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PROJECT PAPER  
EXTENSION OF RURAL PRIMARY SCHOOLS  
PROJECT NUMBER 931-1017

DS/ED

April 27, 1979

AGENCY FOR INTERNATIONAL DEVELOPMENT  <b>PROJECT PAPER FACESHEET</b>	1. TRANSACTION CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;">A</div> A - ADD C - CHANGE D - DELETE	PP  2. DOCUMENT CODE <b>3</b>
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3. COUNTRY ENTITY <p style="text-align: center;">Interregional</p>	4. DOCUMENT REVISION NUMBER <div style="border: 1px solid black; width: 20px; height: 20px; margin: auto;"></div>
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5. PROJECT NUMBER (7 digits) <div style="border: 1px solid black; display: inline-block; padding: 2px;">931-1017</div>	6. BUREAU/OFFICE A. SYMBOL DSB	B. CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;"> </div>	7. PROJECT TITLE (Maximum 40 characters) <div style="border: 1px solid black; display: inline-block; padding: 2px;">Extension of Rural Primary Schools</div>
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8. ESTIMATED FY OF PROJECT COMPLETION FY <div style="border: 1px solid black; display: inline-block; padding: 2px;">83</div>	9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY <div style="border: 1px solid black; display: inline-block; padding: 2px;">79</div> B. QUARTER <div style="border: 1px solid black; display: inline-block; padding: 2px;">4</div> C. FINAL FY <div style="border: 1px solid black; display: inline-block; padding: 2px;">83</div> (Enter 1, 2, 3, or 4)
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10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 - )						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AND APPROPRIATED TOTAL	850		850	3,800		3,800
(GRANT)	( 850 )	( )	( 850 )	( 3,800 )	( )	( 3,800 )
(LOAN)	( )	( )	( )	( )	( )	( )
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY						
OTHER DONOR(S)						
TOTALS						

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>79</u>		H. 2ND FY <u>80</u>		K. 3RD FY <u>81</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
1) EH	620	640		850		600		500	
2)									
3)									
4)									
TOTALS									

A. APPROPRIATION	N. 4TH FY <u>82</u>		Q. 5TH FY <u>83</u>		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
1)	925		925		3,800		<div style="border: 1px solid black; display: inline-block; padding: 2px;">MM YY</div> <div style="border: 1px solid black; display: inline-block; padding: 2px;">0781</div>
2)							
3)							
4)							
TOTALS							

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1

 1 = NO  
 2 = YES

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## B. Summary Description of the Project

This project will provide equitable access to effective primary school education through use of modern communication media and through innovative applications of educational technology. It will develop and test a language arts/reading system using radio as the major medium of instruction.

This is a new, independent project. However, it is an integral part of an ongoing DS/ED program to develop tested models that provide innovative solutions to educational problems through the use of modern technology, in this case, radio. The project will synthesize experience gained from a series of previous projects involving use of radio for instruction and from research in the fields of language and reading instruction. It will design, implement and test a workable instructional model in an LDC school system. It is a direct follow-up to the Nicaragua Radio Math Project and will apply and adapt the findings of that project to another important primary school subject - reading/language arts.

The strategy for accomplishing the project's purpose includes three phases: 1) site selection and in-country development of a detailed implementation plan, 2) instructional materials design and tryout, formative evaluation and revision cycles, and 3) summative evaluation and dissemination activities. Phase I will take place during FY 80, Phase II during FY 81, FY 82, FY 83, and Phase III during FY 84.

The site for the project will be selected during the first months of the project by DS/ED, the contractor, and the Regional Bureaus working cooperatively. The final selection will be based principally on three factors: the extent to which interested countries show potential for providing support for the successful completion of the project; the potential for dissemination of the program throughout the host country should it prove successful; and the degree to which the linguistic profile of the country will facilitate the development of a model primary reading/language arts program.

The direct beneficiaries will be students in the project schools. Secondary beneficiaries will be other students who use the program after its development and families of participating students who benefit from having a literate family member. Long-range benefits to students throughout the host country will accrue from the cadre of host country professionals who will receive training as a result of participation in the project and from the instructional system that is left in place.

The project will provide for utilization of its findings by making instructional materials, procedural models and summative evaluation data available to LDC decision makers and professionals by means of publications, media presentations and seminars.

A concomitant effect of the project will be the development of a trained cadre of language arts instruction specialists, teachers, educational broadcast specialists, and educational evaluators; and the development in the host country of a model reading/language arts program that includes software components (books, script, tapes for broadcasts, teacher manuals and other ancillary materials). These could serve as the nucleus for expanding the program throughout the host country.

