instruments that are later refined. As Windham (1988, 157) points out, "No system of benchmarks can be meaningful in evaluation unless the original assessment created baseline data to which later benchmarks can be compared."

Also important, but often ignored, is the evaluation of the institutional strengthening that comes about through donor-assisted projects. One of the complaints of administrators in the Colombia case study was that baseline data should have been collected on the implementing institutions because the performance of such organizations might be an important variable in determining the sustainability of an intervention. Such efforts should include monitoring the capacity for utilizing evaluation results that is enhanced through the intervention. Projects such as the Basic Education Strengthening Project in Guatemala have incorporated this aspect into their evaluation plans.

Finally, in building local capacity, both timing and flexibility are important evaluation considerations. As a project matures, the questions being asked will change, and the evaluation design must offer the possibility of gathering information to respond to emerging concerns. The availability of information when needed and the integration of different data sources into a coherent format will enhance the usefulness of the results. Thus, local personnel must be prepared to respond to the ongoing needs of different audiences. As Chapman and Windham (1986, 100) stress:

BOX IV-3
Evaluation as a Management Tool — USAID/Guatemala and Basic Education Strengthening

Evaluation design. The project is designed to incorporate the collection of formative data into virtually all project activities. Local technicians in each activity will serve as formative evaluation coordinators. They will be assisted by an evaluation specialist in the development of a formative evaluation plan and instruments and will report to a national-level evaluation and monitoring committee.

Audiences. The principal audience for the evaluation results will be the technicians engaged in implementing a given activity. In each activity, milestones will be established to measure progress in reaching project objectives systematically over time. Additional audiences will be the key decision makers and information users of the project who make up the evaluation and monitoring committee. These individuals will set the evaluation agenda and adjust the evaluation design to meet any changes in the information needs of project managers. Since USAID personnel will serve as members of the monitoring committee and the objectives of each activity are closely tied to project goals, USAID's information needs will also be met.

Indicators. The project has defined a set of baseline indicators and benchmarks that are consistent with LAC Bureau monitoring needs and will be tracked throughout the life of the project. More in-depth analyses will also be carried out to determine the progress of each component in contributing to student learning. Special studies that will examine the causes of dropout, teacher motivation, and the like are planned under an applied research activity. External evaluations to examine trends in Ministry of Education investments in the education sector and the impact of MOE management and organizational changes on the delivery of educational programs are also envisioned.

Institutionalization. By allowing technicians to determine their information needs and then assisting them to develop measures for meeting those needs, the project fosters the use of evaluation results as a management tool. Similarly, decision makers identify the aggregated information from the individual project activities that will assist them in project management and establish a schedule for submittal of the information that will meet their needs.

There needs to be increased acceptance of evaluation as a continuous rather than an isolated or intermittent responsibility of management. This is especially crucial in the management of technical assistance activities where cross-cultural influences and other factors accentuate the normal constraints on management control. Assessment, formative evaluation, and summative evaluation should not exist in isolation. Rather, they should represent phases in a cumulative process whereby an understanding of a program's activities and of the values and preferences of program participants are increased. . . .

Conclusions and Recommendations

Audiences

Conclusions. Recent literature shows that development agencies studying their respective experiences are dissatisfied with the designs employed in evaluating donor assistance efforts. Findings from these reports suggest that A.I.D. and other donor agencies have long been concerned with project and program evaluation. As shown in previous studies and confirmed through the case studies presented in this review, the purpose of most evaluations has generally been that of meeting bureaucratic requirements of the donor agency rather than satisfying the information needs of managers implementing the programs and host country decision makers. Even with this narrow focus, evaluations have, at times, been incomplete, focusing on the major component of a project to the exclusion of other critical elements.

The approach to evaluation suggested in the development literature requires the ability to work with different audiences to match evaluation methods to the nuances of particular evaluation questions. This may mean employing a variety of methods to answer any given question and choosing among methods given constraints in resources and local political considerations. It is clear that evaluation is a complex area of activity where design requires specialists trained in evaluation methodologies.

For evaluation results to be useful, consumers of these results must take "ownership" of the evaluation. This requires that evaluation be a collaborative effort in which the information needs of program managers and other decision makers are taken into consideration, and that appropriate methodologies to respond to these needs are part of the evaluation plan. Evaluation activities must be relevant and timely, and they must produce data useful to the different levels of the decision-making process.

It is generally agreed that to meet such information needs the collection of empirical data must be integrated into ongoing project activities. Evidence suggests that a combination of quantitative and qualitative information — with an emphasis on low-cost, quick-turnaround data-gathering and analysis procedures that facilitate feedback to decision makers — will be most appropriate.

Recommendations. Evaluation should be considered a valuable management tool to be carried out as called for in a project design. Evaluations should include all project elements, including a test of the assumptions in the log frame, as part of their design. They should be nonwaivable except where the rationale for doing so is explained in writing by mission management.

The complexity of designing evaluations that will meet the needs of multiple audiences requires specialists in a wide range of methodologies. Thus, assistance in educational evaluation should be provided by specialists with broad-based backgrounds in evaluation. Training in an education content area should be only a secondary consideration.

To maximize the utility of evaluations for different audiences, several design issues must be addressed. First, the purpose of the evaluation must be well defined. This definition should include who the audiences for the evaluation results are and how the information will be used. Second, alternative or additional designs to the traditional midterm and impact evaluations are needed. These would include:

- Quick-turnaround diagnostic studies using such methods as focus groups, case studies, and classroom observation that can present current data to be used to help fine-tune ongoing activities, and can provide a basis for leverage in policy adjustment discussions; and

- Longitudinal studies that examine the quality and efficiency of an intervention as well as its impact on beneficiaries over time.

To satisfy the information needs of multiple users, evaluation data collection must be incorporated into ongoing project activities if it is to be cost-effective. The training of local data collection personnel and the associated costs must be considered in the evaluation plan of the project paper.

Indicators

Conclusions. Evaluations of development assistance have focused on project outputs to meet donor reporting requirements. This review has identified at least three different levels of information users who require particular indicators of program progress and outcomes to meet their information needs. Policy makers are primarily concerned with national trend data and macro-level socioeconomic indicators. Such indicators, which are used for resource allocation, are generally part of national data-gathering efforts and are relatively easy to obtain. However, questions such as "Did the project improve the quality of life of the populace?" will be difficult to answer in the short run for a primary education project of five to ten years' duration.

Ministry of education project managers and donor technical officers are primarily concerned with indicators of input and output relationships, such as the provision of textbooks to improve student achievement. These are generally quantifiable but not readily obtainable because of poorly developed capability for data collection and analysis in most developing countries. In addition to limited experience with management information systems, most countries lack the measurement instruments needed to collect baseline data on student achievement.

The implementors of project components and their technical assistance counterparts are concerned with program development. Thus, they require information on program delivery, or what is happening in the program itself. This information is generally collected through qualitative methods, which, although relatively recent in evaluation, are being used with success.

Recommendations. Care must be taken not to establish unrealistic measures as indicators of project outcomes or there will be a danger of judging project success unfairly. If external efficiency of an education project or program is to be judged, longitudinal designs extending beyond the life of the project must be used. Other areas that should be considered in evaluation designs are examination of the assumptions made in the project design to determine if they are still valid and investigation of the contribution to institutional strengthening made by a project or program.

Performance data on students must be collected if meaningful conclusions about program quality are to be made. The selection or development of instruments should be a central point of evaluation design deliberations. Donor agencies should not attempt to conduct impact evaluations when a baseline has not been established. This is true for measuring institutional change as well as student performance.

It is important to combine performance measures of student achievement with qualitative measures of the degree of program implementation. If, for example, textbooks have been delivered but are not being used in the classroom, they would not be expected to have an influence on student achievement. However, if frequency of use were not examined, the erroneous conclusion might be drawn that the use of texts does not affect learning.

Care must be taken in designing a management information system that is intended to integrate different data sets. The case studies point out difficulties that may be encountered in implementing complex management information systems that go beyond the needs of local users of the system. In addition, although well-established methodologies exist for obtaining both quantitative and qualitative data on educational efficiency, procedures for the integration of different types of data are still largely in their infancy.

Capacity Building

Conclusions. In developing countries, there is a general lack of familiarity with the use of evaluation as a tool in program management. Thus, potential users of evaluation information will need assistance in articulating their objectives for the program, establishing indicators to measure progress toward those objectives, and collecting information on which to make decisions related to such progress. If such assistance is carried out as part of the implementation responsibilities of local education managers,

it can encourage their sense of ownership of the evaluation. If ongoing evaluation is to be carried out systematically, specific individuals must be identified to coordinate evaluation activities over the life of the project or program.

Progress in building evaluation capacity specifically must be included in the overall evaluation of capacity building. The degree to which managers are able to make decisions based on information they see as important can contribute to project success and sustainability.

Recommendations. In building evaluation capacity, evaluation specialists should assist local decision makers to articulate their objectives and needs so that they take ownership of the evaluation efforts.

To the extent possible, local evaluation units should be incorporated into project monitoring efforts, thereby building on existing capability. Where this is not possible, specific individuals should be identified to coordinate evaluation activities and ensure that activities are carried out and data are available.

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Appendix:
Case Studies

As part of the review of A.I.D.'s activities in basic education in the LAC region, the author conducted a series of case studies. The sites were visited in mid-1990; the shelf studies were conducted using secondary sources.

Site Visits

Colombia Case Study:
Educational Technology Applied to Rural Community Unitary Schools

Guatemala Case Study:
Rural Primary Education Improvement Project

Honduras Case Study:
Primary Education Efficiency Project

Jamaica Case Study:
Primary Education Assistance Project

Shelf Studies

Brazil Case Study:
Education Sector Loans I and II

Haiti Case Study:
Incentives to Improve Basic Education Project

Educational Technology Applied to Rural Community Unitary Schools

The USAID project, Educational Technology Applied to Rural Community Unitary Schools, was included as a case study in this evaluation of basic education because it helped establish the *Escuela Nueva* program in Colombia. The author visited Colombia in mid-1990 to observe rural schools, both those implementing the *Escuela Nueva* program and those not.

Escuela Nueva has been credited with developing an innovative approach to providing instruction in multi-grade classrooms. The approach is currently being expanded on a nationwide basis in Colombia and is being adapted and piloted in several other Latin American countries.

The USAID project was designed to expand and improve pilot programs that had developed individualized instructional materials and an activity-based learning program for teachers working with multiple grade levels. The project's goal was to consolidate the Colombian resources involved in unitary schools so that there would be a concerted effort toward expansion. The effort was to be implemented through the Planning Office of the Ministry of Education, with operational support from the rural divisions of the Secretariats of Education in three departments (states) of the country.

Five components — technical assistance, training, seminars and workshops, research studies, and demonstration materials — were included in the project. Technical assistance consisted of a long-term consultant in educational systems, a long-term specialist in community unitary schools, and short-term advisors in the areas of curriculum, instructional materials, educational technology, and evaluation. Training was to be in the form of short-term experiences at U.S. educational institutions for Colombian specialists working with the international consultants.

Seminars were to be held at both the national and regional levels, and were designed to focus on the application of the program in the rural schools and to allow cross-fertilization among the three departments. Studies were to be formative assessments of both the materials and teacher training programs for unitary schools already in use and examinations of the feasibility of using other materials, such as those developed for rural adults, in the unitary school classrooms. The project also supported the procurement of materials about unitary schools from the United States and other countries.

The project was implemented over a three-year period (1976-1978) with a USAID contribution of $452,000. Counterpart funds were to be $605,000. In addition to unifying and improving the unitary school program, the grant was to create conditions for the expansion of the program throughout rural Colombia.

Background

Colombia is a country characterized by rugged terrain and poor infrastructure in the rural areas of the country. Combined with low population density in much of the countryside, these conditions created a situation of small dispersed schools, many with only one teacher. At the time of the project, 70 percent of the schools in the rural areas had only one teacher and another 20 percent had less than one teacher per grade. Thus, if children were to remain in school and receive a complete primary education, teachers had to be able to teach up to five grades simultaneously.

The principal pedagogical approach in the rural schools had been that of the teacher-centered classroom, where children are passive participants expected to memorize volumes of information. Few didactic materials were available, and

content generally reflected an urban orientation that did little to stimulate pride in local culture. Teachers often had to travel from urban centers in inclement weather, which resulted in delays and absences. When present, teachers attended to two or more grades of children. However, they had generally been trained in traditional pedagogy and had little chance to learn new techniques either for making learning an active experience or for dealing with multi-grade classrooms. Finally, the school calendar was too inflexible to allow for the rural economic cycle that required children to be at home or in the field during certain seasons.

As a result, only 20 percent of rural children finished primary school, compared to 80 percent in urban areas. The average level of schooling completed was only about 1.5 grades among the rural population.

Colombia was attempting to deal with these problems, which are characteristic of many developing countries, through innovative pilot programs that were an outgrowth of the unitary school movement started under the auspices of Unesco in the early 1960s.

In 1961, Unesco sponsored an international conference for ministers of education in Geneva, Switzerland. The principal theme of the conference was the difficulty of providing primary education in rural areas with low population density. The outcome was a recommendation that ministries of education should be encouraged to create single-teacher schools in which the teacher provided instruction to children of all primary grades. It was also suggested that countries with little experience in this modality of schooling request technical assistance from Unesco.

As a result of this conference, Colombia began to develop a unitary school program, with assistance from Unesco specialists. Specifically, Project I of Unesco organized the first rural unitary demonstration school in the Instituto Superior de Educación Rural in Pamplona, Norte de Santander. The objective of the demonstration school was to train teachers and supervisors in new teaching procedures.

A primary school was annexed to the Instituto to serve as a laboratory school in 1962. Under the leadership of Professor Oscar Mogollón, who became director of the school in 1964, the program developed in the experimental school was replicated in 150 schools in the state of Norte de Santander. Many of the elements of the unitary school program were taken from the Argentine model unitary school Felipe Iglesias. The objective of this school was to facilitate active learning and respect for individual learning differences by organizing the school into work areas, utilizing a system of individualized instructional cards, and developing a set of procedures for encouraging the children to participate in the organization of the school. The program specialized in training teachers and supervisors to prepare materials and use them in multi-grade classrooms.

In 1968, the school in Pamplona was visited by researchers from the University of Antioquia and from the Regional Training Centers, as well as by representatives of the national Ministry of Education and the departmental Secretariats of Education. There were several outcomes of these visits: First, the government passed a decree that the unitary school approach would be used in all the schools in the country that had only one teacher, and that areas with low population density would be emphasized. In order to implement this legislation, the Secretariats of Education were required to provide training to rural teachers in the procedures for teaching in unitary schools. During 1967 and 1968, the Regional Training Centers gave more than 160 seminars to over 4,500 teachers. These courses identified the need to develop a text for teachers. This text, published by OAPEC (Organización Administrativa y Pedagógica de la Capacitación), was distributed in various regions and was used in the initiation of several new projects at the departmental level.

The University of Antioquia, for example, was contracted to design an experimental unitary school program as part of Antioquia's response to the 1967 decree. This led to the eventual joint production of texts and modules, which stressed linear programmed instruction by the university and the department.

In 1970 and in 1974, specialists from Unesco, visiting Colombia, emphasized the community aspect of the unitary school model. These specialists stressed the idea of the school as a center of the community and the importance of community-school integration. Colombian

educators focused on the aspects of active learning and individual rates of learning in the classroom, which the Antioquia model attempted to achieve through programmed instruction. Thus, in Colombia, several approaches to the problem of complete primary schooling among dispersed populations were being developed simultaneously.

While the experimental programs were developing, USAID contributed to improving access to primary education in rural areas through educational sector loans. These loans helped expand physical facilities so that a greater percentage of rural students could attend school and helped improve the administrative and training capability of the Ministry of Education (MOE) and the departments. The linkages formed between the MOE and several departments, together with the development of facilities for in-service teacher training, created an infrastructure for consolidating the unitary school effort. This was complemented by USAID funding of the development of a training manual and work on the design of classroom instructional materials in the year prior to the initiation of the Educational Technology Project.

Project Design

The project was part of USAID's overall strategy to maximize small investments that could have a significant effect. It was integrated with other projects in education to the extent that it was designed to take advantage of previous USAID investments in education such as the Regional Training Centers. There was not, however, an integrated human resource strategy that took into account education and training needs across all sectors.

The Educational Technology Project was designed to build on existing local interventions and to test locally developed models in broader contexts within the country. For a small investment, the project was to bring together similar pilot efforts being developed in several parts of have an exponential effect much greater than might otherwise be expected from a small investment.

Background information consisted of several studies of rural schools carried out by the Instituto in Pamplona and the University of Antioquia. These studies, while not longitudinal, were diverse enough to suggest that the concept behind the project was applicable to all unitary schools. Thus, USAID was willing to invest the "seed" money needed to expand the program.

At that time, the Government of Colombia was voicing a commitment to the support of rural schooling. USAID personnel met formally and informally with Ministry representatives for over a year prior to the project to discuss the project's design and the government's counterpart contribution. Meetings were also held with personnel from the Secretariats of Education in the three departments where the project would be implemented in order to gain their support.

Although the project paper was developed by USAID's education office, the coordinator of the *Escuela Nueva* program was also a member of the design team. In addition, the two consultants who were proposed as long-term advisors to the project were brought in at the design stage to assist with certain analyses; they also participated in meetings with the MOE and regional representatives. Interviewees felt that this participation won credibility for the consultants, which aided their technical assistance effort during the project.

The project paper included a detailed evaluation design, which would begin with a survey to establish a baseline from which to assess project outcomes. An evaluation committee was set up with Ministry of Planning personnel, USAID project managers, and unitary school representatives. This committee was to meet at least every six months to examine study results and to make adjustments in the implementation plan as needed. Each activity was to be viewed separately but evaluated in terms of its contribution to the improvement of the unitary school system and the expansion of the unitary school concept to other multi-grade classrooms.

No attempt was made to include other donors in the development of the design. The project, however, was viewed as contributing to the overall USAID strategy of targeting rural areas and was consistent with other USAID efforts in the education and other sectors.

Project Implementation

As mentioned, the project had five components. The principal component was technical assistance, which was to aid in upgrading the unitary school curriculum that had already been developed and to help carry out workshops for teachers who would implement the curriculum. National seminars to build consensus for the program were to take place prior to the regional and local workshops. Research was to be carried out in targeted areas to inform the curriculum development effort. Finally, short-term training and the procurement of demonstration materials were to provide local implementors with information on what was taking place in other countries. This section discusses issues related to the implementation of these components. Given the relatively long history of the *Escuela Nueva* program subsequent to the completion of the USAID project, issues related to expansion of the program between 1978 and 1990 are also discussed.

Technical assistance. The technical assistance team consisted of two long-term advisors in educational systems and community unitary schools and short-term specialists in evaluation and research design, curricula, instructional materials, and educational technology. The consultants worked directly with their counterparts to help upgrade the curriculum and to carry out workshops for teachers and supervisors. This type of participation was viewed positively by host country counterparts.

The specialists wanted to build on already successful work and thus offered suggestions as requested by the program implementors. There was an emphasis on bringing in local short-term specialists in areas such as the production of instructional materials that made use of elements found in the environments of the schools. The international consultants helped to coordinate these efforts.

The midterm evaluation of the project found that the technical assistance had made a positive contribution to the curriculum development effort and the teacher training workshops, but that this component had been budgeted higher than necessary (USAID/Colombia 1977). The final evaluation of the project also noted the contribution made by the long-term consultants, who by that time had left the country. The consultant who was interviewed as part of the current study attributed the success of the technical assistance to working closely with the capable local teams and assisting with details such as ensuring that teachers received per diem payments at the start of the workshops.

Workshops and in-service teacher training. The workshops for teachers and supervisors were considered the most successful component of the project and became a cornerstone of the *Escuela Nueva* program. The training approaches that were developed in Pamplona were refined, and teachers were brought into regional centers for training. A teachers training guide was completed, and 5,000 copies were published during the first year of the project to complement the workshops. Teachers who participated in the project were identified at the regional level and, over the course of the project, 354 rather than the projected 300 teachers, and 78 rather than 54 supervisors, were trained.

Despite the success of the training, only 224 of the 300 projected schools were implementing the program at the project completion date. This was attributed to lack of strong administrative units in the departments, which made the identification of qualified teachers difficult. The distance and communications problems in logistically supporting the schools were also mentioned as factors that inhibited reaching the projected goal.

The final evaluation found, however, that sufficient teachers and supervisors had been trained to administer the project. All of those interviewed agreed that the teacher in-service training component, which took place in three separate workshops, built the teacher commitment that led to the successful implementation of the *Escuela Nueva* program. Teachers were brought together in a comfortable setting and paid per diem (at the time an innovation in Colombia), which contributed to their sense of self-worth and enthusiasm. In the workshops, they were given tools for classroom management, for interaction with the community, and for use of the library. They were encouraged to work together and to develop their own ideas for instructional aids. The 78 supervisors who also received training were introduced to the functional aspects of the *Escuela Nueva* program and to the role of the supervisor as a facilitator in such a program.

Curriculum. The curriculum was designed to be a complete break with the past. It emphasized teachers, children, and community members taking charge of their schools, thus the name of the program — *Escuela Nueva* or New School.

The development of the student materials was carried out through a contract with the University of Pamplona. The midterm evaluation found the materials, which consisted of texts with programmed learning modules, to be of high quality but behind schedule in development. This was attributed to the difficulties in communication resulting from the distance between Pamplona and Bogotá. The problem was solved through an amendment to the project that extended the contract completion date slightly.

The final evaluation found that the four texts had been completed within the revised schedule and that the curriculum, which was reflective of the educational needs of rural children, had been approved and distributed. In addition, a 100-book library had been assembled for each school. This was accomplished through negotiations with Colombian publishing houses for special rates and donations in consideration of the educational nature of the undertaking.

The texts in this initial stage were mimeographed, and two copies of each were made for each grade level. The feeling was that it was important that the distribution of the materials should correspond to the training to the extent possible. Thus, teachers could begin working with the new approach right away even if the ideal amounts of materials were not available.

Research and evaluation. Two studies, rather than the five originally projected, were carried out under the project. These were a feasibility study and an evaluation study. The feasibility study examined the two curriculum development efforts and made recommendations to develop the more cost-effective one. The evaluation study developed an evaluation design for the project and the *Escuela Nueva* program in general and gave guidelines for an evaluation unit within the MOE. These studies were criticized in the final evaluation, however, for being limited to one year, which was seen as insufficient time to obtain valid conclusions on long-term effects.

Training. Three training seminars with 40 participants each were held for educational leaders during the first year of the project. No results from overseas training were reported in either the midterm or final evaluation findings.

Project Management

The project was coordinated by the Office of Planning in the Ministry of Education. The placement of the project in this office was credited for its administrative success; the project did not become bogged down in the bureaucratic machinery that characterized the MOE technical offices. The commitment of the project coordinator and her friendship with the Minister, which facilitated obtaining decisions on project issues, were also factors in the project's success. However, the project did not become completely institutionalized in the Ministry during the years of USAID financing. A semi-official, five-person staff was given office space to coordinate the project. However, the MOE had not budgeted for project coordination, and the two key staff positions were funded through a reallocation of project funds. Similarly, the departments did not allocate personnel to the project, which led to some of the communication problems and delays encountered in implementing the *Escuela Nueva* program at the school level.

All of the persons working with the project were found to be extremely competent and dedicated to the program, which facilitated overcoming the logistical problems. The involvement of USAID personnel, which gave the mission the ability to work daily with the project to overcome problems, was cited by interviewees as important in project implementation.

Project Evaluation

As mentioned, the project had an evaluation review committee which met every six months or as needed to monitor progress. In addition, a midterm and a final evaluation were carried out. Each evaluation examined the assumptions made in the project paper to determine if they were still valid. Data were collected on student achievement and teacher and parent attitudes toward the program. The MOE evaluation team participated in the design of the midterm evaluation, and the final evaluation was carried out by a local research organization.

The major findings of the evaluation research were that the curriculum had been successfully developed to create a child-centered learning

environment and that teachers had developed skills for managing multi-grade classrooms and had changed their attitudes and roles to become more student-oriented. It was also found that parents of children in the *Escuela Nueva* program participated more in school activities and were more satisfied with their children's education than were parents of children in traditional schools. It was suggested, however, that parent participation in the program could have been greatly enhanced through a systematic public relations campaign focusing on the importance of schooling and the "New School" program.

Sustainability

The major outcomes of the project were a three-stage training model, curriculum materials for multi-grade classrooms, and implementation of the *Escuela Nueva* program in 224 schools in three different departments of the country. The project generated a great deal of favorable publicity, which led to requests from universities within Colombia and other MOE units for the participation of the project in their activities. It also encouraged donations from private institutions such as the Coffee Growers Federation.

In addition, as USAID was cutting back its operations in Colombia, the mission worked with the MOE to present the results of the project to other donors, which resulted in a half million dollar grant from the Inter-American Development Bank (IDB). This grant extended the project to three additional departments and allowed for the revision of the student materials over a two-year period.

A second grant from the IDB followed for the years 1980-1982, which extended the program to an additional 1,000 schools. From 1982 to 1983, a third version of the materials was developed and the project incorporated another 1,000 schools. Most of these schools were in the Pacific Coast region of the country. This expansion was financed through funds for rural integrated development, the department secretariats, and UNICEF. Between 1984 and 1987, with the help of World Bank funding, the *Escuela Nueva* program expanded to 8,000 schools in Colombia. In 1988, Colombia negotiated a loan from the World Bank to expand the *Escuela Nueva* program to all 26,000 rural schools in the country.

Outcomes

The *Escuela Nueva* program is not an intervention that fits with the normal routine of a rural multi-grade school, but rather a complete programmatic change that includes students, teachers, community members, and the regional and central support network. In other words, it is a "New School." The basic elements of the program are as follows (Rojas 1988):

Student level
- Programmed self-instruction through student guides
- Community investigations by students
- Negotiation with teachers as to the level of effort (i.e., good, excellent, satisfactory) for a given academic unit
- Group work and peer teaching
- Active learning and inquiry
- Learning centers (*rincones*) with materials made by students and community members
- Flexible promotion by learning unit
- Rural-oriented curriculum
- Student diaries on daily activities
- Student committees for school maintenance and government
- Educational materials for each school including posters, charts, and a 100-book library

Teacher level
- Materials (guides, manual, library) for teachers
- In-service training sessions or workshops
- Local demonstration schools (*micro-centros rurales*)
- Teacher instruction to more than one grade
- Regular meetings between teacher and community-school parents committee

Headmaster level
- Teacher acting as school director when school is small
- Many functions such as attendance handled by students
- Resolution of problems at school-community level

Community level
- Parent review of children's notebooks
- Financial contributions to the school (e.g., for repairs, chalk)
- Parent development of materials for learning centers
- Participation of community members as respondents for children to gather information about the community
- Community participation in two "school days" per year
- Community member presentations in their areas of knowledge

Regional level

- Schools supported by demonstration schools
- Thirty-three CEPs (*Centro Experimental Pedagógico*) providing ongoing in-service training for all teachers
- Workshops for regional supervisors in providing pedagogical support

Central level

- *Escuela Nueva* and CEPs institutionalized within the Ministry
- Expansion of the program from 8,000 to 26,000 schools

Two recent studies provide insights into the lessons learned from the expansion of the *Escuela Nueva* program. The first is a quantitative evaluation of the program (Rojas 1988) and the second is a series of in-depth case studies of successful schools (Rojas 1990). The evaluation was carried out after the *Plan de Fomento* expansion program funded by the World Bank had been underway for three years and encompassed 3,208 children in third and fifth grades. The study sampled representative departments, conducting tests, interviews, and observations in 160 schools and communities participating in the *Escuela Nueva* program and 60 rural schools using traditional approaches.

Children were tested in Spanish, mathematics, self-concept, civic behavior, and creativity. On within-department comparisons, children in the *Escuela Nueva* program scored significantly higher than their counterparts on 27 comparisons and lower on six. On an additional 66 comparisons, no significant differences were found, which led the authors to suggest that no negative effects result from the transition to the *Escuela Nueva* program. When data were aggregated at the national level, all significant differences in the test results favored the *Escuela Nueva* children.

The study also examined teachers' records to determine drop-out rates. Results showed that there was no difference between sample children when examining the percentage of the same children who had enrolled in first grade five years earlier. When total year by year drop-outs were examined, however, *Escuela Nueva* had about half the percentage of drop-outs as the traditional schools at each grade after the first.

Results also showed that the administrative structures and responsibilities for coordinating the program varied by department. In some departments, only one or two part-time people were responsible for coordinating the entire program. This led to problems in delivery of materials to the schools and in follow-up with the teachers, which caused teachers to question the seriousness of those implementing the program. Evaluators recommended a period of consolidation, including an information campaign, that would make regional educators aware of the successes of the program, ensure the availability of adequate materials and trained teachers at all existing schools, and provide permanent coordination at the regional level.

Classroom observations conducted in mid-1990 as part of this evaluation suggest reasons for the successful test performance of *Escuela Nueva* children. Observations were made at four schools, two with the *Escuela Nueva* program and two without. Each had multi-grade classrooms. Six traditional schools were visited to find two where the teachers of the desired grades were present or where classes in those grades were in session. This did not prove to be a problem in the *Escuela Nueva* schools; even when a teacher was not present, students carried out class activities on their own under the periodic supervision of teachers from other classrooms. In the traditional schools the students were generally sent home when the teacher was absent.

In both types of schools teachers were experienced, having at least ten years of service. The *Escuela Nueva* teachers were generally positive toward the program, which had been in the schools more than ten years. At one of the schools, teachers mentioned some early problems in receiving materials and overcoming resistance on the part of parents to the change. All of these problems were said to have been overcome. Teachers in traditional schools stressed the lack of materials, especially textbooks, as a problem in teaching the children.

Teaching in the schools without the *Escuela Nueva* program tends to be teacher-centered. In the classes observed where the teacher was present, 73 percent of the time was taken up in large group activities, with the remainder of the observation time devoted to seatwork. No materials were used other than the blackboard, student notebooks, and some ice cream sticks for counting. The teacher accounted for 64 percent of the verbal interaction during the time

period, with task-related peer interactions and individual work accounting for 10 percent and 9 percent of the observation time, respectively. During the remaining 17 percent of the time, the children were observed to be engaged in non-task-related activities.

The emphasis of the *Escuela Nueva* program on small-group programmed learning was reflected in the observations made in *Escuela Nueva* classrooms. With teachers present, 72 percent of the observation time was devoted to small-group, student-directed activities; 19 percent to seatwork; and only 9 percent to large group activities. The large group activities consisted of discussing classroom concerns such as schedule changes or the purpose of the observer's visit. As might be expected, given this structure where the teacher circulates and participates in small groups, teacher interactions with the individual children under observation made up only 20 percent of the total interactions. Task-related peer interactions and individual work each accounted for 30 percent of the total observation time, with non-task-related behavior accounting for the remaining 20 percent. As the children worked with the programmed learning guides in small group and seatwork activities, there was extensive interaction with the program's instructional materials.

Perhaps the effectiveness of the child-centered approach of the program is best illustrated by the classroom environment when a teacher is not present. As mentioned, it is common practice in traditional schools to send the children of a class home if the teacher does not arrive. *Escuela Nueva*, on the other hand, encourages the children to continue normally with their work, with periodic monitoring by other teachers. In searching for comparison schools, the opportunity to observe a class with no teacher in a traditional school arose, and observations were made and compared with a similar situation at an *Escuela Nueva*.

Two differences were immediately striking. First, in the traditional school, a written assignment had been put on the board prior to the observation period, and no teacher was present for the entire observation period. The ability of *Escuela Nueva* teachers to leave their children working by themselves on programmed activities allowed them to circulate to the teacherless class. Thus, 30 percent of the observation time in the teacherless *Escuela Nueva* class were interactions between individual children and the teachers from other classrooms. Second, time off-task in the traditional school made up 66 percent of the total observation period, whereas this accounted for only 11 percent of the observed time in the *Escuela Nueva* classroom. In the *Escuela Nueva*, the bulk of the interactions (43 percent) were with peers about the task to be completed. Observations of two children illustrate these differences (see Box - Colombia).

When the Rojas 1988 evaluation data were examined by sex, boys in both the traditional and the *Escuela Nueva* schools performed significantly better than their female counterparts in mathematics. Third-grade girls in *Escuela Nueva*, however, performed better in mathematics than males at the same grade level in the traditional schools. With the exception of third-grade girls in traditional schools, females outscored males in Spanish, although not significantly so. Thus, the data show that the *Escuela Nueva* program strengthened the performance of all children but did not overcome traditional sex biases. Boys still performed better in mathematics and girls in language.

The observational data collected for this study showed no differences in the type of interactions between the teachers and children of different sexes. Similarly, although there was more interaction among children of the same sex, no differences were observed in the types of interactions between boys and girls than among peers of the same sex.

The second Rojas study (1990) examined twelve schools throughout the country that local administrators had identified as successful. The findings showed that institutionalization of *Escuela Nueva* at the central level required individuals who were strongly committed to the program. It was not seen as an innovation of national scope until its founders moved to the Ministry and lobbied for support. These individuals also protected the program, moving it within the Ministry to supportive divisions until the results were sufficiently impressive that the *Escuela Nueva* program gained a large constituency calling for its institutionalization. This implies that new programs should be multifaceted and flexible enough to fit into various areas of a ministry's portfolio.

The findings also suggested that a developing country cannot be expected to support a major innovation such as *Escuela Nueva*, even in a time span of almost fifteen years. Although Colombia helps finance the program at both the departmental and national levels, international donor support has been necessary throughout the life of the program. Much of this support has been for program expansion. However, general complaints about the lack of new materials in even the successful schools led to the conclusion that recurrent costs would remain high. This is especially true during a period of expansion.

The availability of experienced support personnel will also affect expansion of the program. In the case of the sample schools, as the program expanded, regional and local administrators were spread thin, and they tended to visit the older, better implemented schools less often. The teachers in these schools started to feel abandoned. One solution was the highly successful peer training done in the micro-centers that form a part of the *Escuela Nueva* program. The study concluded, however, that there must also be a systematic plan for increasing the number of support personnel if expansion is to be successful.

At the school level, the most difficult aspect of the program to implement has been the flexible promotion component. This appeared to result from a number of factors, including teachers' lack of understanding of the component, parents' lack of acceptance either because it was different from their own schooling or because they failed to see progress in the children, or students' lack of motivation. The study suggested that special workshops on flexible promotion might be needed for both supervisors and teachers as the program expands. Modules for discussions with the community on this component of the program were also seen as a helpful addition to existing orientation materials.

Community support for the program was generally high. Where the program had been properly implemented, community involvement was encouraged and parents saw positive changes in their children. However, in a few cases where teachers did not understand the program well and were perceived to be lazy as a result of children's lack of progress, there existed movements to do away with the *Escuela Nueva* program. This suggested that ongoing assistance should be given to monitor community attitudes to the program as well as to monitor classroom activities; the program could appear to be successful within the school but lack community support.

Box - Colombia
Classroom Observations

Traditional Class

(10:20) Osmar sits, turned in his two-student desk staring at two boys wrestling at a desk in the next row. The girl next to him whispers something and points to the four mathematics problems on the board. Osmar doesn't respond but continues to stare at the boys as he chews on his finger. He glances at the observer, then looks around and coughs. He catches the eye of one of his classmates, who is conversing with two third graders, and signals with his hand for the boy to come over. The boy approaches and Osmar tells him the observer is writing down his behavior and will tell the teacher. Both boys glance at the observer, then the boy runs from the classroom and Osmar looks around the class. The girl next to him says "Twenty-two" (*Veintidos*) and Osmar repeats this loudly and then smiles at the girl. (10:25)

Escuela Nueva

(9:05) Jorge sits at a table made from four two-student desks pushed together. The boy next to him gets up and goes to the teacher's desk, returning with the Natural Sciences student guide. The boy opens the book and flips through it. When he stops on a page, Jorge, who has been watching, says, "One, objective one — this isn't it" (*Uno, objectivo uno — esto no es*), pointing to the page. Jorge turns the pages to objective one, "We know the states of different materials" (*Conozcamos los estatos de los cuerpos*). The girl across the table asks, "This?" Jorge responds, "This and this," pointing to a series of questions. He then turns and looks at the girl next to him who is writing in her notebook and says, "Hurry." He turns back to the science book and says, "We do the questions, then. . . ."giving a four-sentence explanation of what must be done. (9:10)

Principals were found to be key to the success of the schools in the study. In small schools, however, lack of commitment on the part of the principal could be overcome by a strongly supportive teacher.

Lessons Learned

This project suggests several lessons about the design and implementation of activities that do not require large investments to produce lasting effects. The lessons are organized into the three main areas discussed previously: project design, project implementation, and project evaluation.

Project design. A small investment can have relatively large effects when it builds on local efforts that are viewed as successful. This is especially true if the project is consistent with stated government policy such as a commitment to rural schooling.

A project that is to be implemented regionally requires pre-design work to win the support and cooperation of the regional and local entities that will act as implementing organizations. The resistance to and lack of understanding of the project both at regional and local levels convinced designers that including a public information campaign in the design would have aided project implementation. The potential of social marketing techniques in facilitating project implementation should be considered in the design phase of innovative basic education projects. Logistical difficulties that may be encountered in regions at a distance from the capital should be assessed at the design stage to reduce delays in implementation.

Flexibility in funding to cover unforeseen occurrences (such as the coordinator positions that were inadvertently left out of the MOE budget) is a key design issue. The project must be able to fund all essential elements.

Provision of a detailed evaluation plan in the project paper will facilitate project monitoring. When an evaluation committee is established that includes host country educators, greater acceptance and use of the evaluation results are likely to take place.

The Educational Technology Project was designed as a short-term intervention to serve as a catalyst for expanding the *Escuela Nueva* program. It proved very successful in this regard. However, implementation of a pilot program on a national level will take a number of years and is likely to require continued international donor support. After fifteen years, *Escuela Nueva* has reached about one-third of Colombia's rural schools and continues to rely heavily on donor support.

Project implementation. An important lesson to be learned in the implementation of this project was its emphasis on supporting teachers. Not only did the project provide tools for teachers in the form of workshops, manuals, student texts, and supervisory support, but it focused on the teachers' feelings of self-worth. The project implementors made a point of showing the teachers that they would be the key to creating a "New School," and encouraged activities such as the micro-centers that would reinforce this concept.

Placement of the founders of the program within the MOE helped to build support for the program. These individuals were able to explain the USAID project and the *Escuela Nueva* program and lobby for their support. Thus, a constituency was created that protected the program and pushed for its institutionalization. Even with this support, however, it took several years and additional international donor financing before the program was incorporated officially into the Ministry.

The commitment of school principals was an important factor in successful program implementation at the local level. This suggests that local school administrators merit special attention in the design of basic education projects.

As a new education program expands in a developing country, support personnel are likely to be spread thin in order to keep down recurrent costs. Schools that have been in the program longer may receive less support once they are perceived to be successfully implementing the program. To avoid a feeling of abandonment on the part of such schools, it is important that an alternative support system such as peer training or distance courses be developed.

Skilled human resources to carry out project activities are often available within a developing country. Many of the project activities were contracted to local entities to develop. This

created the expertise necessary for revising the instructional materials and provided a sense of ownership of the project.

The emphasis on children taking charge of their learning through student government and individual or group programmed learning activities facilitates program implementation. Students take responsibility for their learning and view the school as their own. Thus, they can carry out learning activities in the absence of a teacher.

The principal factor in parental support for a school intervention is the degree to which their children's performance meets parental expectations. If teachers are not committed or do not implement the program correctly, a negative reaction on the part of parents is likely.

Technical assistance. Technical assistance efforts that are collaborative and build on existing achievements are likely to be successful. A collegial relationship can be encouraged through sharing of the counterparts' work space.

Evaluation. Existing evaluation units should be incorporated into project monitoring efforts. The USAID project involved the MOE evaluation unit in the evaluation design. As the actual project evaluation was carried out through a contract with a private sector firm, however, it is unclear whether the MOE unit was involved in the analysis or even received the data from the evaluation. Such data could serve as a baseline for tracking program impact longitudinally.

Sustainability. Despite the success of the *Escuela Nueva* program over a seventeen-year period, the Colombian government is still relying on international donor support to expand the program. This suggests that a relatively long time frame is needed for host governments to absorb expanding programs, and that without donor support, even highly successful pilot programs may be in jeopardy.