The host country will contribute office facilities and MOE personnel to assist in carrying out the project. AID will primarily provide technical assistance for the development of the radio-based instructional system. AID will also provide vehicles for the classroom liaison assistants, radio receivers for the classrooms taking part in the project, production equipment and materials for printed instructional materials, and maintenance materials and equipment.

The proposal is requesting a grant of \$3,800,000 for a period of five years. DS/ED will select a contractor through competitive procedures to implement the project.

## II. Project Background And Detailed Description

### A. Background

#### 1. Educational Goals for LDCs

The Congressional Mandate, A.I.D. policies and LDC priorities emphasize the need to reach large numbers of LDC rural and urban poor with social services. Acquisition of basic learning and life survival skills by children and adults is considered of prime importance. Of these, literacy is seen as a key skill that enables individuals to acquire information and to contribute eventually to national development efforts.

LDC's are expanding primary school systems with the ultimate goal of providing equitable access for all their children. They are finding it difficult, however, to do much about improving the quality of instruction.

Many children repeat grades or drop-out without mastering fundamental literacy skills. This represents a waste of educational investment that LDC's cannot afford. Since learning to read is the single most important educational tool that an individual can master, improving the efficiency of primary reading programs is seen as central to improving education in general. However, primary education in most LDCs operates under the following constraints:

- A severe shortage of trained primary teachers;
- No tested instructional model that reliably achieves learning objectives; and
- Few instructional materials of any kind.

## 2. Proposed Solution and Rationale

This proposed five-year grant project for \$3,800,000 will develop, implement and evaluate a system of primary reading/language arts instruction that will enable minimally trained teachers to carry out effective education program through the use of radio for direct instruction. The effectiveness of the system will be measured by the attainment of specified learning objectives achieved at a cost that is affordable to the developing country.

During the period for which funding is requested, a complete instructional program for primary grades in reading/language arts will be developed. The terminal objectives for the program will reflect the major language arts goal, functional literacy. The program will be designed to include all of the language arts skills of speaking, listening, reading and writing, with major emphasis on the development of literacy skills to the level where learners can reasonably be expected to maintain their reading and writing capabilities.

Two important aspects of this project's approach to the solution are drawn from previous experience in educational technology:

- Reliance on a systematic approach to instructional package design, and
- Reliance on radio as a major medium of instruction.

The choice of radio as the major delivery system component is based on its demonstrated ability to 1) make use of minimally trained classroom teachers to carry out effective instruction, 2) provide effective direct instruction to large numbers of students at comparatively low cost, 3) rapidly increase the number of listeners served with low incremental increases in cost, 4) provide more equitable access to quality education by making the best radio teachers available to every classroom, 5) provide learning experiences difficult or impossible to obtain in classrooms any other way, and 6) implement a curriculum innovation quickly throughout a school system. Radio is a feasible choice since low-cost receivers and increased transmitter facilities have made radio accessible to almost every area of the world.

The Nicaragua Project focused on the systematic design of instruction and demonstrated that through the use of a cycle of design-test-revise procedures, dramatic improvements in learner achievement can be obtained by a radio-based instructional package. The Nicaragua Project applied such procedures to the subject of mathematics. The rationale for selecting mathematics for the first intensive radio instructional development effort was that there were successful math programs that could be adapted to radio; mathematics was considered likely to be less culture-bound than language arts, social studies or science; and it is one of the important basic skill areas.

Reading/language arts has been selected as the next curriculum area for attention, because it is the key skill area for success in the formal school system and provides a learning tool that is essential for further education.

We intend to apply findings from the Nicaragua experience to this project and adapt them to the requirements of a different subject area. What we have learned about radio message design, utilization, and instructional development will provide basic guidelines. At the successful completion of this project, LDCs will have strategies available for improving their primary schools in the two critical areas of mathematics and reading/language arts at a cost low enough so that both the quality of education and access to it will be improved.

The project will require five years to achieve its development, evaluation and dissemination goals. The detailed implementation plan is on page 10.

The developmnet of a successful instructional package will require approximately three and half years. It is estimated that a minimum of three years of efficient reading instruction is required for average learners to attain independent reading and writing skills. There are tested, effective language arts instructional models that can serve as bases, but it is expected that considerable adaptation and revision will be required. The project model will need to take into consideration the culture-bound nature of language instruction, the use of radio as the major delivery system, and the constraints of LDC educational settings. One complete cycle of testing of the basic instructional package will require three school years. An additional period of time will be needed for final revisions before the package will be ready for dissemination.

To increase the usefulness of the project, information will be carefully analyzed, dissemination materials prepared, presentations to key agencies and LDC's made and workshops held in LDC's interested in adapting or replicating the project. Phase III, summative and dissemination activities, will take place during the last nine months of FY 84.

### 3. Experience with radio instruction

With the advent of inexpensive radio receivers and batteries, the use of radio in LDCs has become increasingly feasible, both logistically and economically, and for a variety of purposes. During the last twenty-five years there have been many attempts to use radio to improve access to quality education. There currently exists an impressive body of knowledge concerning these efforts and the evidence is overwhelmingly positive about radio's capability to provide effective instruction.

#### a. Significant General Findings

- Radios are ubiquitous. UNESCO figures indicate that there are at least 75 million radio receivers in the Third World, or an average of one for every thirty or forty people.

- We now know that, all other factors being equal, people do learn as much from radio as from face-to-face instruction. The practical significance of this finding is that when face-to-face

instruction cannot be provided, it is possible to achieve at least the same level of educational achievement by using radio. Of even greater significance is the fact that it is much easier to improve the quality of a single source, (a radio broadcast) than of multiple sources, (classroom teachers).

By developing an excellent series of radio broadcasts, it is possible to measurably improve education throughout an entire system. To up-grade instruction throughout a system by more traditional means is a costly and time-consuming process.

- Radio costs compare favorably with those of other educational delivery systems. Television is three to five times as expensive as instructional radio. To provide comparable instruction through use of print involves considerations other than cost, such as literacy level of users, transportation facilities and other infrastructure considerations. Print costs vary considerably but recent increases in the cost of paper have made a dramatic financial impact on the print medium.

b. Relevant Research

Previous studies that relate generally to the purpose of this radio project are in DS/ED and can be made available to those interested. The most relevant research activity to date is the AID project to teach mathematics by radio in Nicaragua. This project produced a successful instructional program that measurably improved children's achievement on math objectives, and operated at a cost that is feasible for installation in an LDC. Extensive evaluation and research activities were integral to the project. Much new information directly related to radio message design and to media mixes was generated.

The instructional design was based on currently accepted psychological principles of learning and a systematic attempt was made to deal with each, within the context of radio as the principal medium. Message format and content were based on the premise that the following enhance learning: active response of learners, reinforcement, distributed practice, and dealing with the concrete before the abstract, simple before complex and known before unknown.

In trying to incorporate these principles into radio programs, it was found that children learn better when they are actively responding at a rate of at least 4-6 times per minute. The response can be oral, written or physical movement.

Other pertinent findings from the Radio Math project are as follows:

- i. Children were more interested in songs, games and solving mathematics problems than they were in listening to stories.
- ii. The amount of printed material can be greatly reduced without appreciable loss in learning. The current format of the program is as follows: Grade one children receive printed worksheets to accompany lessons. Grade two teachers write on the board, based on directions in the teacher guides. Grade three children copy essential material from radio dictation.
- iii. It is important to have an overall curriculum materials development plan, but it should be flexible. By the end of the third year, an efficient and workable procedure had evolved. At the beginning of the development phase for a given grade, final objectives and broad content outlines were written. Lessons were developed just a few weeks ahead of the broadcasts. Subsequent lessons were designed in response to the feedback received from classroom trials. For example, if children learned a theme more quickly than was anticipated, subsequent lessons gave reduced attention to that theme. If children had trouble, on the other hand, with a concept or procedure the amount of attention to that aspect was increased. Sometimes topics were dropped entirely, in favor of increased emphasis on others deemed more important.
- iv. The feedback system that evolved consisted of weekly achievement tests and classroom observations by project staff members. An average of three classrooms were visited daily, during which observers made notes on observation sheets. Summaries of observation notes were compiled daily and passed to the curriculum writers. Tests were hand-scored by the staff, and the results were given to planners within two or three days.

There seemed to be general agreement that the classroom observations were an essential, though time-consuming, element in the development process. It was through them that the realities of the classroom became integrated into the radio messages, with the resultant gradual improvement of message effectiveness.

## B. PROJECT DESCRIPTION

### 1. The Project in Operation

The goal of the DS/ED program is to provide viable alternative strategies for improving the quality of education and

extending access to education. A series of projects have shown that radio is a practical and effective medium for dealing with some of the constraints that hamper education efforts in the poorer countries.

The purpose of this project is to utilize the findings from previous projects, in particular the Nicaragua Radio Math Project, to develop a viable and instructionally effective radio reading-language arts for primary schools.