Conclusions

The Colombian case shows that a relatively small investment on the part of a donor agency can have a substantial impact when it builds on existing local efforts. However, ongoing donor support may be necessary if the project activities are to expand beyond a demonstration or pilot stage. Such support can be facilitated through communication among donors about project results.

The success of the *Escuela Nueva* approach suggests that to change the attitudes and behavior of rural classroom teachers requires a complete restructuring of the classroom environment. This includes not only removing the teacher as the focal point for classroom interaction by rearranging classroom furniture, but also allowing students and community members to play active roles in school decision making, providing students with instructional guides that allow them to carry out much of their own learning, and assisting teachers to master the program.

The findings of this study also document the existence of a critical mass of qualified technicians in Latin American countries such as Colombia who can carry out sophisticated curriculum development and evaluation activities. These individuals and groups represent a valuable resource for international technical assistance efforts.

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Rural Primary Education Improvement Project

The Rural Primary Education Improvement Project in Guatemala was chosen as a case study because of its emphasis on providing relevant basic education to children of a linguistic and cultural minority who had been poorly served by the traditional delivery system. This review was conducted in mid-1990 as the project was drawing to a close and a new project beginning. The lessons learned in the implementation of this project provide insights for the development of education interventions with linguistic and cultural minorities in other settings.

The project consisted of six components, all of which had the objective of creating a permanent capability within the Ministry of Education (MOE) to provide relevant bilingual education to monolingual indigenous children living in the Guatemalan Highlands.

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

The project was financed for the five-year period from 1985 to 1990 by a loan ($10.2 million) and a grant ($3.3 million) from USAID and by counterpart funds from the Government of Guatemala of approximately $25 million.

Background

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

As early as the 1930s, the Government of Guatemala began to show concern for the education of indigenous children. Teachers were assigned to teach indigenous children to speak Spanish during a preschool year in a program called *Castellanización*. Since the teachers did not speak the language of the children, their ability to transfer knowledge was limited. Therefore, in 1965, the Government of Guatemala changed from a monolingual to a bilingual approach in which native speakers of indigenous languages, who had mastered Spanish and completed sixth grade, were recruited as preschool teachers. PRONEBI had its antecedents in this early program. It involved free use of the students' home language to facilitate understanding, and at the same time, a year of intensive instruction in oral Spanish language skills to five-year-old preschool children.

First grade instruction in schools with a bilingual preschool program, however, was usually given entirely in Spanish by native speakers of that language who did not speak or understand the indigenous language of the children. Consequently, the primary school program had limited success among indigenous populations. An experimental bilingual education project was funded by USAID between 1980 and 1984. This project developed a linguistically and culturally relevant curriculum and tested the effect of the curriculum model in which the language of instruction was gradually shifted from the indigenous language to Spanish over a four-year period. That project compared the academic achievement, drop-out, retention, and failure rates of indigenous children in 40 pilot schools to a similar group of children in comparison schools. The results led to the institutionalization of PRONEBI by national decree and to the development of the Rural Primary Education Improvement Project.

It is important to note that the pilot project was implemented at a time of extreme violence directed against the indigenous population. Its success in the face of this situation can be attributed to two factors. One was the courting of the military by project administrators. Their continued efforts to bring problems to the attention of military personnel resulted in the appointment of a liaison officer whom project officials could call in any emergency. The second factor was the visibility of project officials — especially the USAID Education Officer — when indigenous personnel involved with the project were threatened. Interviewees felt that this presence, showing the involvement of USAID with the project, acted as a deterrent to violence toward project field staff.

With the change in government in 1983, there was a lessening in hostility toward indigenous groups, which continued with the democratically elected government in 1985. Bilingual education profited by this change, and PRONEBI came into existence through a governmental decree (No. 1093-84) in December 1984. Its purpose is to support the coexistence of two cultures — Ladino and indigenous — and their respective languages in Guatemala by promoting the harmonious development of the individual in two cultural and linguistic contexts, thereby contributing to a conscious definition of a Guatemalan nationality (Government of Guatemala 1984). A Ministerial accord on July 10, 1985, ratified the internal operating procedures of the program.

PRONEBI is under the direction of the Directorate of Rural Socio-Education (*Socio-Educativo Rural*), which is responsible for all rural primary education in the country.

Project Design

At the time that the project was designed, the mission's Office of Human Resource Development (OHRD) did not have either an integrated human resource development strategy or an education sector strategy. The Country Development Strategy Statement (CDSS) was seen to provide a general framework but was not central to project design. The USAID mission now has an education sector strategy, which respondents said has been very helpful in the design of a new basic education project that includes further expansion of bilingual education.

By 1985, the mission had invested in three back-to-back loans to build classrooms, develop facilities for pre-service training, and update curriculum materials, respectively. With heavy World Bank investment beginning in Guatemala and the favorable results of the evaluation of the bilingual education pilot project, USAID saw a need to concentrate on the most at risk populations. Thus, the mission narrowed its focus to the indigenous population.

The mission's approach to designing the Rural Primary Education Improvement Project was one

of involving both MOE administrators and technicians extensively in the design process. A high-level committee, consisting of the technical Vice Minister as chair and the directors of the functional divisions of the MOE that would be involved in the project, was formed to ensure that the project was in line with Guatemala's five-year plan. A second committee of technicians from the potential implementing divisions was formed to determine the feasibility of the project. PRONEBI made presentations on the results of the pilot study and other activities to the first group, and worked with the second group to carry out studies and review A.I.D. Handbooks 3 and 13 as well as results of the evaluation of the pilot project.

Both groups started working approximately one year before the actual design phase to build consensus for the project in the favorable atmosphere that existed with the change of government. These committees then formed part of the working groups that, together with USAID personnel and foreign consultants, prepared the Project Paper. Government personnel who were interviewed for this study thought that this approach had allowed for the development of a project that reflected the reality of the host country.

Background studies consisted of a 1978 sector assessment and the evaluations of the pilot project as well as the studies carried out through the working groups. The USAID personnel interviewed thought that, while it would have been ideal to have had some targeted studies to provide options for USAID in rural education, it was necessary for the mission to take advantage of the existing political climate that was favorable toward the indigenous population. USAID personnel also recognized that the size of expansion (from 40 schools in the pilot project to 400) might be overly ambitious in terms of the administrative capacity developed in PRONEBI up to that time. They felt, however, that given the favorable political climate, it was necessary to expand rapidly and form a solid base for bilingual education.

USAID, through the HRD Office, took the lead in developing the Project Identification Document (PID). The work of the committees was incorporated into the document. The Education Officer coordinated the Project Paper development, working with the committees and bringing in international consultants for specific analyses. There was consideration of coordination with other USAID projects. The emphasis on the indigenous population was seen as consistent with the mission's emphasis on rural diversification. The Education Administration Project trained supervisors and administrators in the MOE functional areas dealing with PRONEBI, and the Nonformal Education Project was to promote bilingual education and take advantage of PRONEBI's expertise to develop bilingual materials. Although not directly related to the Rural Primary Education Improvement Project, the higher education project for indigenous students was also aimed at the Mayan population.

A major area of contention in project design was technical assistance. USAID felt that international expertise was needed in a number of areas. The Government of Guatemala, on the other hand, was of the opinion that sufficient local expertise had been developed through the pilot to serve the needs of the new project. A compromise was reached in which a team of international consultants in bilingual primary education, anthropology/linguistics, and evaluation was to be secured by competitive bid. Local consultants in the areas of training, supervision, logistics, and administration were to be hired individually.

Project activities were to be coordinated with the activities of the World Bank to minimize overlap. The Bank was to fund the production of the PRONEBI texts and teachers guides when these were completed. Interviewees felt, however, that the degree of coordination obtained was a function of the interest taken by USAID and World Bank personnel in the bilingual education project rather than a consistent effort to plan the integration of activities with other donors. For example, no integration with the Inter-American Development Bank or the Organization of American States was planned.

Project Implementation

The implementation strategy for the project was to gain the maximum expansion of bilingual education possible in the favorable political environment of the moment. Thus, 1,200 schools were included under the PRONEBI umbrella, although only 400 of these schools ("complete schools") were to be provided with teachers and curriculum materials for preschool

through fourth grade. The others ("incomplete schools") either had bilingual staff only for preschool or had staff fluent in Mayan languages other than the four principal languages of Mam, Kekchi, Quiché, and Cakchiquel for which texts were to be developed. The project was to have a phased implementation schedule; the texts for a certain grade level were to be developed each year and the Ministry was to assign bilingual teachers to each grade level as the texts became available.

Administration and supervision. Many of the PRONEBI staff members had been employed under the pilot project and therefore were knowledgeable about the bilingual education program and had ongoing experience in its design. Through project support, most staff members had studied in a university program, thereby upgrading their academic qualifications for the positions they held. Evaluations of and conversations with PRONEBI personnel suggested a high degree of motivation on the part of PRONEBI staff. Program administrators attributed such commitment to the encouragement of having bilingualism recognized as a positive attribute or skill for the first time.

Despite effective administration, however, the multiple responsibilities in each PRONEBI operating unit, caused by expansion from a pilot to a national program ten times as large, stretched technical development to its limits. In addition, normal changes in the direction taken by PRONEBI in its development led to the recommendation that PRONEBI focus its main efforts for the next several years on consolidating its services to the current 400 schools, rather than expanding services to additional schools. The objective was to ensure the technical adequacy of the materials, services, and operational systems under development. Strengthening the PRONEBI infrastructure in the 800 additional schools with some bilingual teaching staff was to continue as a secondary objective to prepare for a future expansion of bilingual schools.

A problem that existed at the start of the project was the overlap of PRONEBI activities with those of the World Bank-funded PRODEPRIR project. This project was developing a rural curriculum and was testing the curriculum in some schools that were also implementing the PRONEBI curriculum. Thus, teachers were confused about what they should actually be doing in the classroom. This conflict was resolved through a series of meetings between the two organizations.

During the initial implementation of the project, school furniture was not delivered to PRONEBI schools on time for reasons beyond the control of the administrative unit. Because of a nationalistic backlash against the original bid award for the furniture to a Salvadoran company, the Ministry of Finance canceled the contract, and a new request for bids was made prior to selecting a Guatemalan furniture manufacturer. This caused delays of over a year in the delivery dates and reflected very negatively on PRONEBI in the local schools and communities, which had been promised furniture.

Because of a devaluation of the quetzal, there existed a surplus of $3.7 million in local currency three years into the project. PRONEBI carried out a reprogramming exercise to fund additional activities, including program expansion. At the time of the study (May 1990), however, only about 500,000 quetzals had been released to PRONEBI by the Ministry.

PRONEBI has a public relations arm attached to its administrative unit. This group carried out some localized promotion of the program; however, public relations efforts were largely ineffective due to the lack of technical expertise and staff. Several studies document a lack of understanding of the program in both indigenous and nonindigenous communities, and government officials have been characterized by PRONEBI personnel as indifferent to the program.

An ongoing problem is the lack of integration between PRONEBI and MOE activities. PRONEBI, because of its emphasis on bilingual education, has maintained itself somewhat apart from other Ministry divisions. In addition, as an internationally funded program, PRONEBI received vehicles for the program and motorcycles for supervisors that further set it apart. The new basic education project, begun in 1990, emphasizes logistical support for the primary education system in general and for the greater integration of PRONEBI with other divisions through the national effort to regionalize education. Thus, this difficulty should be resolved in the future.

The supervision subsystem coordinated by PRONEBI within the national educational system

has functioned well. When ordered to take part in a regionalization program that required PRONEBI supervisors to supervise all schools in a region, not just those of PRONEBI, supervisors did so without complaint. Teachers view supervisors positively and feel that they are providing guidance and support rather than inspection.

Having to collect administrative data and deal with teachers' needs has limited the contact PRONEBI supervisors have with local communities to the resolution of overt problems, such as parents removing their children from school as a result of misinformation about the bilingual education program.

Under the project, PRONEBI supervisors had the opportunity to take a two-year university course in the administration of bilingual education programs. Over a third of the 41 supervisors, however, experienced academic problems. A number of factors contributed to these problems, including workload and time demands, lack of sufficient interest or preparation for university studies, unfamiliarity with the goals of PRONEBI, and a lack of relevance of course content to the direct implementation of the PRONEBI program. Eventually, all but four supervisors completed the program. Because of their studies and the confidence gained in the program, most of the supervisors became active in school personnel issues. In the last year, they were among the leaders in a strike that resulted in the Ministry suspending all supervisors. There is hope that with the leverage of the new project, the supervisors will be rehired as part of the regionalization effort.

Curriculum development. The curriculum development unit is adequately staffed, but personnel lack training in textbook design and the learning processes of young children. In addition, non-PRONEBI-specific demands on the time of the curriculum development teams (e.g., translating the National Constitution) have led to wide variation in the pedagogical adequacy of the student texts and teacher guides developed for the different language areas.

PRONEBI calls its approach to bilingual education a parallel bilingual model. The model encourages instruction in the native language in preschool and first grade, then dual use of Mayan and Spanish as the languages of instruction in subsequent grades. This model is pedagogically appropriate for those communities where the perceived need is greatest — where virtually all children are entering school monolingual in a Mayan language. The model, however, is not appropriate for PRONEBI schools where children have considerable Spanish proficiency upon entering preschool or in classrooms containing children who are monolingual in Spanish. At the time of the study, PRONEBI was beginning to develop Spanish texts to accompany the Mayan texts and thus make the materials more flexible.

The availability of bilingual teachers has been the major stumbling block to effective implementation of the curriculum. The Ministry, which had promised to assign 150 teachers a year to PRONEBI schools, has not done so, and the project agreement does not contain a condition precedent to guarantee assignment. Even if the agreed-upon 750 teachers were assigned to PRONEBI schools over the life of the project, this would be insufficient to provide the 1,600 teachers needed in grades 1-4 in the 400 schools in which PRONEBI is currently working and would not allow for expansion.

With the available teachers, lack of familiarity with Mayan as a language of instruction (versus an oral language for use at home and in the community) tends to hinder program implementation. Few of the teachers have studied an indigenous language formally, and most are not comfortably literate in their first language. Despite the in-service training provided by PRONEBI, teachers express insecurity in reading and writing their native language.

Linkages with institutions that train bilingual students to teach in rural indigenous areas (e.g., Escuela Normal de Santa Lucia Utatlan) were not fully developed. There was no attempt to use PRONEBI texts in the classes nor to use PRONEBI schools for student teaching. PRONEBI's only involvement with normal schools was to provide staff to teach classes in Mayan language at the two religious normal schools for indigenous children in Guatemala City and Antigua.

A number of physical and logistical factors also hindered implementation. Overcrowded classrooms and the lack of rudimentary materials such as chalk and serviceable blackboards contributed to less than optimal use of the

instructional materials at some schools. Although government programs are addressing nutritional and health deficiencies in the children, these deficiencies also continue to undermine students' scholastic achievement. Finally, community members reacted negatively to the program in some areas; they fear that the program will impede their children's acquisition of Spanish.

Textual materials. The 1987 process evaluation of PRONEBI found that student texts and teacher guides in the four principal Mayan languages accurately reflected the national primary education objectives and, with the exception of the Mayan language texts, were consistent across the four language areas. The attractive texts were culturally and linguistically appropriate for the areas in which they were developed. Dialect differences, however, were substantial in some of the expanded geographical areas in which PRONEBI was working.

There were two critical weaknesses in the instructional materials. First, teachers interviewed generally found the texts too difficult for their students and felt the guides did not offer sufficiently detailed information to aid teachers in efficiently using the texts. Second, while there is wide variation in the pedagogical adequacy of the teachers guides and student texts, a number of consistent problems exist in varying degrees across all of them. These are a reliance on teacher-centered learning; an overwhelming emphasis on rote learning; lack of accord with child development principles and a corresponding premature assumption of literacy; lack of creative classroom activities; failure to indicate adequately how student texts are to be used; lack of integration with previous Guatemalan curricular innovations; and lack of attention to the language needs of the broad speech communities. Many of these deficiencies exist also in the national curriculum guides upon which the bilingual curriculum was based.

When interviewed, the curriculum teams felt that they were making adequate progress in revising the curriculum. They were hesitant to accept technical assistance because they did not find previous assistance useful. However, a review of the materials in 1988 found little change in the materials.

This is a function of the experience of the curriculum team members who did not have active, child-centered learning experiences in their own school years and of the teams' concern with correctly re-establishing a written Mayan language. This concern involved team members in discussions about a new lexicon that was just accepted by the government and in preserving the academic integrity of the written forms presented in the texts. In addition, all of the editing of materials was done by hand or with typewriters. The time involved to make extensive changes in the materials was a major factor in the teams' reluctance.

Training. The professionalization program to provide high school equivalency for bilingual promoters who teach the preschool classes proved very successful. Although cramped housing for the training unit and lack of equipment hindered optimum efficiency, the program graduated 808 promoters, rather than the 580 originally planned.

The in-service training program for bilingual teachers was largely successful in winning the teachers' acceptance of the philosophy and goals of PRONEBI. The organization relies on the in-service training sessions to overcome deficiencies in the teacher guides and texts. Because the trainers themselves lack experience teaching with rural primary school texts, the training activities seldom deal with the specifics of how to use the instructional materials in rural classrooms.

The university courses for supervisors and coordinators were well organized, offered topics theoretically related to the implementation of the bilingual education program, and were taught by well-known Guatemalan scholars. The professors, however, had little experience with the practical aspects of applying their disciplines to the implementation of a bilingual program. As mentioned, the academic achievement of the students in the two university programs varied a great deal. Nearly all of the PRONEBI staff and regional coordinators in the degree program successfully completed their coursework, whereas a third of those in the short course in administration for supervisors experienced some difficulties.

Research and evaluation. The research and evaluation unit was to develop measures to monitor the academic achievement of children in two languages, to continue a longitudinal study of the pilot schools, and to carry out an evalua-

tion of the expanded program. The international consultant in evaluation functioned as the de facto head of the unit during the two years that he worked with PRONEBI. He trained an indigenous woman who was appointed the head of the unit after his departure. While this individual could carry out the routine data analysis required for refining the tests, she was not an evaluation specialist. Therefore, PRONEBI hired a national Guatemalan consultant to assist in the development of an evaluation research design. One of the difficulties encountered was the unavailability of individuals with the necessary qualifications in computerized evaluation at the salary PRONEBI was willing to offer.

Once the consultant was hired, the PRONEBI data base was found to lack information about the children, teachers, schools, and communities in its own schools and in those served by its supervisors; this information would be critical to make decisions about an evaluation design or about subsequent expansion of the program. Thus, the first task undertaken by the consultant was an assessment of the PRONEBI schools.

The international consultant's attempt at collecting evaluation data was superficial and found little difference among children in PRONEBI and non-PRONEBI schools. However, the consultant admitted that the design was flawed — there were no data collected on the degree to which the PRONEBI program was implemented in the classroom or any attempt made to conduct a pretest to determine the appropriateness of the comparison group.

Technical assistance. The four Guatemalan national consultants in supervision, training, administration, and logistics were very effective in their roles and achieved a good deal of integration with the PRONEBI program. All of them, however, were directly involved with ongoing program operations. In the case of training, where no unit head had been named, the consultant ran the unit. When she departed, neither administrative skills nor training technology had been transferred.

The international technical assistance component of the project consisted of three long-term positions in bilingual curriculum, anthropology/linguistics, and evaluation. The bilingual curriculum specialist, who also served as chief of party, was primarily an education administrator. He brought with him a curriculum developed for the bilingual populations of another country in which he had worked, and insisted that the PRONEBI personnel focus on a transitional bilingual education model. His approach was seen by PRONEBI staff members as indicating a lack of interest in learning about their unique problems and a desire to apply his expertise to their problems. Thus, there was little direct interaction between the consultant and the curriculum development teams except for administrative purposes.

In the area of linguistics/anthropology, the contract called for the consultants to develop products such as student dictionaries, language area histories, and grammar analyses. Thus, much time was spent in field work and document preparation in the contractor's offices. The products were completed; however, no provisions had been made for integrating the products into the overall curriculum development effort prior to the consultants' departure. The emphasis on products, combined with the physical isolation of this component from other PRONEBI staff and the lack of designated counterparts in these two areas, limited the contributions made to staff development and technology transfer by the consultants.