A great amount of background information exists, especially from the Radio Math project, that will facilitate the development of a workable instructional program. It is clear that radio can provide direct instruction that results in significant learning gains. However, it is also clear that the content and formatting of the messages, and the soundness of the underlying instructional strategies, are strong determining variables related to levels of achievement. We also know that systematic development of the instructional component, through utilization of formative design strategies, is an important factor in developing successful instructional programs. We know that the content must be relevant to the needs and interests of learners and that the only way to finally determine message effectiveness is through field trial. We know which radio message design factors have proved to be significant. We know instructional strategies that have worked for developing reading-language arts skills and ways that radio has been used effectively for instructional purposes. Finally, we know ways to reduce instructional hour unit costs.

These factors have been taken into consideration in the formation of the implementation guidelines and framework within which the detailed implementation plan will be developed, once the host country has been selected.

The project will involve classrooms, a materials development unit, and evaluation and coordination activities.

In project classrooms, children will probably receive all of their language arts instruction from this project's instructional package. Each lesson (or instruction period) will be divided into three segments:

Part I: A brief introduction by the classroom teacher, using teacher notes provided by project language arts specialists. This period may include review of previous lessons, a song or other related

activity, questions that relate to the current theme, or similar activities.

Part II: A radio broadcast approximately thirty minutes long, during which a complete lesson will be presented. Children will be listening and from time to time actively responding either orally, in writing, or by physical activity.

Part III: Reinforcement activities conducted by the classroom teacher, using student materials and teacher notes developed by the language arts specialists.

Materials development will be the joint responsibility of the instructional development unit and the production unit. The language arts technical assistants will work with a team of host country curriculum materials writers to design the detailed lesson plans. They will work as a team with the production unit to develop scripts, radio programs, worksheets, and other materials that are needed.

A team of host country education evaluators will develop instruments and evaluation strategies (based on those that have proved successful in Nicaragua and elsewhere) and will assist with classroom observations, the administration of periodic achievement tests, and the scoring and analysis of tests. They will be responsible for supplying feedback information to the materials development staff on a regular basis.

The materials writers and producers will visit classrooms on a regular basis to observe total lessons.

The project coordinator will work with a host country counterpart from the Ministry of Education who has responsibility for primary language arts. Their tasks are to implement the project by coordinating all of its activities and to assist the host country in planning for dissemination of the instructional program. One of their major concerns will be the drawing up of a systematic plan for developing the expertise of the local staff and for gradually increasing their responsibilities for management of the instructional program design task.

Working from a language arts objectives matrix that is based on the country's language arts curriculum guide, the materials developers will continue to write detailed unit and lesson plans and to produce the radio broadcasts, student materials and teacher-notes. They will observe classrooms periodically and consider

the achievement test data as they revise earlier lessons and adapt future lessons on the basis of the classroom trial feedback. They will conduct teacher in-service training sessions as needed.

The host country staff, (materials developers, education broadcasters, education evaluators and language arts specialists) will receive on-the-job training and in some instances longer-term formal training.

## 2. Implementation

The following tasks will be implemented:

a) The contractor will undertake studies of proposed sites during the first months of the project to provide information needed for site selection. During the last six months of the first year, after a country has been selected, a study of cultural and psycholinguistic features of the country will be carried out to provide necessary information for selecting appropriate instructional strategies.

b) A detailed implementation plan will be collaboratively developed and will involve host country personnel, AID/DS/ED personnel and appropriate technical experts, as well as the contractor.

c) The project will develop a complete three level language arts/reading program, suitable for use in the primary grades. Level I will focus on the development of readiness and beginning reading and writing skills. Level II will focus on the development of independent learning skills, and Level III will focus on the development of fluency and comprehension skills.

d) The country selected will utilize English as the school medium of instruction. However, it is assumed that learners may have other first languages. The instructional design will take the first language of the learners into account by including instructional components that utilize the learners' first language as a bridge to literacy and proficiency in the second language, English.

e) The instructional system will be designed to enable minimally trained teachers to carry out a successful language arts program and to be logistically and economically feasible for an IDC school system.

f) Specific findings relating to effective radio instructional message design from the Nicaragua project will be systematically tested and adapted to the new subject area (language arts) and to the different cultural setting.

g) Children can learn to read, using material written about almost anything. However, content of all language materials for this project is to be based on collaboratively agreed upon culture-specific criteria. The general guideline is that all content is to relate to at least one of the following purposes:

- assist the learner in developing a prescribed skill,
- relate to children's needs and interests,
- contain useful information
- foster socially functional attitudes, and/or
- reflect values of the culture.

Conversely, materials will be screened to insure that they do not violate the society's sensibilities or its mores and that they are not perceived as fostering undesirable attitudes.

h) Design of all instructional components is subject to change, based on data collected systematically as part of the formative evaluation plan. The product of this project is to be a proven, successful instructional package. Therefore, elements must be subjected to rigorous testing, and lesson revision made on the basis of the results. This feedback collection and response will be an ongoing process throughout the development phase of the project.

i) Cost is a critical factor in LDC utilization and must be taken into account when considering alternative learner activities, materials, teacher training and supervision strategies, message design and media mixes. Critical cost issues are to be identified and systematically tested, to determine maximum payoff for minimum possible cost. Since radio messages have the potential for lowering instructional unit costs by increasing audience size and by increasing the amount of broadcast instruction, the program design will emphasize use of radio.

j) The overall evaluation plan will be collaboratively designed by the contractor and the host country MOE.

k) Dissemination activities are to be included in the implementation plan. Dissemination plans will include attention to assisting the host country with planning for system-wide use of the instructional system as well as to disseminating the findings of the project to other LDC's.

### 3. Site - Selection Criteria

We have included linguistic factors among the criteria for site selection because it seems advisable to carry out this project in a country that has a basically monolingual profile and that utilizes English as the major medium of instruction in school. The pedagogical complexities related to language arts instruction in multilingual settings could present insurmountable difficulties as part of an already complex task -- to develop an effective language arts instruction package that can be distributed to LDC classrooms via radio. Once a workable bilingual model has been developed, a next step could be to adapt that model to multilingual settings.

If English is the medium of instruction, the utilization of US technical advisors in the field of language arts instruction will be greatly simplified. In addition, materials that are developed can serve as prototypes for other interested countries without going through a double translation.

If the country has one major first language, it is more likely that materials developed at the project site can be utilized throughout the country, with minor or no adaptation necessary.

The criteria to be considered include linguistic, diffusion and feasibility factors.

#### Linguistic factors:

- Is the country monolingual, regarding first language?
- Is English the medium of instruction in upper primary and secondary schools?
- Will the MOE policy permit use of children's first language in beginning primary grades?
- What is the official language policy of the country?

- Is the first language of the children a written language?

Does it have a standard orthography? How much written material exists in the first language?

Diffusion factors:

- The stated intention of the host country officials to incorporate into their educational system the innovations included in this project, if they prove successful, and
- The likelihood that a site can be found exhibiting characteristics of the host country educational system, as a whole.

Feasibility factors:

- The willingness of the host country to enter into partnership in the planning and operation of this project,
- The commitment of the host country to cooperate by contributing personnel and materials to the project,
- The technical capabilities of host country personnel,
- The stated intention of the appropriate host country ministries to establish, implement, and see-to-completion the planned operations of this research and development project,
- The stated intention of the host country education administrators and teachers who would be connected with the project to cooperate in the stated purposes of the project,
- The stated intention of the host country MOE to insure a male-female balance of students and staff insofar as it is practically possible, and
- The existence of appropriate radio broadcast facilities in the host country.

4. Assumptions for achieving purpose

The following conditions required for achieving project purpose are assumed:

- 1) An LDC that meets project criteria can be selected;

- 2) The host country will support the activities of the project and the continued use of the program by providing essential LDC personnel and facilities, and by integrating the project LDC staff into the structure of the Ministry of Education, as a functioning entity;
- 3) Host country media production and distribution facilities and radio air time will be available as anticipated; and
- 4) Prior to the dissemination phase, the project will have been successfully implemented.

5. Outputs

The proposal is requesting a grant of \$3,800,000 for a period of five years. During that period of time the following outputs will be obtained:

- 1) An effective language arts/reading instruction system for primary grades using radio for direct teaching will be developed, implemented and tested in an LDC school system.
- 2) A cadre of host country professionals, including teachers, language arts specialists, education broadcast specialists, and evaluation and testing specialists will be trained.
- 3) Primary students in project classes will receive effective instruction in language arts/reading and will become functionally literate.
- 4) Prototype sets of instructional materials will be assembled and made available to other LDC's to assist them in adapting or replicating the instructional system.
- 5) Publications summarizing project findings will be written, published and distributed to other LDC's and interested agencies.
- 6) Seminars will be given in each of the AID Regions (world regions) to present project findings.

6. Required Inputs

- a. The project will require an appropriation of \$3,800,000 according to the following schedule (US \$000).