The technical assistance in research and evaluation was successful in aiding in the establishment of a research and evaluation unit in PRONEBI and beginning the development of evaluation systems for the program. The complexity of developing an appropriate evaluation design, the lack of a counterpart, and the need to provide formative evaluation information to the ongoing curriculum development effort created a need for long-term assistance in this area that could not be met within the time frame of the technical assistance contract.

Project Management

Formal communication with USAID was well developed on a technical level and maintained weekly. USAID representatives are included in the Technical/Administrative Council, and USAID personnel are invited to all PRONEBI activities. Early in the project implementation, however, there was a USAID-provoked budget problem that took some time to resolve and interfered with routine PRONEBI operations. USAID had been funding a controller position

within PRONEBI to handle financial transactions with USAID, and this position was included in PRONEBI's annual budget proposal to the mission for the current year. The position, however, was defunded by USAID, and the entire budget allocation to PRONEBI was held up until a solution to the problem could be found. Thus, short-term funding difficulties within PRONEBI were created and some PRONEBI personnel were not paid on time.

There was substantial changeover in USAID project monitors over the life of the project. Three different USAID direct hires and a North American personal services contractor had responsibility for the project over the course of five years. The foreign service nationals (FSNs), however, remained the same and provided continuity. When interviewed, project managers felt that their responsibilities were to ensure that project activities take place within regulations, to assist when problems arise, and to help technically. There was a feeling in PRONEBI that greater flexibility in the timing of funding would aid project implementation.

Project Evaluation

PRONEBI staff and USAID personnel have generally found the evaluations conducted to date to be useful. These included an external process evaluation, conducted after the second year of the project; bi-yearly internal planning reviews; and a recent project audit. In each case, PRONEBI personnel were brought into the evaluation process by discussing their evaluation concerns and sharing or clarifying results with them during the course of the study. PRONEBI staff were so positive about the process evaluation that they asked the evaluation team to return and provide a seminar on the evaluation results as well as to participate in the annual planning exercise.

Sustainability

The project was planned to incorporate PRONEBI into the MOE, thereby creating budget support for bilingual education. With the exception of counterpart funds for teachers' salaries, this did not occur. The new USAID basic education project will continue to fund the bulk of PRONEBI's activities. The program has yet to build a strong constituency among government officials, who were described as indifferent to the program.

Outcomes

No achievement data that allow comparison between PRONEBI-trained children and similar children in non-PRONEBI schools are available. A recent qualitative study (Richards 1990), however, has carried out an in-depth analysis of classroom interaction patterns in seven schools (four PRONEBI and three non-PRONEBI) located in two different Cakchiquel-speaking areas. The results of this study provide an indication of the degree of implementation of the activities of the program.

The study reports the results of interviews with teachers and parents as well as the findings from systematic classroom observations of individual children. Parents were found to be generally in favor of their children speaking two languages. Spanish, however, was seen as the language of the classroom; two-thirds of the parents thought Cakchiquel could be learned at home and would interfere with learning Spanish if the two were taught together. The parents had little knowledge of the objectives or methodology of the PRONEBI program. There was a greater tendency on the part of the parents to enroll boys in school than girls, and few of the women interviewed had attended school beyond the first grade or were fluent in Spanish. Enrollment of eligible children in PRONEBI schools was significantly higher than in comparison schools, and parents of PRONEBI children were more likely to say that their children attended regularly.

The language proficiency of the teachers points out the problem of teacher assignment. In each group of schools, there were five teachers who did not speak Cakchiquel. Of those who could speak the Mayan language, half felt that they had difficulties in using it and only four thought that they wrote it well. This was reflected in the use of Cakchiquel in the classrooms; five of the teachers who spoke Cakchiquel did not use that language in the classroom. Similarly, even those teachers who used the Mayan language felt that they needed more training in the grammar to teach it well. Despite this lack of mastery, there was a significant difference in the total frequency of Cakchiquel use in PRONEBI schools when contrasted with the comparison schools.

The lack of mastery carried over to the use of the bilingual texts. Although they were present in the PRONEBI classrooms, they were seldom ob-

served in use. Teachers cited several reasons for not using the materials, including the facts that the teacher was not biliterate, the texts were too advanced for the children, or the materials had problems.

Observations of individual students showed that PRONEBI students were spoken to more in Cakchiquel, that there was greater adherence to a planned schedule, and that children spent more time on learning-related tasks. The main classroom activities were teacher-centered large groups and seatwork. A majority of instructional time focused on Spanish and mathematics. Approximately one-third of the school day was spent in nonacademic pursuits such as transitions and opening or closing activities. Few lessons that focused on Mayan culture and language were observed in any of the classrooms.

The students in PRONEBI classrooms were found to use more Cakchiquel than comparison children. No favoritism was found in the teachers' interactions with children of differing ability or of different sexes. Girls, however, were more likely to use Cakchiquel in initiating interactions or when responding to the teacher than boys.

Lessons Learned

The Rural Primary Education Improvement Project has shown that linguistic minorities, through international donor assistance, can develop effective programs to serve the needs of their populace. PRONEBI serves approximately 100,000 indigenous students and expects to reach 120,000 more. It provides children access to schooling in their native languages while preparing them in a second language, Spanish, which is the national language of the country.

In addition, the project supported professional training for 800 bilingual promoters and 48 supervisors, and provided in-service training to the primary teachers working in PRONEBI schools. These inputs resulted in increased quality of instruction, as reflected in teachers' adherence to a planned schedule, greater use of the native language, and greater time on task by PRONEBI students when compared to indigenous students in other schools. Thus, the program offers a number of lessons for the implementation of bilingual programs in developing countries.

Project design. In the expansion of a pilot program to a national intervention, it is important to involve key host country educators in the planning process. This was done successfully in Guatemala through presentation of the results of the pilot and by the incorporation of high-level administrators and technicians in the planning process. The consensus reached on project design gave the host country officials a feeling of ownership in the project and led to their ongoing support.

The design process showed the importance of taking advantage of a climate of support for an intervention. This support led to the institutionalization of PRONEBI and permitted large-scale expansion of the pilot. If political goals call for expansion beyond the recognized capability of the implementing organization, care must be taken not to lose sight of this fact and to build in a period of consolidating or increasing resources.

Background studies for project design should be targeted toward potential areas of intervention within a sector. They should focus on constraints to successful interventions and possible solutions along with associated costs.

The assignment of bilingual teachers to the PRONEBI schools has been an ongoing difficulty. Including such assignment as a condition precedent in the project agreement could have provided additional leverage for ensuring the placement of teachers, which is key to the implementation of the bilingual curriculum.

The involvement of local specialists in the provision of technical assistance shows that the Latin American and Caribbean region has developed capable human resources in many areas. This suggests that A.I.D. should examine the availability of national specialists to provide technical assistance when designing basic education projects.

Project implementation. The establishment of a special implementing unit enhances efficiency in project implementation. It may take some time, however, to fully incorporate such a unit into the structure of the Ministry of Education. Care should be taken to distribute resources throughout the system to avoid perceptions of favoritism and negative attitudes toward the special unit.

The "parallel" bilingual model followed by PRONEBI contains some aspects of both a

language maintenance model and a transition to the national language model. This mix of characteristics is true of most bilingual education models worldwide. In designing projects containing bilingual education components, it is not important to be concerned about a philosophical description of the bilingual education program. Rather, the emphasis should be on those aspects which contribute to increased efficiency. These include developing reading materials in the native language so that future generations of bilingual teachers will be truly biliterate, and making curriculum materials more flexible so that they can be used with children of different levels of first and second language proficiency.

Initial delays encountered in providing school furniture argue for caution in making promises that may be beyond the control of the implementing organization to keep. Failure to fulfill a promise in one area of a complex program such as PRONEBI may jeopardize the implementation of other components of the program because of local animosity. In fact, several instances of this came to the attention of the evaluation team.

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

Time and work involved in activities such as text development that require extensive editing can be greatly reduced if computers and word processing software are provided early in a project. Training in the use and maintenance of the software and hardware must also be provided.

Teachers and teacher trainers tend to teach in the ways they have been taught. As most rural educators have had little experience with textbooks or other instructional materials, they are unlikely to use such items extensively. Thus, teachers guides and texts must be made intuitive to encourage their use, and training should focus on the use of instructional materials in the bilingual classrooms.

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

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

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

The lack of understanding of the bilingual program by parents and the indifference of government personnel suggest the need for a broader public relations effort. This would include a multi-level campaign based on social marketing techniques aimed at creating an understanding of PRONEBI and winning support of indigenous communities as well as political and academic groups.

Technical assistance providers must judge the appropriateness of presenting technologies developed in other countries. No matter what success an intervention has had in one context, if it is not seen as appropriate by local implementors, it will not be adopted. Insistence on the implementation of an inappropriate model can result in the consultants losing credibility.

Although it is important that technical assistance efforts provide products that will have ongoing utility to a program, such products should not be overemphasized to the exclusion of

interpersonal interaction or technology transfer. Ideally, the consultants' scope of work should include interaction with counterparts to jointly develop products. This will help create the expertise needed to make appropriate adaptations in the products after the completion of technical assistance.

Evaluation. Building the capability in the implementing organization to carry out assessments of student performance is creditable. It is important, however, that performance measures of student achievement be combined with qualitative measures of the degree of program implementation. If, for example, textbooks have been delivered but are not being used in the classroom, it would not be expected that they would have an influence on student achievement. However, if frequency of use were not examined, the erroneous conclusion that the use of texts does not affect learning might be drawn.

In evaluating bilingual programs, it is also important to determine the language proficiency of individual children when interpreting study results. It has been shown that children of different language proficiency are influenced in different ways by bilingual interventions.

Conclusions

Despite the success of the Guatemala bilingual education program, it has yet to win the full acceptance of Guatemalan decision makers. While the causes for this lack of support are numerous, the results — which include failure to assign bilingual teachers to PRONEBI schools, a lack of reclassification for PRONEBI personnel who have improved their educational qualifications through the project, and the failure to incorporate PRONEBI fully within the Ministry of Education — have implications for program implementation, staff morale, and sustainability.

The development of a bilingual curriculum is a complex undertaking requiring skills beyond those of speaking, reading, and writing the target languages. Similarly, a single educator, even if extremely well-versed in bilingual education, is unlikely to have all of the diverse skills in curriculum development, textbook production, staff development, and formative evaluation of textual materials that will be required in developing adequate materials for dual-language settings. Thus, a cadre of specialists will be needed, as would be the case in single-language curriculum development efforts.

The successful use of long-term national consultants illustrates the availability of qualified host country educators in Latin America. They can provide technical assistance in a number of areas and should be taken advantage of in education interventions by donor agencies.

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Primary Education Efficiency Project

The Primary Education Efficiency Project in Honduras was chosen as a case study because of its emphasis on improving the quality and efficiency of basic education through a multi-faceted approach. Moreover, the project was considered so well-conceived that it received an award for design within A.I.D. This review was conducted in mid-1990, halfway through the course of the project.

The project was designed with seven components, six to be implemented through the Ministry of Education and one through a Honduran private voluntary organization. All of the components have as their overriding objective improvement of the efficiency and cost-effectiveness of the primary education system by upgrading the quality of instruction given in elementary schools; expanding the coverage of primary school services; and supporting administrative and policy decision making in the Ministry of Education (MOE).

Activities include the development, printing, and distribution of a new Honduran textbook series; in-service training for all teachers and supervisors; educational research and policy studies; support of an information management system; and the creation of a system for measuring academic achievement. In addition, local currency funds were provided to support the expansion of coverage through school construction and renovation activities in communities with strong self-help programs. The final component consists of using interactive radio and other graphic instructional materials to enhance language and math skills in the primary school classrooms. This component was to be implemented by AVANCE, a private voluntary organization, which would work in close collaboration with the MOE.

The project was designed to be implemented over eight years (1986-1994), with a USAID contribution of $27.5 million. This amount included $22 million in grant funds and $5.5 million in loans. Although the project was designed to begin to produce measurable impact in a short time, it also focused on long-term improvement in the functioning of the Honduran primary education system.

Background

At the time the project was conceptualized, Honduras was the poorest country in Central America, with a per capita gross domestic product estimated at $769. Although the country was experiencing some economic growth, largely due to favorable trends in coffee prices, there was a need to enhance export diversification and competitiveness. Unemployment was high, large fiscal and balance of payments deficits existed, and debt service payments represented an estimated 27 percent of export earnings. A weak human resource base, including low-quality primary education, was seen as contributing to slow economic growth. Although 85 percent of Honduran children of primary school age had access to school, only 28 percent of these children were able to complete the sixth grade. On the average, eleven years of schooling were needed to produce a sixth grade graduate because of desertion and repetition. Forty percent of the Honduran adult population was illiterate and only 27 percent had completed fourth grade.

Thus, improving the quality of education and strengthening institutional and administrative structures would help reduce unnecessary recurrent and human costs. The project planned to make textbooks available to the country's 294,000 first graders by the second year of

implementation. The full package of textbooks and teachers guides were to be available in grades one to six by 1991. All 40,000 primary teachers as well as principals and school superintendents would receive in-service training by this time. Similarly, radio and testing were to have been utilized by over half the students and teachers.

Substantial improvements in academic achievement, retention rates, and unit cost were expected in the first class of first graders to complete a year in school using the new instructional services, and these trends were expected to continue as the full package of services were provided to all primary grades. The project estimated that the percentage of students completing sixth grade would rise from 28 percent to 45 percent by 1994. Approximately 15,000 fewer children would drop out each year and 17,000 fewer would repeat. These outcomes were estimated to result in a savings of $8.5 million per year to the system. It was felt that the reduced unit costs would enable the Ministry of Education to better handle the recurrent costs of instructional materials, increased field supervision, and expansion of the infrastructure and human resources of the primary education system.

The project built on the accomplishments of the USAID Rural Primary Education Project, which was implemented from 1980 to 1986. That project focused on expanding and improving the physical infrastructure of the primary education system in rural areas. It also provided in-service training to rural teachers and school supervisors, supported the development of a national teacher training center, and began the development of a computer-based management information system for the Ministry.

Project Design

The mission's Office of Human Resource Development (OHRD) has not developed an integrated, multi-sectoral strategy for human resource development. Likewise, the mission does not have an education strategy. The Education Office has tended to rely on the LAC basic education strategy statement as strategic background for the project. Although the Country Development Strategy Statement (CDSS) provides a general framework, USAID personnel interviewed felt it is too general to be useful at the project level. There was a general agreement that a country-specific human resources strategy statement would be useful. This would be especially true if the document included an implementation plan with performance indicators for the short, medium, and long terms.

The approach to designing the Primary Education Efficiency Project was heavily influenced by the socio-political context of the period. The government that was in power when the design process started was generally viewed in Honduras as corrupt and would be leaving power in the upcoming elections. Thus, the project could not be designed with the collaboration of the existing government or it would lose credibility with the incoming administration.

In order to overcome this lack of official acceptance and still move the design process forward during a period of political transition, the OHRD solicited the assistance of four well-known Honduran educators. Three of these individuals held important technical (as opposed to political) positions in Honduran education. The fourth had been an official in the Ministry of Education of a previous government, prior to taking a technical position in the USAID Education Office. Over the course of nearly a year, these educators worked with USAID, outside of their own work schedules, to carry out studies that would provide baseline data for designing the project. The team carried out field studies and analyzed existing MOE statistical data. These studies were funded by USAID through a buy-in to an existing technical assistance contract with Project Development and Support (PD&S) funds. The studies included such tests of project feasibility as having teachers write a textbook and design a pilot radio script.

The strategy of making the project "Honduran" proved successful with the change of government in 1986. Although the new government was somewhat hostile to USAID, the participation of Hondurans in explaining the project through the use of Honduran statistics and other locally generated data helped win credibility for the undertaking.

It was suggested, however, that while the studies served as general background and were useful in negotiations with the MOE, they would have been even more useful if they had been more focused. That is, they could have presented

options for project activities and illustrative budgets for the amount of USAID and MOE investment needed to implement the suggested options. Likewise, the breadth of the studies did not allow thorough investigation of key issues related to each activity. Examples of such issues are the appropriateness of the texts for multi-grade classrooms, which make up a substantial percentage of Honduran primary schools, and migration and climatic factors contributing to student absence.

The OHRD took the lead in developing both the Project Identification Document (PID) and the Project Paper, utilizing the Kissinger report, the baseline studies, and the evaluations of the previous primary education project as background. The project was designed primarily by USAID personnel in the OHRD and the Project Development Office. Consultants were called in for specific analyses as needed. It was felt that this approach allowed the mission to set deadlines and maintain control of the design process to a degree that would not have been possible with a team of outside consultants.

Because the project was viewed simply as a basic education project, there was little attempt to integrate it formally with other projects in the sector or in other sectors. The exception was the agriculture office, which was involved because one component of the project provided support for a newspaper previously developed for small farmers. Similarly, there was no formal coordination of project activities with those of other international donors. The UNDP advisor assisted USAID in gaining access to the Ministry and then offered to assist in coordinating activities among donors. Although USAID offered to fund a MOE donor coordination unit, no agreement could be reached among donors and the MOE did not push for a coordinated donor effort, so the plan was not implemented. Except for occasional visits to review what others are doing, there has been no coordination or sector-level strategic planning among donors.

Project Implementation

As mentioned, the project consists of seven activities, six which are implemented by the MOE and a seventh through AVANCE, a private voluntary organization. Several strategies or guiding principles were woven into the design. These included housing project activities in appropriate divisions of the MOE, with the division directors as activity coordinators to ensure institutionalization; management-by-objectives reviews coordinated by a Honduran management institute; and emphasis on national technical assistance complemented by short-term international consultants. The implementation strategy was that of phased implementation on a national level. That is, the texts would be developed and distributed by grade level to all of the schools in the country. Among the Hondurans interviewed, there was a consistent view that this was an appropriate strategy as pilot projects either were not expanded to a national level in their country or proved ineffective when enlarged.

Texts. There was general agreement among the interviewees for this study that of the MOE activities, textbooks had been the highest priority both for the MOE and for USAID to date. This was a result of the identified need and the belief that texts could have a high impact in a relatively short time period. In fact, the MOE originally saw the activity as one of reproducing existing textbooks. During design negotiations, however, it was agreed that new texts would be developed rather than simply reproducing texts that had been designed in the 1960s. The issue of curricular reform, which requires congressional involvement, was skirted by describing the process as an enhancement of the existing curriculum and making reference to it in the development process.

According to an international textbook specialist, the development and production schedules in the project design were unrealistic when implementation began. He attributed this to the lack of a textbook specialist on the project design team; activities were not adequately described and sufficient time was not allowed for editing, illustration/layout, and field testing. The schedule called for the production of a set of textbooks and teachers manuals for one grade level each project year. In order to achieve this production schedule, capacity building had to be left largely aside in favor of production, and technical assistance had to be increased from periodic short-term advisors to two long-term international specialists. Thus, much of the actual work was done by the international consultants at the expense of building local expertise.

To ensure institutionalization of textbook development and production, it was suggested in the project design that these activities be housed in the MOE Center for Learning Resources. Ministry personnel felt that, because of her political orientation, the director of this unit would not move the project forward. Thus, the production staffs were employed on a contract basis. They were recruited largely from university personnel who had experience with the subject matter or, [illegible] cases, had been primary school teach- [illegible]st had no experience in textbook develop- [illegible]nd production. The production staffs [illegible]d of teams of ten to twelve individuals [illegible]riters and an editor for each subject area [illegible]as an illustration team and secretarial [illegible] staff).

The textbook specialist felt that these staffs were larger than needed and resulted in a few people doing most of the work. Early in the project, drafts and revisions were produced with typewriters, until computers, together with word processing and desktop publishing software, were obtained and production staff trained in their use. All of those interviewed agreed that this technology had saved innumerable person-hours and contributed greatly to producing the texts on schedule. The teams were trained in workshops and on the job by the international textbook specialists.