Year 1: \$ 850  
Year 2: 600  
Year 3: 500  
Year 4: 925  
Year 5: 925

- b. The project will require 2.0 person months per year of DS/ED staff time.
- c. The following contractor staff will be required for achieving project outputs:

Project coordinator (54 person months)

The project coordinator will be responsible for on-site coordination and management of project activities. The project coordinator will have a background in primary language arts instructional systems design which includes experience with broadcast media and with education in lesser developed areas of the world. The coordinator will assure timely implementation, smooth operation and appropriate quality within the program. She or he will also act as liaison between short term consultants and LDC-MOE officials.

Two language arts materials development specialists (108 person months):

The language arts specialists will assist with the development of the detailed implementation plan and will be responsible for the development of the instructional system. Their responsibilities will include in-service training of LDC materials writers and classroom teachers, and collaboration with production support staff (typists, graphic artists, and education broadcasters). They will liaison with MOE counterparts responsible for language arts curriculum and instructional supervision. They will be responsible for the content and quality of the instructional materials. They will act as liaison with field staff to coordinate classroom trials of materials and to insure that feedback information is used to improve the instructional program. They will assist with dissemination activities as required, based on the detailed implementation plan.

One educational broadcaster (54 person months)

An educational broadcaster will assist with radio lesson design and production. He/she will train LDC counterparts and will be responsible for producing and broadcasting radio lessons that carry out the intent of the instructional design.

Short Term Technical Assistance (35 person months)

The implementation of the project will require approximately 15 person months of evaluation consultant assistance and 20 person

months of expertise in the following areas: engineering, staff-trained, computer programming and analysis, and instructional materials production.

It is not possible to specify the exact amount of assistance that will be required in these areas until a country has been selected. However, experience has shown that technical assistance will probably be required in one or more of these areas.

Host Country: The LDC government will provide personnel required to carry out the project. They are to be permanent staff members of the host MOE.

The language arts specialist will be the counterpart to the project coordinator and should be on the central administrative staff of the MOE. The LDC language arts specialist will have the responsibility of working jointly with the project coordinator to carry out the instructional design and utilization components of the project, and to assist with expansion of the instructional program throughout the host country educational system.

The other kinds of personnel that will be drawn from the LDC MOE are as follows:

- language arts materials writers to write lesson plans, script, student classroom materials and teacher guides, working cooperatively with the language arts specialists to develop the complete instructional program.
- classroom liaison assistants, to act as liaison between classroom teachers and the instructional materials developers; and to assist with in-service teacher training and with data collection as needed.
- education evaluation specialists to design appropriate evaluation instruments and techniques for assessing the extent to which lessons and units are reaching specific learning objectives, and to supervise the collection of data from classrooms. They will be expected to orient teachers and assist them with evaluation activities, and provide feedback information to the instructional materials development staff, to the evaluation consultant, and to the project coordinator.

- radio/electronics technicians to provide necessary maintenance and operation of broadcasting and receiving equipment.
- radio producer/directors to assist with the scripting and production of the radio portion of lessons. They will work with the education broadcaster and the language arts specialists.
- materials management assistant to coordinate production and distribution activities.
- graphics artists to illustrate, layout and prepare instructional materials for publication.
- administrative assistants and/or secretaries to attend to office management and to provide support to the other staff members.
- Classroom teachers to use the radio broadcasts and printed support materials in their classrooms, and to give feedback to the materials developers through the classroom liaison staff. No specific number of grade designations will be established prior to selecting the site since there may be various configurations depending on the sizes and class compositions of the schools selected as sites. Level I materials will be tried in grade one classrooms, with beginning students. However, it is anticipated that it may be desirable for example, to try Level I materials with other grades as well.

d. Training

It is not possible to specify training needs exactly until a country has been selected and an analysis made of levels of expertise available. However, experience has shown that there will be a need for staff training.

A combination of in-country training and participant training will probably be required. The estimates given are conservative, that is they are based on a pessimistic assessment of the levels of expertise that are likely to be available.

If the goal of developing the LDCs ability to carry on the reading-language arts instructional program independently and to implement it throughout the country are to be reached, it will be essential that key people become expert in the following areas: education evaluation, educational broadcasting, and reading.

Further, if the project's goal of developing an effective reading/language arts program is to be reached, the staff will have to develop certain skills and will have to have some knowledge of the underlying theories of language arts and reading instruction and of educational media.

e. Commodities

A recurring theme in evaluation reports on education in LDCs is the lack of contact between central staff and the classrooms. This is usually attributed to the lack of transportation. Most MOEs are aware of the desirability of maintaining contact with schools, and most have personnel for that purpose, usually called supervisors, or some equivalent. However, rarely do those individuals actually grace the classrooms.

A second recurrent problem is distribution of materials and supplies and maintenance of equipment.