In developing the texts and teachers manuals, [illegible]cedure followed was to first review the [illegible]erformance criteria (*rendimientos* [illegible]s) developed to guide the text production. [illegible]on these criteria, a plan and sequence for [illegible]ks were developed over a two-month [illegible] The following four months were devoted [illegible]ucing a draft of the text, workbook, and [illegible]l. These were field tested, and revisions [illegible]ade based on the results of the field tests. A final draft was prepared and illustrations drawn. Emphasis was placed on developing content that was created entirely by Hondurans to avoid criticism of foreign influence in the texts. Despite the teams' feeling that time constraints were severe, the original production schedule of a series for one grade level per year has been maintained.

To maintain the schedule, however, the foreign service national (FSN) project manager at the mission had to take an active part in editing the texts because much of the textbook staff was laid off by the new administration elected in 1990. At the time of the present study, rehiring and replacement of textbook staff was still under negotiation between USAID and the MOE. While the project agreement with the Ministry includes the standard provisions that USAID will approve personnel contracts, maintaining the contracted personnel for the life of the textbook component was not included as a condition precedent in the agreement. USAID personnel interviewed for this study assumed that this oversight occurred as a result of the close working relationship between the previous USAID Education Officer and the Ministry. The transfer of this individual, combined with the change in Honduran government, left USAID without a useful tool to employ in negotiations with the new government.

A textbook printing contractor was obtained through an international competitive bidding process. A Costa Rican firm won the contract based on its costs and its ability to handle the volume of books to be printed within the three-month time frame required by the MOE. Distribution was not included in the terms of reference and both warehousing and distribution have been the responsibility of the Ministry.

Books were originally to be taken home by the children. However, the MOE has made the teachers responsible for replacing lost or damaged texts. Generally, therefore, the texts are kept in the school to reduce the possibility of teachers having to pay replacement costs.

Teacher training. The teacher training activity consists of a national in-service program to prepare teachers and supervisors in the use of the new instructional materials and in the organization of community-school activities. Teacher training is implemented through the teacher training unit of the MOE that was established in 1982 and had participated in the previous USAID-funded basic education project, Rural Primary Education. The center has 33 technical personnel and a director. In 1988, the center and its personnel moved to Tegucigalpa, where the new facility was ample to house the other project activities and their staffs as well.

The center personnel have relied on a phased training plan which, they stated, had proved effective in previous in-service training endeavors. This plan consists of training MOE personnel in the use of the texts first, then training at

the regional and finally the local levels. The training staff provides instruction for central-level personnel over a week to two weeks. Feedback is given and then arrangements are made by trainers to visit sites in the 18 departments of the country. In these sites, supervisors, school principals, and master teachers selected by the supervisors are trained. These trainees, in turn, train groups of approximately 25 teachers in the county seats (*cabecerias municipales*) of their departments. In addition to developing a training plan that includes a series of group participation activities, the center produces a magazine for teachers which provides lesson plans and activities tied to the books.

Although the books have been produced each year, they have been somewhat delayed so that training has been carried out without the books or has had to be delayed until near the end of the school year, as was the case with the second grade texts. This prevents teachers from using the books effectively until the next school year, some three to four months after the training. Training is not repeated, however, because center personnel are concentrating on the next year's texts.

Trainers found both the delays in using their skills while the first series of texts were being prepared and the lack of coordination and sequencing of training activities to match classroom schedules somewhat demoralizing. Initially they spent a good deal of time waiting for something to happen. They have overcome this by working with the technical assistance personnel to broaden the training activities. They have held a national fair on instructional materials ...ration for teachers; developed supplemen- ...nstructional materials that are being tested ...ssrooms; and created a leadership training ...m to involve school personnel with local ...unities that is to be implemented on a pilot basis.

Evaluation. The evaluation component was designed to provide uniform academic standards and measures for determining student performance. In implementation, however, evaluation has not been well defined. Different short-term consultants were brought in to help in the development of instruments. Each defined evaluation differently and, as a result, a range of instruments, from standardized achievement tests to formative and summative evaluation instruments, were suggested. Because there was not an evaluation unit in the MOE and no counterparts were selected early in the project, the consultants worked with the personnel of the teacher training center and the long-term consultants. Although tests were developed and have been used on a pilot basis, the objective of these tests was not clearly defined, and it was felt that they did not reflect the content of the textbooks adequately. Thus, no systematic evaluation plan was developed and, to date, there is only pilot information available on the impact of the interventions on student or teacher performance.

The lack of definition in this activity led to the technical assistance chief of party becoming involved in attempting to define the goals of the evaluation activity. This, however, was viewed by USAID as outside of his job description, which was to coordinate short-term technical assistance. This difference in role definition, together with what USAID viewed as a lackadaisical management style, contributed to his eventual removal from the project.

There is a general feeling among those interviewed that measures of performance are needed to determine the effects of the texts and fine-tune their use. As yet, however, neither appropriate measures nor an evaluation design have been defined.

Research. The research activity was designed to provide valid data to the Ministry on key issues for which policy decisions had to be made. The activity was to be directed by high-level administrators who were experienced in using research findings for decision making. The professionals actually selected, however, were at the technical level. Moreover, with the concentration on the textbook activity, little assistance or attention was given to research. Studies were not tied to either the policy needs of the Ministry or monitoring project interventions. Thus, the few studies that have been produced are viewed as largely irrelevant (e.g., "The Role of the Supervisor").

Construction. This activity was to continue the expansion of primary education coverage through school construction, renovation, and maintenance. It is being implemented through the construction and maintenance division of the MOE. Given the different implementation mode

of this activity and its focus on access within a project concerned primarily with quality and efficiency, it was not a focus of this study.

Management information system. The project was to assist the MOE to improve decision makers' access to timely statistical analyses by upgrading the computer capability of the Ministry's management information system (MIS). This activity, according to those interviewed, has also suffered from a lack of definition. The MOE was concerned primarily with making its existing hardware compatible and being able to handle personnel requests. A short-term international consultant recommended that a complete decision support system, which would include tracking of student and teacher performance as well as personnel and other administrative record- keeping, was needed. This individual made hardware and software suggestions for such a system. Honduran computer personnel in the Ministry also pushed for extensive new hardware. Thus, although a computer for tracking personnel movements has been installed in the MOE, there are ongoing discussions between USAID and the Ministry to define the purpose of the MIS and the specifications for appropriate equipment to meet the resulting objectives for the system.

Educational media (AVANCE). The seventh activity included in the project involves educational media. This activity actually began two years before the current project as a replication of ACPO, the Colombian literacy program for rural adults. The activity was originated by the same group that had begun the Colombian intervention, but was taken over by AVANCE after a year to continue the development of *El Agricultor*, a newspaper for rural farmers.

AVANCE was established as a private voluntary organization involving 39 Honduran businessmen, of whom nine are elected to the board of directors. In developing the project, USAID managers worked with the private sector so that the businessmen involved represented a wide range of geographical and political interests. The board members are responsible for setting policy and hiring a director, who in turn is responsible for hiring operational staff.

As originally conceived, the organization was to buy a rotary press to print the newspaper as well as turn a profit that could be used for other educational endeavors. This idea ran afoul of the Honduran printing industry, which suggested that USAID's financial support of AVANCE in this case would create an unfair competitive advantage. Thus, the idea was subsequently dropped.

The newspaper is distributed weekly by regional news sellers. It did not find the support among farmers that the similar effort in Colombia had encountered. The distribution pattern favors regional centers; the material is too general to meet the needs of extension agents; and the material is too difficult for farmers to read (Torrey 1990). The newspaper has developed a constituency among teachers, however, as a result of the posters that are included in the papers and the general interest articles about Honduras, both of which serve as supplementary instructional aids.

In addition to the newspaper, AVANCE runs a radio station in the Mosquitia area of the country. This station was established by United Rescue, then taken over by AVANCE with USAID funding. The station conducts about 50 percent of its programming in Spanish, with the remaining broadcasts being divided between Mosquito (40 percent) and Garifano. AVANCE also has a quick print service and is developing an interactive radio series for the first three primary grades. As with the newspaper and radio station, these activities are funded under the Primary Education Efficiency Project.

The interactive radio program was originally designed to be a replication of the A.I.D.-funded radio mathematics program originally developed in Nicaragua. However, the approach taken in this program was found to be inconsistent with that of the new mathematics texts. Thus, the radio mathematics program was changed to a mental arithmetic program called "Family of Numbers" (*Familia de los Números*), which supported the content of the Honduran texts. The program thus became an original effort rather than an adaptation, and required more staff than first planned.

The radio Spanish program has just begun and is being designed to complement the new texts. The texts already exist for the first three target grades and can be used as a reference in developing the radio curriculum.

There was a general feeling among those interviewed that the design of the educational media component of the project was overly ambitious. It included too many activities given the level of experience of the private voluntary organization in educational media and in dealing with USAID-funded projects. It was felt that management training, especially in accounting and procurement procedures to meet A.I.D. requirements, should have constituted the first phase of implementing such a variety of activities through a private voluntary organization.

Support for the interactive radio program was gained by involving various levels of MOE personnel in the activity. This was done through seminars with top MOE officials and by using MOE supervisory personnel as sales agents for the radios. AVANCE signs sales contracts with the supervisors and trains them as part of yearly outreach activities. It was originally planned that radios would be sold to communities to be used in the schools. A market research study, however, suggested that teachers themselves would be willing to purchase the radios. At present, about half of the country's 10,000 primary teachers are participating in the program. AVANCE itself carries out teacher training through its sales force. This consists of showing teachers how to coordinate the use of the student booklets with the radio program.

[illegible]tten materials for the interactive radio pro-
m have been subsidized by private sector
is, which have their names placed on the
[illegible]erials. Similarly, air time for the programs
been donated by the radio stations. There has also been time left in the programming for commercials. To date, however, advertising has not been sold. The interactive radio activity originally had a social marketing unit; the professionals in this division, however, wanted the project to be driven by their work, rather than by that of the technicians. This situation proved disruptive to the management of the program and the unit was disbanded.

The newspaper has not been successful financially because it costs approximately one lempira to produce and is sold for less than half that amount. Despite the newspaper's wide acceptance among teachers, the board of directors of AVANCE still see the target audience as farmers.

There was a general feeling among interviewees that the businessmen participating in AVANCE had little interest in the interactive radio activity as they saw no way that it could become profitable. It was felt that they had hindered the success of the project by hiring managers who did not understand the project and by focusing on the print operation. While some AVANCE members were viewed as taking a philanthropic approach, most were characterized as businessmen with little stake in education. An indication of the board's lack of interest in the educational aspects of the project was the removal of AVANCE's executive director, who was generally regarded as one of the foremost educators in the country and as a capable manager.

Subsequently this component of the project was suspended because AVANCE did not make enough progress toward the objective of financial self-sufficiency. At the time of this evaluation, the future of the AVANCE activities was being discussed within the USAID mission.

Project Management

Project coordination. USAID managers in the Education Office who were interviewed for this study saw their role as one of project monitoring. This included financial monitoring to check on the disbursement of funds by the implementing organizations and technical monitoring of both the implementing organizations and the technical assistance contractor. An informal technical role was also identified by the FSN project manager. This included assisting in implementation in times of crisis, such as editing the texts when technical staff were removed by the new political administration. The FSN project manager also felt that he and the Hondurans on the technical assistance team had the role of informally communicating the project's goals and achievements to representatives of all political parties prior to the national election in order to win general support for it.

Project coordination has taken place through weekly meetings of USAID, the Ministry, and the technical assistance contractor. These meetings are held to resolve routine problems. Formal and informal discussions are also held as needed. In addition, management-by-objectives seminars are conducted every three months, and a yearly review is coordinated by a Honduran management institute.

Implementing organizations felt that their relationship with USAID was functioning well. They mentioned the advantage of having USAID personnel in the country to assist immediately when problems arose and contrasted this with other donor agencies without local missions. In terms of its own administrative structure, however, the MOE was in the process of making some alterations. It had been determined that, with their other responsibilities, the Vice Minister and division chiefs did not have the time needed to devote to project operations. Thus, a project director and heads for each activity were named.

The technical assistance provider also thought the coordination arrangements were generally positive. There was a question raised, however, about USAID's review of proposed consultants and its prerogative to suggest alternatives. It was not understood why, since the contract had been won competitively at least in part on the personnel proposed, these individuals were not appropriate after contract award. The comment was made that, "If you select a bid on four-door jeeps, you can't go back and ask for two doors once the contract is signed."

Technical assistance. The technical assistance was designed to emphasize national involvement and short-term rather than long-term international assistance. The chief of party was to coordinate bringing in short-term specialists as needed. This model was changed for the textbook activity in the early stages of the project. "Bridge" technical assistance was brought in through purchase orders during the time that the request for proposals for competitive bids on technical assistance was being prepared. This bridge technical assistance allowed specialists to have input into project operations and avoided delays. The textbook specialist who was employed at that time argued that only through long-term technical assistance could the goals of the textbook activity be reached. This suggestion was accepted and incorporated into the project specifications.

Other technical assistance has been provided by short-term consultants primarily, with the chief of party and two long-term national consultants providing continuity. There has been general disappointment with this model. Consultants could not always be engaged on short enough notice to meet project needs, and when they were available, their Honduran counterparts did not always have time to prepare series of well-thought-out questions and activities. In addition, as mentioned previously, the same consultant was often not available for a series of consultancies over an extended period. This led to multiple consultants addressing the same questions from different perspectives and often suggesting different solutions — a situation that proved confusing to project implementors. In some instances, consultants spent so much of their time preparing the reports called for in their scopes of work that they did not train their counterparts sufficiently to carry out the recommendations made in the reports.

All of these outcomes led to a consensus among interviewees that a better balance between long-term and short-term technical assistance would be more effective. Also, schedules for short-term advisors should be worked out so that consultants can make repeated visits with an emphasis on training Honduran counterparts.

It was also felt that if a project were designed to transfer the administrative duties of chief of party to a national consultant, as in this case, that individual should be identified early. This would allow training in all of the duties of chief of party by the U.S.-based consulting firm. Despite this observation, chief-of-party responsibilities had been transferred to one of the Honduran national consultants, who seems to be carrying out her duties successfully.

Technical assistance for the educational media component implemented by AVANCE followed a design similar to that of other activities. A long-term chief of party was to coordinate short-term expertise as needed. In this case, however, the chief of party was also a specialist in interactive radio. A second long-term international advisor worked with the newspaper activity. Because the technical assistance was contracted through a buy-in to the worldwide A.I.D. Radio Learning Project, the short-term technical assistance has been more successful than in other project activities. This is because a single firm that specializes in interactive radio has carried out most of the technical assistance as a subcontractor on the Radio Learning Project, thereby ensuring consistency in approach and personnel.

Even though he viewed the technical assistance effort in educational media as successful, the chief of party felt that additional long-term

international assistance would have enhanced project implementation. He stated that interactive radio projects of the scope of the Honduras effort generally have three or four long-term specialists to ensure the transfer of technology. In addition, much of his time has been spent dealing with administrative matters, which reduces his technical input.

Project Evaluation

As mentioned, much of the data gathering for ongoing monitoring of the project was to take place as part of project activities. At the time of this study, data collection had been delayed by the lack of definition for the testing, MIS, and applied research components. External evaluations are planned for the midterm and end of project reviews for the six components implemented by the MOE. The workscope for the midterm evaluation was being designed for these activities at the time of this study. In addition, a primary education subsector assessment was carried out in December 1989 (San Giovanni et al. 1989). This study had a broader focus than the project — the assessment examined issues such as educational status and trends; primary education costs and financing; access, efficiency, and projected costs; facilities, instructional processes, and practices; multi-grade primary schools and school-community relations; teacher training and staff development; and educational administration. USAID personnel felt, however, that the information provided was useful in fine-tuning the activities of the Primary Education Efficiency Project.

The AVANCE project has its own evaluation schedule, and an external midterm evaluation was underway at the time of this study. The interactive radio activity also conducts ongoing formative evaluations in pilot schools. These studies are aimed at improving the radio programming as it is developed.

Sustainability

As originally envisioned, the project would supplement and enhance the skills of personnel already within the MOE, thereby institutionalizing technical capability. This capability would then be available every seven to ten years as new texts were to be developed. In actuality, the use of MOE permanent resources only occurred with the teacher training unit. Through the project, this unit was able to obtain a site for a national teacher training center in Tegucigalpa, which is staffed by experienced trainers who are regular employees of the Ministry.

In other components, such as textbooks, personnel had to be hired on a contract basis. The textbook production personnel are likely to remain in the educational system, however, as many were recruited from the university. They also may be able to apply their new skills in other sectors; for example, USAID envisions using them to design take-home school health booklets, which would also include math exercises. Thus, these individuals are likely to be available for future textbook design efforts. Their contracting, however, will entail costs for which funds must be allocated.

The printing of the texts also is a recurrent expenditure that is likely to require ongoing international donor support. It was hoped that Honduras would see the importance of the texts and begin to reallocate funds from other areas, such as university training or construction, to ensure free textbooks for all primary school children. Such adjustments in policy are usually easier to defend if data are available to support the impact of the texts on children's achievement and if the economy is improving. Honduras' economy is at present worsening and, due to the delays in establishing the evaluation activity, data on the impact of the texts are not available.

Other strategies such as cost recovery, in which parents rent or buy the texts, also seem to be improbable solutions for a variety of reasons. First, the money produced is not guaranteed for texts but usually goes back to the Ministry of Finance, where it may be directed to other sectors or to other educational projects. Second, money is accumulated in the hinterlands and placed in the hands of poorly paid custodians, raising the risk of malfeasance. Finally, this plan would deny texts to the poorest families for whom the effort is most appropriate. An option to overcome this last obstacle is to target free books for the poor. This, however, requires a very sophisticated management system and, in many countries, may be considered unconstitutional as it would favor certain citizens over others.

All USAID personnel interviewed suggested that becoming self-sufficient is a difficult process for a newly created private voluntary organizations,

like AVANCE, dedicated to educational pursuits. Generally, those involved in the operations of such an organization will be educators with little experience in income-generating activities. Board members, on the other hand, will have a profit motive foremost in their thinking but may not understand the social aspects of the activities. It was suggested that allowing sufficient time for private voluntary organizations to develop appropriate operations is important. AVANCE management personnel stated that in contrast to producing only 20 percent of the operating capital in 1988, the organization had accounted for 50 percent in 1990.

Also, separation of educational endeavors from those designed for profit is fundamental in assisting a private voluntary organization to develop appropriate strategies. USAID is currently working with AVANCE to develop a matrix that distinguishes income-generating activities from those with social development goals. Those development-related activities that are likely to always need support are identified and the degree to which they can be supported through other types of activities aimed at producing income is determined.

Several possibilities for sustaining the interactive radio activities were suggested in the course of discussions. These were based on the U.S. public broadcasting model for programming, such as the Children's Television Workshop, and include three strategies: programming through grants; product spin-offs such as Oscar the Grouch (or, in this case, Family of Numbers) dolls; and sales of international broadcast rights including technical assistance for adaptation of programming to local needs. This approach, however, was seen to require a policy making body of professional educators who have a stake in children's education.

Outcomes

The project contemplates significant decreases in the number of drop-outs and repeaters as well as increases in the primary school completion rates. It was estimated that the sixth grade completion rate would go from 28 percent at project initiation in 1986 to 45 percent by project completion in 1994. Additional outcomes were to be a 15,000 student decrease in the number of primary school drop-outs and a 17,000 student decrease in the number of repeaters. It was estimated that these combined outcomes would save the primary education system $8.5 million per year.

The subsector assessment (San Giovanni et al. 1989) found that while completion rates in Honduras were among the lowest in Central America, they have shown a consistent increase. Figures derived from the STEP (*System for Tracking Educational Progress*) computer projection model show a rise from 45 percent in 1986 to 50 percent in 1990. The assessment also found that drop-out and repetition rates are relatively high, especially in the first three grades. First grade repetition rates in 1987 (the last year for which data were available) were 26.9 percent, a slight improvement over the 27.3 percent reported for 1982. In the second grade, repetition was 15.6 percent compared to 16.2 percent in the base year of 1982. Drop-out rates showed greater improvement, dropping from 19.3 percent to under 16 percent and from 12 percent to 10.8 percent in first and second grade, respectively.

Given the positive trends in efficiency, and the fact that the first texts had not yet reached the classroom in the years for which statistics were available, there is reason to hope for a significant impact from the project. Until measures of student achievement are developed, however, indicators of impact will be in the form of outputs such as those just discussed.

Likewise, the impact of interventions on the quality of instruction should be related to student performance. In the absence of such performance measures, teacher mastery in using the texts and observations of individual children's behavior in the classroom serve as a proxy for examining quality.

A total of four schools were visited in order to examine teacher mastery of the interventions. In three schools, observations were made of naturally occurring classroom activities. In the fourth school, the radio mathematics lesson was observed. All observations were conducted with second grade children, as it was assumed that they would have had the maximum exposure to the interventions. Classroom-level observations were conducted for a minimum of one hour. Those made of an individual child totaled at least 15 minutes, during which time the child was observed in two different instructional activities.

After the observations had been completed, teachers were interviewed about the effects of the interventions.

All of the teachers were experienced, with lengths of service ranging from eight to fifteen years. All were positive toward the texts and the radio programs, stating that these interventions motivated the children because they were new and different. They also felt that the texts relieved parents of a financial burden and prevented those children whose families could not afford books from falling behind. They found the mathematics texts more difficult than the ones they had used in the past and said they did not use the teachers guides very often owing to lack of time. One teacher added that some of the drawings represented things, such as grapes, that were unknown to her children, and that the printing of the textual material was poor.

Three of the four teachers had received training in the use of the texts and stated that they were comfortable with these instructional materials. The fourth teacher had not yet been trained by her principal and felt that she needed instruction. The two teachers working with the radio program had also received training in its use and felt themselves prepared to implement the program.

Observations tended to confirm teachers' appraisals of their mastery of the texts and the consolidation of the use of these materials within the classroom. Texts were employed in two types of activities — large groups directed by the teacher and individual seatwork. Texts were in use an average of 71 percent of the observation time. Of this time, 59 percent was large group activity and 41 percent was devoted to seatwork. Teachers modeled proper responses and encouraged investigation (using the books to search for proper responses) when interacting with the children in large group sessions. The teacher without in-service training followed the same strategies in using the books as the other teachers and was equally successful in keeping her students involved with the learning tasks.

All of the seatwork observed consisted of the children copying sentences and illustrations from the texts. The percentage of time spent in seatwork increased with the number of grades that a teacher was responsible for in a single classroom. The teacher with one grade level spent 48 percent of the total observation time in large group activities and 10 percent in seatwork. In the combined first and second grade classroom, 55 percent of the time was devoted to large group activities and 34 percent to seatwork. In the multi-grade classroom, 23 percent of the total observation time was used for large group activities, and children were involved in seatwork 57 percent of the time. During seatwork activities in both classes containing more than one grade, the teacher dealt with the needs of the other classes. In all classes, the remaining time was used for transitions and opening or closing activities.

As might be expected, children were less engaged in the learning tasks associated with seatwork activities. An average of 58 percent of the time spent in seatwork was devoted to non-task-related behavior. The following example of Maria, a second grader at Paloma School, illustrates these trends (see Box - Honduras).

As can be seen from this example, teachers are able to use the texts creatively in large group activities. Their mastery of organizing non-teacher-directed activities to use the texts, however, is limited. They tend to resort to traditional copying and overestimate the time needed for task completion, leaving the children to their own devices. This is especially true of multi-grade classrooms when the teachers are working with different grades. Management of transitions is time-consuming; an average of five minutes was needed to complete book distribution or collection in each classroom observed.

No observable gender difference were found in the children's classroom interactions. Teachers interacted equally with the sample children of each sex. The nature of the interactions was similar also. In almost all cases, such interactions consisted of teacher-initiated discourse sequences calling for a child to respond to a question. The five children of each sex observed in the four sample classrooms spent the same percentages of time on task and interacted with their peers at the same rate.

Observations of a radio mathematics lesson showed children to be consistently involved with the activity. Although the observed activity allowed little opportunity for teacher input, the teacher made all responses as called for by the program and supported the children in transi-

tions from one task to another during the lesson. The radio mathematics activity was evaluated subsequently to the observations made for this study. Results show that a sample of first and second grade children participating in the program performed significantly better on the mathematics test designed by the evaluation unit than similar children in schools without the radio program (Scott 1990). A qualitative evaluation of the program found that radio learning was least effective in multi-grade classrooms because of the interference from other classes, the lack of teacher preparation in classroom management, and the expense of replacing batteries when the program was used in multiple sessions (Albedi 1990).

A recent evaluation of *El Agricultor* (Torrey 1990) showed that almost all Honduran teachers use the paper as a tool in the classroom. It is used for reading and writing exercises and as source material for essays. Students were found to buy the paper regularly. Some respondents among both teachers and students, however, felt that the paper was too expensive. Agricultural extension agents also were found to enjoy the paper but did not find it relevant to their work.

Box - Honduras
Classroom Observation

Large Group Activity

(11:06) Maria sits eagerly watching the teacher, who is reviewing a science lesson on cultivation with the children. The teacher asks, "What are plants for?" (*¿Plantas para que sirven?*) Maria continues to watch the teacher while repeating the word "*planta.*" The teacher repeats the question, and Maria says "*gente*" (people) to herself as the teacher calls on a girl who has raised her hand. The girl says, "*Comida*" (food). The teacher responds, "*Si, comida, alimentos*" (Yes, food, nourishment) and Maria repeats "*alimentos*" after the teacher. The teacher asks another question and Maria watches a boy respond. She then points to a picture of the sun in her book, as do other children when the teacher asks, "Where is the sun?" The teacher then asks, "What do the plants need?" Several children, including Maria, raise their hands and after one responds, "Sun," the teacher points to Maria, who answers, "Water." (11:11)

Seat Work

(11:18) Maria is copying aspects of the illustration of a farmer in his fields that the class had been discussing earlier. She is using a small set of crayons and is one of the few children who has more than a pencil. A boy shoves his notebook in front of her and she glances at it, then returns to her own work. Another child comes over and asks for a crayon, which Maria hands her without responding verbally. The teacher, who is working with the first graders, has seen this exchange and says to the observer, "They don't have colors" (*No tienen colores*). Maria, as she continues to draw, says to herself, "I do" (*Yo, si*). She then sits back and watches other children draw. (11:23)

Lessons Learned

A number of lessons for the management of basic education programs in developing countries can be learned from this review. The lessons fall into four main areas: project design, project implementation, project evaluation, and sustainability.

Project design. The involvement of host country educators both in conducting the background studies and in designing the interventions is critical to project success. If these individuals are well-known technicians, their participation will add credibility to the project in the eyes of the government. Such involvement will also give the educators a stake in the project that can lead them to provide formal and informal explanations of the project to new government officials during periods of transition.

To be most useful to project designers, background studies should focus on key areas of interest within basic education. Such studies should be of sufficient depth to answer questions about the appropriateness of proposed interventions in different learning environments and to present options for different levels of investment.

As shown by the Primary Education Efficiency Project, A.I.D. personnel together with host country technicians can develop well-conceived basic education projects. In certain technical areas such as textbook production, however, specialists should be included on the design team to ensure reasonable timelines and levels of effort for project implementation.

Conditions precedent can be a valuable tool for project managers as they serve as a means of ensuring consistency in periods of transition.

Where appropriate, they should be included in project papers so they can assist managers to keep a project on track.

Project implementation. The availability of USAID managers to respond rapidly to project needs strengthens the implementation process. The presence of a local USAID mission was seen as a positive feature that distinguished the agency from most other international donors.

"Bridge" technical assistance through a buy-in mechanism proved an effective way of providing expertise in specialized areas. This approach avoids the delays in implementation that often accompany the solicitation of competitive bids for technical assistance by allowing experts in key areas to be working with host country technicians while the request for bids is prepared and bids are evaluated.

Short-term technical assistance must be planned to ensure consistency in personnel if it is to be effective. The project's emphasis on short-term technical assistance was difficult to implement owing to problems in availability and related changes in short-term consultants. The different orientations of short-term consultants working with the same activity contributed to a lack of definition of some project activities. The most successful short-term assistance was that provided by a contractor that used its own technical staff, thus ensuring consistency in approach.

Where coordination of technical assistance activities is to be passed from an international specialist to a national coordinator, it is important that the local professional be identified early enough to be trained in all aspects of managing a complex project for an international donor organization with its own organizational culture.

In using international technical assistance, a balance must be struck between stressing the production of instructional materials, such as textbooks, and the building of capacity to carry out the activity. Training plans and measurable training objectives should be put into the terms of reference for both long- and short-term consultants.

Personal computers with word processing and desktop publishing software can greatly enhance the efficiency of activities that require extensive editing such as textbook production or radio script development. In the design of a project including these activities, procedures should be specified for obtaining required software and hardware and for providing training in their use early in project implementation.

Given the lag time inherent in the development and production of texts, the activities of a teacher training unit must be broader than simply training teachers in the use of the textbooks and teachers guides. These activities could include motivating teachers through national competitions and developing ancillary instructional materials, as the unit is presently doing. It could also include studying schools to develop training sessions on appropriate classroom management techniques to complement the training given in using the texts.

The development and application of measures of student performance is critical in determining the impact of a project's interventions. Without such measures, it is impossible to determine if a "high impact" intervention such as textbooks is meeting its objectives. The development of a standardized national testing system is a massive undertaking that would require substantial investment. Measures such as those already developed for this project, however, can serve as indicators of children's progress. With a well-selected sample, the instruments can be refined at the same time data on the effects of the interventions are being assessed.

There must be agreement among technical assistance providers, the MOE, and USAID personnel as to the information needs of the Ministry prior to project implementation. While timely computerized statistical analyses are important to international donors for determining investment options in education, such information may not be viewed as vital by host country decision makers who often use other criteria in making decisions. It is important to determine who the audience is for an MIS and how information will be used before developing specifications for the system.

If textbooks and interactive radio interventions both are being implemented, it is important that the two complement each other. This type of integration is likely to require a greater investment than adaptation of existing materials and will also require close coordination among implementing organizations.

Teachers are willing to purchase instructional aids such as newspapers and radios when they feel these aids will help them in the classroom. Some of the costs of such materials can be subsidized by private sector firms through advertising in printed materials or during airtime.

Supervisory personnel, when used as sales agents for materials that must be purchased, can be an effective means of disseminating an intervention.

Evaluation. A variety of methods such as focus groups, case studies, and classroom observation can be used to provide project managers with quick-turnaround information for fine-tuning ongoing activities.

In assessing the success of certain strategies, such as building a constituency among Honduran decision makers for reallocating funds to textbooks, the assumptions on which the strategies were based should be examined as part of the evaluation. In this case, it was assumed that an improving economy and data on the impact of the texts would support reallocation of funds from other areas. The economy, at the time of this study, was worsening and evaluation of the impact of the texts has not yet begun.

Sustainability. The expertise developed through a project can be used for other activities within a sector or in other sectors, even when the capability has not been institutionalized in the MOE. To take advantage of capability in textbook production, however, requires a resource utilization plan based on an assessment of the skills being developed and the need for such skills.

Contextual factors may affect the degree to which planned change, such as reallocation of funds from tertiary education to textbooks, will take place. The worsening economy in Honduras has reduced the possibility of dialogue on this issue as well as the ability of parents to pay for books.

Allowing sufficient time for a private voluntary organization to develop appropriate operations is important. Project managers should not be too quick to decrease or suspend funding without examining the assumptions made about cost recovery to determine if they were realistic.

Separation of educational endeavors from those designed for profit is fundamental in assisting a private voluntary organization to develop appropriate strategies. USAID is currently working with AVANCE to develop a matrix that distinguishes income-generating activities from those with social development goals. Those development-related activities that are likely to always need support are identified and the degree to which they can be supported through other types of activities aimed at producing income is determined.

There are possibilities for sustaining interactive radio activities based on the U.S. public broadcasting model for programming. These include such strategies as programming through grants, product spin-offs such as Oscar the Grouch (or, in this case, Family of Numbers) dolls, and sales of international broadcast rights including technical assistance for adaptation of programming to local needs. These strategies, however, have not been tried in a developing country and require a policy making body of professional educators who have a stake in children's education.

Conclusions

The Primary Education Efficiency Project illustrates that even in a well-planned project, many management difficulties will have to be overcome if the project has a variety of interrelated activities that affect much of the primary education system. Local priorities, such as textbook production, and the need to negotiate definitions of activities' objectives, as in the case of MIS and testing, can prevent the planned parallel implementation of certain components. Not only can delays in the implementation of some activities result, but such delays may also curtail the degree to which progress toward project objectives can be measured. While there is no ready solution, since the implementation of project activities will depend to a great deal on the local context, planners of multi-component projects or programs should be aware of the difficulties in implementing a number of interrelated components simultaneously.

The experience in Honduras also shows the capability of local Latin American educators to provide technical assistance to basic education projects in a number of areas. In some specialized areas such as textbook design and produc-

tion, test development, and MIS, long-term international technical assistance focused on technology transfer is still needed.

The results of the AVANCE component of the project call into question the commitment to public sector basic education that will be made by private sector organizations in Latin America. Activities involving the private sector must be monitored, and milestones for integration of private sector efforts with other project or program activities carefully established.

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Primary Education Assistance Project

The Primary Education Assistance Project in Jamaica was chosen for examination through a site visit in mid-1990 because of the project's emphasis on community-school interaction and the involvement of the private sector in the production of primary school texts.

The project was developed to make a contribution to the quality and efficiency of Jamaican primary education by supporting interventions in selected areas. These areas included construction, renovation, and furnishings in addition to the instructional materials production and distribution and the community-school participation activities mentioned above. The project was implemented through the Ministry of Education's (MOE's) Projects, Construction and Maintenance Division (PCMD), with participation from the Planning and Development Division and the Educational Operations Division. A long-term engineering specialist provided technical assistance by advising the program director on A.I.D. construction and procurement procedures and by helping obtain short-term technical assistance as required.

The construction component was not designed to build new classrooms but rather to repair and refurbish existing schools that had fallen into disrepair or suffered from vandalism. Approximately 150 schools throughout the country were to receive minor repairs and installation of security measures such as grillwork. New desks, blackboards, and classroom partitions were to be provided where needed. Work was to be done through local contractors, thereby increasing employment opportunities.

The instructional materials component furthered an innovative textbook program begun in 1984 by the Jamaican private sector with assistance from USAID and other international donors. This program provided inexpensive texts and teachers guides to 350,000 primary school children in the country. The Primary Education Assistance Project was to expand that program by helping to finance the printing and distribution of approximately 10 million texts and guides, by providing teachers with supplementary instructional materials, and by furnishing short-term technical assistance to aid the Ministry in developing cost-effective systems for continuing the program after the termination of international donor support.

The final project component was designed to encourage more effective community-school participation by revitalizing local school boards as a mechanism for generating financial resources and services for Jamaican primary schools. The activity consisted of short-term technical assistance in community-school relations to assist the MOE in developing an operational plan; workshops on needs assessment and action planning for community-based education officers, school staff, principals, and community leaders; and short-term participant training in small towns in the United States faced with similar problems of vandalism and local school financing.

The project was to be implemented over a three-year period (1985-1987). It was funded through a grant of $11.3 million from USAID and a counterpart contribution from the Government of Jamaica of $3.8 million. In 1987, the project was extended to 1990.

Background

To overcome the economic slump resulting from the decline in demand for bauxite and alumina, at the time of the project design the Jamaican government was pursuing a policy that emphasized economic recovery through increased

private sector activity, greater employment opportunities, and increased exports. While Jamaican primary education had made tremendous strides in increasing access, with 96 percent of the school-age population enrolled, it was very inefficient. Approximately half of the primary school graduates were considered illiterate. Thus, both the expense of training these individuals for the workplace and the lack of available trained human resources to carry out the government's strategies hindered economic recovery.

A number of constraints contributed to the poor quality of the primary education system, including overcrowding in buildings that had deteriorated and were suffering from the effects of vandalism; lack of school furnishings, sanitary facilities, and basic equipment; insufficient quantities of teachers guides, textbooks, and other instructional materials; and graduates who were considered functionally illiterate as a result of automatic promotion and teachers' tendency to concentrate their efforts on the better students in the classroom. These constraints resulted in high unemployment among young primary school finishers and substantial economic drain on the nation because of the need to provide remedial education or training at higher levels of the education system or in the labor market.

The project built on an effort started two years earlier which produced low-cost textbooks and teachers guides on newsprint, which were given free to students. The program was carried out by the principal newspaper in the country, which printed the books on its presses at off times. The program was supported by USAID, other international donors, the MOE, and the Jamaican private sector. It provided five million texts to 350,000 primary school children. The Primary Education Assistance Project was to continue this effort and promote educational quality through other inputs into school rehabilitation and revitalized local community participation in the schools.

Project Design

The overall focus of the project was on carrying out high-impact interventions and increasing local capacity to sustain such interventions upon project completion. The major thrust of the project was to renovate and refurbish classrooms that had suffered vandalism. The project was to strengthen the MOE's capacity for classroom repair and prepare school personnel and community members in techniques for combating vandalism once the project had ended. A study was to be carried out under the project which would provide the MOE with options for maintaining textbook production once the project had ended.

At the time the project was designed, the USAID Education Office relied on the Country Development Strategy Statement (CDSS) as a general framework for strategic planning. The mission has subsequently prepared a human resource development strategy that is consistent with other mission documents but further specifies certain directions in mission assistance. In basic education, for example, these include an emphasis on the improvement of marketable skills such as mathematics and the continuation of leveraging private sector and community resources to reduce the MOE's financial burden (USAID/Jamaica 1989). While the document is useful, USAID officials feel that it should be developed further to maximize its utility. This would include the development of an implementation plan that would present possible options for interventions and the strengths and weaknesses of each.

The principal background material for developing the project was a basic education survey that focused on the feasibility of the proposed project components and options for their implementation. Because the textbook production had been underway for approximately two years, much of the background information needed for this activity was already available.

Using this experience and the basic education survey, the USAID Education and Human Resource Development Office took the lead in developing the Project Identification Document (PID) and Project Paper. USAID personnel in this office, with support from the Project Development Office, produced both documents. There was a general feeling that, because of their day-to-day contact with the education system of the country and their understanding of A.I.D. project design, USAID personnel should design the project. They would bring in specialists for the design of specific technical approaches outside their areas of expertise. USAID personnel also recognized the need to build MOE planning capacity; a component with this objective was

originally part of the project design. This was dropped, however, in favor of kits of materials for teachers, which senior mission personnel felt would have a more direct impact on project implementation.

One oversight in the project design, which was identified by project managers in retrospect, was the lack of preparation of teachers in the use of the texts. It was assumed that since the texts were based on existing materials, teachers would be familiar with them. Potential difficulties in managing the use of the text series when each child has an entire set of materials, however, were not contemplated.

The project achieved a high level of coordination among international donors. This was attributed to the groundwork done to bring donors together prior to the implementation of the original textbook effort. In addition, the size of the country, the relatively small international community, and donors' tendency to use USAID as a source of information because of its permanent mission all were identified as factors contributing to effective donor collaboration.

Project Implementation

Construction. The construction component has proved to be the most difficult aspect of the project to implement. Project management personnel in both USAID and MOE attributed the difficulties in meeting project objectives to a poor determination during project design of the MOE's absorptive capacity. This lack of capacity was exacerbated by political maneuvering, personnel changes, and the rebuilding efforts required in the wake of Hurricane Gilbert.

MOE personnel suggested that the delays in implementation were largely the result of the lack of an effective project management system. They felt that although procedures for implementing projects were in place, they were largely "in the heads" of individuals in various MOE offices. Thus, delays were incurred in identifying the individuals with appropriate information to expedite project implementation. It was also suggested that during changes of administration, the lack of well-defined standards and procedures could lead to the loss of funds. The MOE hoped to overcome this situation through technical assistance from the Inter-American Development Bank (IDB) to develop a computerized project management system, which was being negotiated at the time of this study.

Both USAID and MOE personnel identified the difficulty in finding qualified Jamaican engineers for the project implementation unit as a constraint to implementation. Although the hiring of this person was part of a project covenant, the salary that the MOE was allowed to pay was not competitive with salaries paid in the private sector. Thus, there was a two-year delay in finding the local counterpart to the international engineer brought in to assist the implementation unit. This was followed by a bidding process, which delayed the construction project an additional six months.

These delays, combined with the effects of Hurricane Gilbert, overburdened the MOE. A number of the construction firms selected were not monitored well and did not complete their work. Thus, 56 schools had been renovated at the time of this study rather than the 160 envisioned in the Project Paper. Ten additional schools had been renovated as part of a pilot program incorporated into the community action program discussed below.