It is absolutely essential for the project staff to have daily access to the schools, and for the radio sets, the transmission equipment, and the production equipment to be kept operating.

Therefore, AID will finance the purchase of four four-wheel drive vehicles (estimated total cost \$36,000), and will finance maintenance and operation costs of the vehicles and the production and broadcast equipment.

AID funds will be used to purchase materials, production equipment and supplies, including audio recording and print reproduction equipment. The estimated cost is \$150,000.

AID funds will be used to purchase radio receivers for use in project classrooms. Estimated cost: \$2400.

The LDC government will be asked to gradually assume the maintenance and operation costs so that during the last year of the project, this will be totally financed by the LDC.

f. Evaluation

In addition to the extensive formative evaluation activities that are an integral part of the instruction program development process, the detailed implementation plan to be developed after a site has been selected will give specific and detailed directions for carrying out project review and summative evaluation activities.

The budget includes service fees for fifteen months of evaluation consultant technical assistance, and travel funds to enable the evaluation consultant to work in the LDC for approximately three months per year during the life of the project.

AID/DS will be responsible for seeing that an internal AID evaluation takes place approximately one year after the beginning of the project to assess management effectiveness and to make recommendations for improving the implementation of the project. One DS, 1 contractor representative, 1 external evaluator and 1 other AID office representative will participate in the review.

A second internal review will be held after 35 months.

The short-term consultant will assist with the following evaluation activities:

1. designing the evaluation component of the implementation plan and assisting with its total design. {This refers to the detailed implementation plan for the instructional component and specific management details related to the LDC.}
2. assisting with the design of base-line data collection techniques and instruments and training LDC staff who will be responsible for in-country evaluation activities.
3. annual site visits and the submission of project evaluation reports on the extent to which the project is meeting its management activity schedule and making progress toward objectives.
4. assisting with collection and processing of data to be used in the summative evaluation and assuming responsibility for preparation of summary reports on the overall effectiveness of the project.

The contractor will be responsible for securing the services of qualified evaluation consultants to accomplish the evaluation tasks.

Implementation Schedule

<u>Activities</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
1. Secure implementation contractor	X				
2. Select site	X				
3. Select project staff	X				
4. Procure commodities	X	—————→			
5. In-country pre-planning	XX				
6. In-country training workshop	X	X	X	X	X
7. Develop instructional program					
Level I		XXX			
Level II			XXX		
Level III				XXX	
8. Field trial of program					
Level I		XXX	XXX	XXX	XXX
Level II			XXX	XXX	XXX
Level III				XXX	XXX
9. Revise instructional components					
Level I			XXX		
Level II				XXX	
Level III					XXX
10. In-depth project review		X	X	X	
11. Conduct summative evaluation of instructional program					XX
12. Develop dissemination materials					XXX
13. Publish findings					XXX
14. Conduct briefing seminars in LDCs					XX

### III Project Analyses

#### A. Pedagogical Analysis

The instructional system design will adhere to current basic psychological principles of learning. Content will be selected on the basis of its relevance to the children for whom it is intended; skills will be carefully analyzed to determine prerequisite skills and sub-skills involved; children will be expected to respond actively and to express their own thoughts and feelings; reading and writing will be taught as an integrated part of the total language experience; systematic review and scattered practice will be built into the program design; children will receive feedback on aptness of responses; children will be informed of the purpose for which activities are undertaken and will be given accurate information about their progress toward goals. Learning will be organized to proceed from familiar to unknown, from simple to complex and from concrete experience to abstraction.

It is anticipated that many of the children will speak a mother tongue that is different from the language of instruction of the school. Therefore, procedures will be built into the readiness and beginning reading levels of the program that use the child's first language as a bridge into the acts of reading and writing. Bilingual education research has shown that children learn to read better and more quickly when they are first introduced to reading materials in a language that is familiar to them. The task of learning to read is made more difficult (and for some children impossible) when their first introduction to reading is in a second language. Getting meaning from print (relating sound, symbol and experience) must be considered at every stage of instruction.

However, it is worth noting that although children learn to read faster and easier in their mother tongue, the immersion studies show that children can learn to read in a second language and that they eventually do catch up with the children who are learning to read in their mother tongue, all other things being equal.\*

\* Troike, R. and Modiano, N. (eds.) Proceedings of the first Inter-American conference on bilingual education.  
Arlington, Va: Center for Applied Linguistics, 1975.

Content will be "child-tested" to determine which topics and activities are of real interest. A determined effort will be made at achieving a balance between those topics that are of legitimate concern to the adults and those that children really like.

An eclectic approach will be taken toward language arts instruction, in these major aspects of the instructional design.