Texts. The production of low-cost textbooks, through private sector participation, that could be distributed free to children at all primary grade levels has been the most publicized component of the project. Since this activity began two years before the project, few implementation problems were identified. The mission had originally waived open competition for the contract to produce the texts because of the newspaper's unique capability to distribute the texts throughout the country, and this waiver continued. At one point, the paper that was imported through the Canadian International Development Agency (CIDA) was protested as unfair competition by the newspaper's business rivals. A study carried out by Southern University (1989) with project funding found a high degree of satisfaction with the texts. It questioned, however, why neither the quality had improved nor the cost lessened with increased experience.

The question of recurrent costs and the continued production of the texts has been of major concern to both USAID and the MOE. The Southern University study presented options to the MOE for continued financing. It recom-

mended a strategy whereby the MOE would pay part of the costs and parents would pay part; in addition, it recommended that each set of books be used for a predetermined number of years. Given the popularity of the mass distribution of free books each year, the MOE opted to continue its original policy.

A policy study commissioned through a component of the project (Trevor Hamilton and Associates 1990) examined educational financing in a broader context. This study suggested a slight overall increase in national budget allocations to education, combined with reductions in capital expenditures and expenditures to tertiary education, as strategies to cover the costs of basic education and the production of texts. The document also encouraged private sector advertising, rental of textbooks by parents, and production every two years, rather than yearly, as strategies to meet recurrent costs related to the production of the texts.

The Government of Jamaica has yet to make a firm decision on these options. Interviewees felt that the government was committed to cost reduction and had the continued support of donors for its efforts in basic education. This support would include a World Bank Social Sector loan, of which $11 million was targeted for primary education including textbooks; UNDP and Unesco support for curriculum development and school and staff training; CIDA provision of paper for the texts; and cash grants for textbook production from Unesco, West Germany, and private sector companies. USAID will no longer provide support for textbook production but, rather, will focus on the complementary activities of community outreach, mathematics education, and achievement testing (USAID Jamaica 1989).

School-community outreach. Interviewees generally agreed that the School Community Outreach Programme (SCOPE) had been the most successful component of the project. In this component, school principals, teachers, and local community leaders were trained in community organization techniques to deal with vandalism in their schools. The component was to have trained 200 people; in fact, a total of 298 were trained. One hundred and fifty people were trained in four short-term training activities in the United States. Participants visited U.S. communities that had experienced vandalism and discussed strategies for involving the community to combat the problem. Strategies discussed included starting clubs for out-of-school youth, competition among classes within a school to maintain the school's appearance, and soliciting financial support from local businesses through "Adopt-a-School" programs.

An additional 148 persons were trained in two follow-up seminars of ten days each which were held in Jamaica. These were carried out largely by participants in the overseas program with support from the local logistics contractor. These seminars established local capability to pass on the techniques learned abroad to other communities and schools struggling with the same problems.

Another component of the project was a pilot effort designed by USAID and the MOE in which grants of $10,000 were given to ten school-community organizations that had participated in the training program to carry out their own school renovation projects. Because the participants in the training program had been given bookkeeping training, they were able to keep thorough records of payments. They worked with USAID and the MOE to develop a bidding process for securing local contractors and to establish contracting procedures.

Renovations were completed in three to six months in the experimental program, which is somewhat faster than the renovation efforts in the overall program. The communities were able to use the grants as leverage to encourage community members to assist with the renovations. Thus, as one MOE official stated, "SCOPE is a good program because once they get people involved, they can stretch their dollars a lot farther than we can."

A recent evaluation of SCOPE included interviews with principals, teachers, and community members at a sample of program schools (Robinson 1990). It found that in 75 percent of the cases, physical improvements had been made in the school, and that there had been some private sector involvement in 80 percent of these improvements. All of the schools reported a reduction in vandalism, and over 90 percent of the teachers thought that both they and their schools had benefitted from the program.

The success of SCOPE resulted in its incorporation into the MOE. The program has an office

and operates on a regional basis throughout the country. MOE officials feel that the program is successful in part because of Jamaica's history of locally supported elementary schools within the country — a tradition until the socialist government of the last two decades. Thus, there is a history of support for local participation which will continue through USAID assistance in the new Primary Education Assistance Project II.

Other activities. Several ancillary activities were also developed under the project. These included teachers kits consisting of instructional materials such as globes, maps, paper and pencils, and a series of policy studies. Teachers responded very favorably to the kits; however, most were destroyed in Hurricane Gilbert and were not replaced.

The policy studies were developed in the areas of physical plant utilization, educational research, educational financing, and performance measurement. These studies provided a status report on the situation in each of these areas and recommendations for improving the situation. Several implementation strategies, with plans and budgets, were presented as options for each area. The studies, together with a summary of available statistics for the country (Blank 1989) and a special study on teachers' knowledge of mathematics (Nissen 1989), have served as discussion documents in planning and policy discussions between the MOE and USAID.

Project Management

Project coordination. The project was coordinated by the MOE office charged with coordinating international donor-assisted projects. Each activity had a coordinator who reported to the office director. In order to implement project activities, however, approval was needed from a number of other MOE offices such as finance, land acquisition, and building maintenance. MOE officials stated that most of the procedures were in the heads of individuals within the specific departments, rather than on paper; this often caused delays in obtaining clearances. The lack of consistent tracking of project activities and of minimum standards for construction work, combined with political rewards to contractors during a change of administration, were given as reasons for incomplete work and loss of some construction funds. This was to be overcome through a computerized project management system to be developed through IDB funding.

Ministry personnel felt that they had a good working relationship with USAID and that the presence of the local mission permitted rapid resolution of day-to-day problems. USAID staff, on the other hand, felt that the MOE sometimes expected them to do too much for project implementation activities, especially those related to interaction between USAID and the MOE.

Technical assistance. In addition to the U.S. engineer, whose efforts were somewhat curtailed by the inability of the MOE to offer competitive rates to hire a Jamaican counterpart, technical assistance was provided for the training component and for the policy studies. Southern University was responsible for the training, and also carried out a study of options for funding the textbooks after the withdrawal of USAID support. In carrying out the training, Southern University worked with a local consulting firm which supplied logistical support. This firm participated in the first in-country seminar and, based on that experience, was able to conduct the final in-country seminar by itself.

The OHRD made a conscious effort to use competent local professionals to carry out technical assistance, and all of the policy studies were conducted by local consultants. The office developed a file on local firms and individuals which included corporate capabilities and areas of expertise. Where sufficient local expertise was available, contracts were let out to bid locally. International consultants were brought in only for areas where there was not identified local capacity. Even in such situations, the use of local firms through subcontracts with international firms was encouraged. In some instances, however, when the Jamaican government felt that the situation required an opinion that would be perceived as more objective, international specialists were contracted.

Project Evaluation

Consistent with the projects' major emphasis, the evaluation plan focused on monitoring the construction/renovation component by U.S. and Jamaican engineering specialists. The difficulties the MOE had in funding a qualified specialist, however, as discussed above, resulted in delays in recruitment. When the U.S. specialist

completed his assignment, a Jamaican engineer with the USAID Office of Engineering, Energy, and Environment took over monitoring responsibilities.

Although the Project Paper stressed the need to monitor the other project activities, it did not develop a detailed evaluation plan. The MOE, with technical assistance from CIDA, carried out annual evaluations of the textbook component. Since no achievement tests were available, however, these evaluations consisted of polling teachers and students as to their satisfaction with the texts. An evaluation of the SCOPE component was carried out by a local contractor.

A midterm evaluation specified in the project paper, which was to have examined all of the components of the project including institutional strengthening, was waived, as was a final evaluation for the project. USAID managers felt that the lack of overall project evaluation results deprived them of a management tool that could have been used as leverage in discussions with the MOE.

Sustainability

At the time of this study, the Ministry was considering approaches to maintain the textbook program after USAID funding was terminated. The most likely recourse seemed to be to secure funding from other donors. SCOPE was to be continued with funding from USAID, and local communities were to be encouraged to carry out activities that the Ministry previously performed to allow the Ministry to concentrate on areas such as construction and instructional materials.

Outcomes

As mentioned previously, evaluations of the textbook component and the community outreach component of the project found close to 100 percent satisfaction among teachers and community members. The studies also reported that teachers estimated an increase of 67 percent in student attendance and an increase of 158 percent in nongovernmental support for the schools (Robinson 1990).

These satisfaction levels were consistent with those found in visits to four SCOPE schools as part of this study. In all schools, teachers had started youth clubs and invited out-of-school youths to use school facilities for their activities, thus cutting down vandalism. Within the school, competing "Houses," which received points for punctuality, deportment, and house duty, had been established to improve school management and maintenance. All of the SCOPE schools had been successful in obtaining donations from private sector companies and, in two cases, the companies had agreed to participate in the "Adopt-a-School" program. All of the schools had active parent-teacher associations (PTAs), which generally organized a money-making social function once or twice a year. In each school, the PTA had grown as a result of recruitment techniques suggested in the SCOPE seminars. In one school, a teacher incentive program that included small, interest-free short-term loans and the possibility of buying bulk food at cost had been established.

All of the schools had doors and windows reinforced with bars and several had bathrooms upgraded and roofs repaired. At some schools guard walls had been built and dirt areas paved. The exception was the fifth school visited, which was part of the MOE construction program, rather than the SCOPE pilot construction program. At this school, although construction of additional classrooms was underway, three different construction firms had been involved in the building effort. The first two had each worked until close to the proposed completion date, then disappeared. Thus, the project was two years behind schedule, and the principal was not confident that the building would be completed within the latest four-month deadline. Although this school had sent a teacher and a community member to the SCOPE training, the principal stated that they had not been able to get anything started because the community was very poor.

Given the size of the schools (275-1,000 students) and the fact that many children were in final examinations at the time of the visits, it was not possible to conduct observations of classroom interactions. Rather, inventories were made of the number and gender of students in each classroom and the presence or absence of textbooks. In each urban school, textbooks were visible. In lower grades, however, there were generally one or two textbooks in view and, in classrooms not engaged in exams, children were working with blackboard assignments or copybooks, rather than with textbooks. Upper grades

(3rd through 6th) generally had sufficient books in view to serve at least half the class and more may have been located in desks. Thus, the texts were present, although, because of the examinations, few were in use.

The ratio of girls to boys was about even in all the classes visited. This is consistent with findings for Jamaica as a whole; "male/female enrollment is approximately equal at the primary level. At the secondary level in 1987/88 females outnumbered males by a ratio of 3:2. Generally female promotion rates are slightly higher and repetition rates lower than those for males. While girls may appear to perform less well on the Common Entrance Examination than boys, this is not so. Pass levels are set lower for males than females in order to ensure that at least 40% of high school spaces go to the males" (USAID/ Jamaica 1989, 11).

Lessons Learned

Project Design. The experience of USAID/ Jamaica in developing a human resource development strategy suggests that to be most useful, such a strategy must go beyond simply setting broad parameters and presenting an implementation plan for achieving multi-sector goals and objectives that incorporate both education and training. Such a plan should include measurable performance indicators that go beyond outputs and address impact.

The most useful background studies are those that provide statistical (descriptive or analytical) summaries of the existing situation in the education sector and offer options for interventions. Such options should include justification for the suggested size of investments, implementation plans, and potential impact of the interventions (Trevor Hamilton 1989, 1990). This would allow project managers (USAID and host country) to choose among potential interventions to maximize scarce resources.

USAID education project managers are the most appropriate individuals to lead the development of PIDs and Project Papers since they are involved in the day-to-day educational reality of a country and of A.I.D. in a way that a team of consultants cannot be. Thus, despite other time commitments, project design work should be a priority for education officers.

Covenants and conditions precedent can be a valuable management tool, since they serve as performance indicators for host country achievements. The conditions precedent are also a means of testing the assumptions included in the log frame and changing such assumptions if necessary. When appropriate, both covenants and conditions precedent should be included in project agreements so that they can be used by project managers as necessary to help keep the project on track.

All projects inherently include institutional development. This should be made explicit in the project design phase. The project paper should define the conditions that are to prevail at the project completion date, the procedures and activities to reach the desired conditions, and the way in which achievement of these conditions will be measured. Key in such definitions would be the conditions that must exist in order for the host country to continue the project after the termination of donor funding.

A discussion of private sector involvement in the project should be part of all Project Papers. The mission should explain why the private sector is to be involved and how such involvement will take place. If there is to be no private sector involvement, the reasons for not including this sector in the project design should be made explicit.

Project implementation. Involvement of local communities can be an effective means of implementing school construction and maintenance activities. Grants made directly to schools can stimulate community involvement. Such decentralization also supports A.I.D.'s development goals; it is democratic, in that more people become involved in the decision making process and, to the extent that the community members identify the school as their own, it enhances the resource base through monetary or in-kind contributions.

Philanthropic investment by private sector for-profit organizations in the production of instructional materials should be monitored carefully to ensure cost-effective implementation. Competitive bidding is a means of ensuring cost-effectiveness; however, if the competition is international, all associated costs such as warehousing and distribution should be included in the bid specifications.

Training that is targeted to meet recognized needs within a project framework can have immediate measurable impact. All basic education project-related training should be based on meeting recognized needs that have the potential to improve project effectiveness.

The use of local educators for technical assistance is consistent with the increase in skilled local technicians throughout the LAC region. These resources should be utilized when technical assistance is required as they will have relevant experience and their use will be cost-effective. International technical assistance should be used when the appropriate skills are not available locally. Training of local personnel should be included in the work scope when international technical assistance is employed in order to further increase local capacity.

Evaluation. Evaluation can be a valuable management tool that should be carried out as called for in a project design. In order to be most useful to managers, evaluations should include all project elements, including a test of the assumptions in the log frame, as part of their design. They should be non-waivable except where the rationale for doing so is explained in writing by mission management.

To maximize the utility of evaluations for project managers, several design issues must be addressed. First, the purpose of the evaluation must be well defined. This definition should include who the audience is for the evaluation results and to what use the information will be put.

Sustainability. The normal project timeline of four to six years does not provide sufficient time to develop strategies for dealing with the recurrent costs of a large-scale textbook program. This is true even with collaboration by the private sector in the production of relatively low-cost instructional materials and the participation of multiple donors. Thus, short-run strategies are likely to revolve around searching for additional donor support.

The Jamaica case shows that building management capability within an implementing unit is a prerequisite to developing sustainable interventions. The development of systematic administrative procedures and management skills should be part of the project design. In specialized areas, such as civil engineering or computer systems analysis, institutional capacity building may be hampered by the inability of the public sector to compete in terms of salaries with the private sector.

Conclusions

The Primary Education Assistance Project demonstrates that profit-making private sector organizations can play a part in the improvement of public basic education when they believe that it is in their economic interest to do so. This may require an extended education process in which the economic development benefits of a literate and numerate population are demonstrated.

Even with the successful involvement of the private sector, questions of sustainability for large-scale interventions remain. The expectation of continued free textbooks each year by the Jamaican school-age population and their families has led the Ministry to look for options that would allow this level of intervention to continue. As neither the private sector nor the MOE itself can support the textbook production, Jamaica was pursuing additional donor funding at the time of this study.

Communities can do a great deal to assist in the implementation of basic education interventions. This includes both reducing vandalism and ensuring that resources are used in a cost-effective manner. In a country at Jamaica's level of economic development, however, it is unlikely that communities can generate sufficient resources to finance schooling locally.

The presence of a USAID mission offers the leverage for continued interaction and negotiation with both private sector and public sector organizations that are often necessary to ensure collaboration. Similarly, the USAID mission can serve as a focal point for donor collaboration, as was the case in Jamaica.

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Education Sector Loans

The education sector loans in Brazil were chosen for review in mid-1990 both because they were generally recognized as successful and because they represent a modality that differs somewhat from A.I.D.'s current project-focused assistance in the developing countries of Latin America and the Caribbean.

The first education sector loan (ESL I), signed in 1969, focused on expansion of the secondary school system by the creation of *ginasios polivalentes*. These were secondary schools that were qualitatively different from traditional *ginasios* in that they provided training in practical skills as well as academic subjects. The loans were provided to Brazilian states that completed submit four-year plans for the development and maintenance of a secondary education system. The plans addressed administrative reorganization, curriculum changes, and costing. Thus, although focused on school construction, the loan was designed to create a new educational pattern at the state and local levels.

The first loan program, which was implemented between 1970 and 1974, provided $32 million to the Government of Brazil. This was matched by the same amount of Brazilian resources, with $20 million coming from the federal government and $12 million from participating states.

The second education sector loan (ESL II) agreement was signed in 1971. It was similar to ESL I in terms of structure but was closely tied to Brazil's national education reform of 1971. As with ESL I, ESL II aimed at assisting the reform process at the national level and accelerating the reform in the seven states that had participated in the first loan program. Like ESL I, the second loan required four-year education plans and included construction, training, curriculum improvement, and materials production. It also placed a great emphasis on human resource development, to be carried out through special projects in educational research, planning administration, teaching, and curriculum design. The loan was for $50 million, with an equivalent amount from the Government of Brazil.

Background

The education sector loans represent the culmination of 35 years of U.S. assistance in Brazil. Brazil in the 1970s, as today, was a country of great disparity. In 1970, the Northeast region of the country had a life expectancy of 48 years, compared to 63 years in the South. In education, only 42 percent of the school-aged (7 to 14 years old) population was enrolled in grades 1 through 8 in the Northeast, as opposed to 76 percent of the same age group in the South.

Even in the South, however, many municipalities had no education facilities beyond grade 4. In the late 1960s, when primary school enrollments were reaching 60 percent of the school-aged population nationwide, post-primary enrollments were only 20 percent. While post-primary *ginasios* (grades 5-8) accounted for three-fourths of this percentage, only about half of those students who began *ginasio* studies completed the eighth grade. Thus, the middle school had been identified as a bottleneck to the delivery of education services.

The loans built on several efforts supported by earlier U.S. assistance. These included (1) support for a pilot teacher training program at the National Pedagogical Institute in Belo Horizonte, which trained teachers and administrators at the center and, through extension courses given in other states, developed new curriculum approaches, published materials, and provided technical assistance throughout Brazil; (2) support for primary school construction and the

development of state secretariats of education through a program aimed at basic and elementary education in the Northeast; and (3) systematic capacity building in both primary and secondary educational planning and administration at the state level. The results of these efforts increased the planning capability in a number of states to the degree that the states could successfully participate in the education sector loans.

Program Design

Although the education sector loans were the largest that A.I.D. had provided to that time, they were insufficient for a national effort. Thus, the planning process, which took place jointly over an extended period of time, focused on maximizing the impact of the loans. This was accomplished by working with Brazilian managers to determine priorities and making joint decisions on how foreign assistance could contribute to meeting such priorities.

The strategy that was devised focused on low-income states with largely rural populations. These states were in different regions of the country and had shown, through the plans submitted to the central implementing agency, the capability to meet loan requirements. These states, therefore, were viewed as regional leaders that could serve as models and catalysts for educational change in other states.

Interviewees felt that the key to successful design was an extended dialogue and a collaborative effort that used the Brazilian national plan as a starting point. The loan agreements were worked out jointly with the Ministry of Education and Culture (MEC) and reflected the work of a team of MEC personnel, representatives of the Ministry of Finance, and USAID staff.

The availability within the Brazilian ministries of a critical mass of technocrats who could develop well-articulated plans, together with the presence of sufficient USAID staff to work closely with these individuals, resulted in a program that was consistent with national goals. By working at the sector level, a close articulation with national planning came about.

The loans were developed through the USAID Human Resources Office and administered through a central unit within the MEC charged with planning secondary education programs. The education programs were, however, part of a much larger lending package which required communication among several technical offices within the USAID mission.

Program Implementation

The implementation approach was time-phased in terms of both human and material resources development. By working with PREMEM, the central planning unit for secondary education, state planning teams were to gain confidence and become accustomed to planning school systems and individual school units. Institutional relationships were to improve as officials at the local, state, and national levels had to join forces to carry out program implementation. Short-term and collaborative training at all levels was to increase local and regional implementation skills.

Construction. Although construction was a major component of the loans, it was not seen as the driving force behind them. Rather, the construction of the *polivalentes* was seen as part of an integrated move toward creating new educational patterns in Brazil. In support of this effort, construction contracts were awarded through a competitive bidding process for the first time. This involved state and national agencies in establishing criteria for acceptable products and in monitoring the progress of private sector firms. In addition, school facilities were designed as a function of new curricula and teaching methods, thus supporting educational reform.

Changes in administrative personnel at the state and municipal levels caused priorities to shift and delayed construction. Inflation, which had been projected at around 20 percent a year, actually more than doubled during project implementation. This was the major cause of somewhat fewer units (ESL I, 204 vs. 276; ESL II, 76 vs. 99) being completed than originally planned.

Training. Inflation also limited training; only about 37 percent of the planned training in ESL I took place. This was due in part to PREMEM determining that construction was a higher priority than training and diverting funds for training teachers to construction efforts.

ESL II was especially successful in providing training to personnel at the newly constructed schools, at other schools within participating states, and at state secretariats of education. About 33,000 professionals were trained under this loan. Most of these individuals received short-term training in areas that were consistent with the goals of the 1971 educational reform, including research, curriculum design, planning, teaching-learning materials, and educational administration systems.

Much of this training was done through local universities, which not only improved local capacity and increased the number of certified teachers, but encouraged universities to upgrade their programs and develop ongoing in-service training facilities.

Planning and administration. This component had perhaps the most positive lasting effects. Through the central units developed to assist the states, all of the program states produced integrated state education plans, and planning units existed in all 22 state secretariats by 1974. The plans were characterized as providing clearly articulated and reasonable goals to be met over time rather than radical changes (Hutchinson et al. 1976; Krueger 1980). That loan and counterpart funds could be obtained through well-articulated plans, together with the specific training given in planning, provided leverage to move individual states to systematically plan their education activities.

Curriculum. Both loans contributed to a redesigned curriculum for grades 5 through 8. This curriculum combined basic academic courses with practical courses in agricultural, industrial, and domestic arts. Its purpose was to overcome a traditional dichotomy between intellectual and manual endeavors, which was seen as having a socioeconomic bias.

ESL II also supported special projects which contributed, through studies and training, to the ongoing curriculum reform.

Financial resources. Both state and federal governments met loan stipulations to increase expenditures for education in real terms annually over the 1968 base year. The planning exercise also increased state planners' ability to think ahead and plan for recurrent costs. It was suggested, however, that as education expenditures decreased as a percentage of the national budget after 1968, the sector loans had no sustained influence on the level of spending for education (Hutchinson et al. 1976). The counter argument was also made that education expenditures were indeed growing, but not as fast as the overall national budget (Krueger 1980).

Program Management

As mentioned, the loans were administered through a central planning unit for secondary education (PREMEM), which grew out of planning efforts begun under earlier interventions. The unit was structured with departments consistent with the areas of the loan (e.g., planning administration, financial resources, construction, curriculum, teacher preparation). These individual units were responsible for similar areas at the state level.

Technical assistance was provided by a U.S. university whose specialists worked in the PREMEM departments reflecting their areas of expertise. The project was monitored by two USAID education officers who divided their responsibilities between physical inputs/ administration and delivery of instruction.

Program Evaluation

USAID personnel carefully monitored financial inputs and progress in reaching targets, and such tracking was explicit in the state secretariats' plans. There was, however, less concern with formative evaluation that would monitor the quality of the interventions and allow for systematic improvements. An evaluation of the program was also undertaken as part of a general evaluation of education sector programs in several countries (Hutchinson et al. 1976). The focus of this effort also was largely on the extent to which target outputs had been met.

Krueger (1980), in a desk review of the impacts of the loans, suggested a field-based assessment of the impacts on the sector of the loans. She felt that the assumptions of the loan program with regard to questions of equity, relevance, and long-term effects should be examined in detail. Such a study was not conducted, however.

Sustainability

The economic problems that Brazil has faced since the mid-1970s make it difficult to judge the

contributions of the education sector loans to sustainable education outcomes. One indicator of the success of strengthening the planning and administrative capacity of the states, however, is the increased share of expenditures taken on by state and local governments. Between 1960 and 1974, state governments' share of public expenditures for education rose from 59 to 63 percent, and municipal shares increased from 8 to 11 percent, while federal expenditures dropped from 33 percent to 22 percent (Krueger 1980).

Outcomes

The major outcome of the program was the creation of a commitment to sound plans emphasizing phased implementation approaches in the educational sector. This planning process occurred at the national, state, and, to some extent, municipal levels. Linkages between state and local institutions as well as between national and state educational organizations were formed. At the national level, a planning unit, PREMEM, was formed; it has provided ongoing technical assistance and human resource development to the states.

The loans contributed to a national curriculum reform intended to promote child-centered, active learning with an emphasis on practical education. Local communities benefited from the infrastructural improvements that took place in transportation, water, and electricity to support the new schools. The emphasis on school-community and parent-teacher councils as part of the *polivalente* program gave families new opportunities to participate in school-community decision making.

The number of teachers in the system increased threefold during the period of the loans and the percentage of certified teachers increased, especially in those states participating in the program. One negative factor was that the new schools tended to draw off the better teachers from surrounding schools because of the higher quality of facilities.

Enrollment rates in grades 5 through 8 increased during the loan period. The rate of increase was generally greater in states outside the Northeast region (Krueger 1980).

Lessons Learned

Design. In developing a sector-level program that relies on state monitoring of local interventions, the capability to develop well-articulated education plans at the state level is required. This "critical mass" had been ensured in Brazil by human resource development activities carried out under previous bilateral projects.

The program was developed in collaboration with Brazilian planners and tied to Brazil's national plan. Thus, the interventions represented the host government's education needs and was seen as a Brazilian program.

Planning a sector-level program requires a relatively long design phase if it is to mesh with the goals and priorities set forth in a national plan. USAID staff should work closely with counterparts over the entire course of the design process.

A sector strategy allows for the mobilization of sufficient resources to orchestrate an education development program in a way that surpasses what can be achieved through smaller, independent projects. The success of the strategy, however, will rest heavily on the capability and commitment of the host country organizations implementing the program.

Implementation. The development of well-articulated plans that build in monitoring of interventions and communication among local, state, and national institutions as a basis for disbursement of funds will contribute to success in meeting program targets. If these plans represent competition among states or municipalities for scarce resources, however, care must be taken not to increase disparities among states by rewarding those with relatively more resources to develop plans.

Locating technical assistance providers in the workplaces of their counterparts can contribute to collegial relationships as well as on-the-job training.

Sustainability. Building planning and administrative capacity at state and local education levels will have lasting effects in terms of educational efficiency. Such capacity can be successfully created through short courses and on-the-job training, which do not remove administrators from the workplace for extended periods of time.

Evaluation. The breadth of interventions in an education sector-level program makes formative evaluation to improve the quality of instructional

delivery and to establish baseline data for assessing impact rather complex. As with the monitoring of outputs, however, it can be accomplished through building such evaluation approaches into the plans of implementing organizations.

Conclusions

The education sector loans assisted the Brazilian government in its commitment to investment in educational expansion. Although making up only a small portion of the total investment, the sector approach allowed a contribution to the overall educational reform effort that would not have been possible with small independent projects of relatively short time frames.

The major impact of the loans, and of earlier USAID investment in education, appears to have been in forming a technocratic human resource base capable of planning and implementing programs at the central, state, and local levels. This trained cadre of individuals is attributed with having helped speed up the process of educational reform in Brazil.

Focus on outputs of the program limited the degree to which the quality of the interventions was measured. As a result, little is known about trained administrators and planners continuing to work in the sector, the usefulness of training for teachers, the appropriateness of the schools for the Brazilian reality, and the efficiency of the programs in reducing repetition and desertion.

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Incentives to Improve Basic Education Project

The Incentives to Improve Basic Education Project in Haiti was selected for review in mid-1990 because of its unique approach to improving basic education in rural and poor urban areas through strengthening private primary schools. The project's focus on institution building through private education associations also makes it worthy of study.

The project consists of four major components:

- Provision, through four- or five-year performance contracts to participating schools, of such material and pedagogical resources as in-service training for teachers and school directors, textbooks, school equipment, preschool programs, seed money for income-generating activities, and performance incentives to teachers and directors.
- Support for the formation of Catholic, Protestant, and lay sector administrative units responsible for administering services to participating schools.
- Research and development activities to test low-cost educational technology, preschool approaches, and strategies for cost recovery and local financing.
- Assistance to the Ministry of Education to increase its capacity for inspection accreditation, certification, and student examination in the private education sector.

These four components are meant to comprise an integrated approach to helping the Haitian private education sector organize itself coherently in order to improve the quality of instruction, administrative efficiency, and equity of access in private schools serving economically disadvantaged children.

The project is designed to be implemented over six years (1986-1992) with a USAID contribution of $15 million in grant funds. This grant is to be supplemented by $3.8 million of host country in-kind contribution and $1.7 million from other donors. The principal grantee for the project has been a U.S. nonprofit institution selected by USAID in consultation with the Haitian private and public sector personnel who participated in the project design.

Background

At the time the project was designed, Haiti was the poorest country in the LAC region. Its history of poverty and political instability is reflected in the country's schooling, where net enrollment was 56 percent and the national literacy rate was 20 percent in 1985.

Recent growth in primary school enrollment has come about largely through private schools supported by philanthropic funding. This is especially true in rural areas, where often such private schools offer the only possibility for primary education. Sixty-nine percent of Haitian schools are private and over 60 percent of primary enrollment is in the private sector.

At the time the project was planned, there existed extreme diversity among private sector schools and a general lack of coordination at both the system and individual school levels. Schools were run by Protestant missions, the Catholic diocese, and religious orders, as well as by individuals and communities. There was little coordination among private schools and virtually none between private school systems and the public sector.

Individual schools were characterized by poorly paid unqualified teachers; inadequate learning materials; and inexperienced local administra-

tors. School inefficiency was exacerbated by nutritional and other health deficiencies among the school-aged population.

The project was designed to blend instructional improvement with institution building. Its goal was to provide stimulus and support to the private sector of Haitian primary education to allow that sector to organize itself and to upgrade the quality and efficiency of the growing number of private primary schools serving disadvantaged Haitian children.

Project Design

The project was designed by a joint project design committee consisting of USAID mission staff, a team of international consultants, and a group of Haitian educators who joined in a Catholic/Protestant working group. This committee met a number of times over the year of project development.

The committee also created a technical subcommission to study the problems of Haitian educational reform and its incorporation into the project. A concept paper was prepared by the subcommission and presented in an open forum to an invited group of Haitian public and private educators. This document, together with the Country Development Strategy Statement and an education sector assessment that had been conducted in 1984, served as the principal background documents in designing the project.

The project was consistent with the Haitian government's goal of universal primary education by the year 2000 as expressed in its national plan. With the change of regime in 1986, literacy and education continued to be primary concerns.

The project was developed in close collaboration with personnel from the World Bank and the Inter-American Development Bank. It was seen as complementing the efforts of the banks in school construction and teacher training aimed primarily at the public sector. The project design team also consulted the French and Canadian development agencies and laid the groundwork for collaboration during project implementation.

Project Implementation

The project has been implemented in a period of political turmoil that has seen several changes of government leaders as well as an unsuccessful election in 1987. This political instability has resulted in a curtailment of donor activity in many sectors and a general weakness of public sector institutions. Thus, the objective of strengthening the Ministry of Education's capacity to perform accreditation, examination, evaluation, and applied research has been postponed.

Institutional development. The organization of the private sector for coordinating educational improvement, however, has gone forward and is generally viewed as successful. During the first year of project implementation (1986-1987), a technical service center (TSC) and two sectorial service centers (SSC) were formed. The TSC, under the guidance of the project administrative council, which was composed of representatives of the commission of Catholic schools and the federation of Protestant schools, coordinated the work of the SSCs and the technical assistance provided by the international grantee institution. The SSCs were the operational arms of the two religious commissions. They selected participating schools, delivered materials and services, supervised and monitored the schools, carried out evaluations of school performance, and participated in research activities initiated by the TSC.

In the second year of the project, the two religious commissions began the process of forming a private primary education consortium. In addition, the two groups signed new contracts with the institutional grantee which gave the SSCs an increasing share of the management of school support funds. The Catholic organization also received a grant from the French government to assist in institutional strengthening and the World Bank supplied money for teacher salary supplements, learning materials, and administrative support.

In the third year of the project, the Haitian Private Education Foundation was officially recognized, and a new contractual relationship between USAID and this organization was developed. The project's midterm evaluation found that institutional development at the central level was the most successful component of the project (Locher et al. 1989). This was attributed to its having built on the knowledge of individuals with experience in organizational development to create new organizations free of past liabilities. The importance of organization

building as a key aspect of project implementation as well as allowing sufficient time for new organizations to develop were also noted as factors in this component's success.

However, the institutional development component has not been successful in the private lay sector largely because of its diversity and lack of organization. The midterm evaluation recommended that a systematic assessment of the needs of lay sector schools be undertaken and a policy be formulated for bringing a lay sector representative into the Foundation for the remainder of the project.

Delivery of school services. The project focused on schools that were neither the best nor the worst in the system as a whole. It provided a package of services and materials agreed upon with the schools through contract to the SSCs and the Foundation. Standardized administrative practices were put on paper and communicated through training sessions, then reinforced through written communication between the school and the central organization to ensure that resources were being put to their intended uses. The evaluation found school service delivery to have been "effective, on time and on target" (Locher et al. 1989).

Evaluators found that in addition to training 187 of the targeted 300 school directors, the project trained 292 school committee members, thereby allowing for better understanding of the program in local communities. The project had surpassed its targets by training 1,279 teachers in only three years. Training that provided a practical hands-on approach emphasizing team-building was credited with helping to increase student achievement in French and mathematics (Tietjen 1990). Such training was most successful in well-managed schools and when complemented by "refresher" courses. One unanticipated result of training was that teachers were being offered jobs with better schools that could pay higher salaries.

Three aspects of the resource package were not completely successful. First, performance grants to teachers were not generally successful because they were seen as salary supplements rather than bonuses based on performance. Second, only 40 percent of the project schools participated in the school feeding program. This was a result of either increased enrollment above project goals, which caused food to run out, inability to collect small contributions from parents to support personnel and equipment, or supplying food rations to families rather than to children. Third, income-generating activities were not developed; the money was reallocated for institutional development when it was decided that such small-scale activities were unrealistic to answer the problem of recurrent costs.

One hundred and eighty-seven of the 300 schools targeted for the entire project had received instructional materials after three years. There was great variety in the materials, and how available texts were to students was not clear. School supplies of good quality were meeting delivery targets at project schools. Similarly, school renovations were being carried out as called for in the project paper; the renovations, however, did not generally resolve school space problems. In addition, 97 pre-primary programs were in operation under the project.

Research and development. This activity received less attention than either institutional development or school service delivery during the first three years of the project. The Ministry was to play a large role in this component and with the de-obligation of funds following the events of November 1987, this did not occur. Data were being accumulated and some research studies were underway, but the objectives and focus of the component were seen as lacking definition at the time of the midterm evaluation.

Project Management

Policy for the project was established by the Project Advisory Committee, which included USAID, the TSC director, and sector directors. At the technical level, there was a matrix management style in which teams representing the various organizations worked together on the units' technical tasks. Technical assistance personnel worked together with the teams and in essence provided on-the-job training. The midterm evaluation found that the combination of consensus-oriented and matrix management styles had worked well for the project. With the exception of some early problems with procedures common to all projects, the management approach was found to allow the organizations to meet USAID's administrative requirements.

It was felt, however, that with the establishment of the Foundation as a direct grantee of USAID, a redefinition of the management structure would be needed. The evaluation recommended that clear lines of responsibility and decision-making authority be drawn among the different organizations making up the Foundation and between the Foundation and the institutional grantee.

Project Evaluation

An extensive evaluation plan involving two types of formative evaluation and a two-part summative evaluation was developed as part of the project design. The schools were to be responsible for gathering and analyzing a basic set of output data for their own performance. The SSCs were to monitor this activity as well as conduct an annual evaluation of project operations. The summative evaluation was to take place as a midterm evaluation in Year 3 of the project, with a final evaluation to take place in Year 6. In addition, studies of special interest were to be conducted as part of the applied research effort.

The midterm evaluation found that routine data collection of a formative nature was being conducted (Locher et al. 1989). It was felt, however, that these data could be analyzed in a systematic manner and could be expanded to offer explanations of trends found in project implementation. Although the evaluation failed to establish a baseline, it had set up a careful monitoring system that will allow analyses of project participants over the last three years of the project.

Sustainability

The midterm evaluation concluded that the expectation of sustaining project activities solely with local resources after project termination was unrealistic. The authors stated that while the activities were sustainable, they were not self-sustaining; even without technical assistance, they were considered too expensive to be financed locally. Thus, long-term dependency on outside financing was viewed as necessary if lasting improvements in basic education were to be made.

Outcomes

The midterm evaluation of the project provided information on impact in three areas: teacher revenues, school budgets, and teacher training. The authors stated that it was premature to attempt to measure impact on student learning at that point in time.

The evaluation found that the performance grants to teachers served as an incentive to forgo other possible sources of income and thus contributed to teachers' willingness to adopt the procedures and assignments of the Incentives to Improve Basic Education Project. However, no data were presented to support this conclusion.

The project was also found to have a significant impact at the school budget level. The allocation of additional funds contributed to more coherent planning by school administrators. In addition, evaluators felt that the use of funds for systematic school improvement offered the opportunity to increase revenues. This occurs through enhancement of a school's reputation, which increases student numbers or fees.

Empirical data showed improvements in teachers' subject matter knowledge and pedagogical practices of up to 40 percent as a result of training. Although no data were available at the time of the evaluation, it was assumed that such gains would be translated into classroom behavior, thereby influencing student performance. The unexpected result of training was that the trained teachers might be offered higher paying jobs in public sector schools or in better-off private sector institutions and thus would be lost to the project.

Lessons Learned

Project design. Where there is a history of philanthropic involvement by the private sector in schooling, as with religious organizations in Haiti, this sector can be a viable vehicle for implementing educational change.

The project design process may require an extended period of time in order to reach consensus among host country educators and donor agency personnel as to project components and implementation strategies. International technical assistance will be required to assist in the design process in specialized areas where local expertise is lacking.

Encouraging the collaboration of existing private organizations to implement project interventions

is effective when sufficient time is provided for strengthening the institutions. This is especially true when the institutions have philanthropic goals. Effective implementation and institution building are more problematic with institutions that view their involvement in education principally from an entrepreneurial perspective.

Project implementation. The strategy of using an international grantee to contract with local institutions to implement the components of the project, while at the same time providing technical assistance to the local contracting institutions, can be an effective one. Redefinition of institutional roles, however, may be necessary as the implementing organizations become more adept and agreements with the donor agency are renegotiated.

It is possible to plan for the production and delivery of a variety of educational services to meet the needs of individual schools. These services must, however, be limited to a certain range of options. It is likely that despite individual school differences, similar "packages" of options will be chosen.

In a situation with a drastic lack of trained resources, a project that involves teacher preparation may find that the trained resources are being lost to the larger system. In such a case, the investment made in training translates to the larger system and may require an indicator of success that is broader than the project itself.

Evaluation. Effective monitoring of the quality of education interventions in order to make improvements in delivery requires collecting baseline data and conducting systematic investigations of program implementation. In order to conduct such investigations, local program monitors must be trained in data collection techniques that will be used across the entire program.

Sustainability. The Haiti case suggests that private sector educational organizations are better able to weather political instability than public sector organizations that are tied closely to the policies of the regime in power. Despite increased organizational capability and collaboration, however, private schools may not be capable of maintaining the level of service provided through the project without ongoing donor funding.

Conclusions

The Incentives to Improve Basic Education Project has successfully improved education service delivery to poor children through strengthening privately run schools. The project has been most successful in the religious schools, in part because such schools already belonged to broader organizations that could be built into a coalition. Where such organizations do not exist, working through private schools may be problematic.

The results of the project at midterm suggest that attention to building institutional capacity can have positive effects. Successful improvement of institutional capacity, however, may require long-term ongoing technical assistance.

Finally, the implementation process demonstrates that all components of a complex project may not move forward at the same speed or time. Thus, flexibility in implementation must be built into project design so that implementors can focus their attention on the components with the greatest likelihood of success.

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