1) The design will represent balance of incremental and holistic approaches. Basic principles, facts and sub-skills will be carefully sequenced, systematically introduced, taught, practiced and reviewed. However, the child will engage in many holistic language experiences that encourage personal discovery and motivated but unstructured practice of all the aspects of language. A combined analytic/synthetic instructional/learning system will be developed.

2) Individually selected and self-paced tasks, whole class activities led by classroom teacher and the radio lesson, and small group activities will be included. Every effort will be made to develop a system that provides for a variety of sensory inputs and kinesthetic experiences.

The project will explore possibilities of using radio to involve other people in the children's learning environment. Radio programs directed at parents or older siblings might be used to stimulate interaction with primary age children in the teaching/learning process outside of school.

Other possibilities that will be explored are use of peer-tutors, or of older student reading-partner mentors, and a community search for local child-lore that can become part of the children's literature component.

#### B. Economic Feasibility

There are several cost methodologies that can be used to estimate costs for instructional technology systems. However, in the case of a project such as this, in which there is heavy initial investment in instructional system development, with increasing numbers of students using the program from year to year, the appropriate method must take into account fluctuating costs and utilization.

Since teachers will not be displaced by this project, project costs will be in addition to the existing educational budget. Moreover it is unlikely that lesser trained teachers will long work for salaries that are far below what their better trained colleagues earn. The savings therefore to economically justify this project must come primarily from improved quality of instruction. More children must complete more grades in less time. In other words, the years per graduate must decrease.

To analyze the costs of this project four main decisions will have to be made. First, how rapidly will the program be implemented throughout the country? Obviously, the more rapid the rate the less the per pupil cost. Second, will the project continue on in higher primary grades where fewer students presently reach? Third, the project can be staffed various ways. How many expatriates will be needed and for how long? Finally, what choice will be made between rented radio-transmission time and ownership of transmission system. These are the major cost decisions that must be made.

The types of costs that will be analyzed include: start-up, project administration, program production, transmission, and reception. All of these will be viewed from both the donor and the host country's point-of-view. It must be kept in mind that an experimental project of this type will include additional costs for data collection and analysis over and above what normal operation would require.

In the Nicaragua Radio Math project where this type of cost analysis was conducted, the additional cost per student per year averaged around \$2.00. Given the high achievement rate by radio students and the tendency for better performance in math to reduce the failure rate, the program proved very cost effective. The same type of results are anticipated in this project.

### C. Social Soundness Analysis

The impact of a project on the sociocultural milieu of a host country results from the interaction of several factors: 1) objectives of the project and the extent to which the objectives are congruent with those of the society, and 2) the implementation strategies and the extent to which they utilize familiar or existing institutions that are not in conflict with values of the group.

This project's overall objective to develop an efficient primary language arts/reading instruction program to serve as a model for LDC's, meets an acknowledged need. The specific learning objectives around which the program will be built will be collaboratively decided upon by the host country and the technical consultants, and can be expected to be in reasonable harmony with the values of the country.

The institutions involved in implementation are the traditionally accepted ones related to the formal school system, with the exception of the broadcast component which will involve a different sector. No radical departures in teacher role will take place. Teachers will still be responsible for the management of learning in their classrooms, and will perform tasks that are very similar to those they and the community are accustomed to.

One side-effect that may occur is increased parental and community involvement in school, due to the ability to listen to at least part of what happens at school every day.

Other effects could result from the content of the language arts materials, and from the message formatting. For this reason, it will be necessary to conduct a thorough in-country background study during the first phase of the project. This study will be a major activity during Phase 1 and will provide information about cultural and psycholinguistic factors that must be taken into account. A more comprehensive treatment of sociocultural aspects of the project can be found in Annex B.

#### D. Technical Feasibility

A criteria for site-selection will be the existence of a viable radio broadcast infrastructure within the host country. This will be determined by carrying out technical feasibility studies of proposed sites as part of the site-selection process (Phase I of the project). A second criteria will be the capability and the willingness of the host country to provide necessary staff support.

#### E. Role of Women

This project can be expected to have both short and long range implications for the role of women in the country that is selected.

The short range effects will depend on the extent to which the technical consultants can prevail upon the MOE to implement the following condition: there will be a balance of male and female teachers and project staff members with an honest attempt to involve women at all levels of the operation. This aspect will be considered during site selection.

AID will, as one of the contract conditions, stipulate that the long term technical assistance team will include women.

The long range effect will depend on the creativity and commitment of the language arts materials developers. In appendix B the topic of sensitive issues is discussed. It is to be clearly understood by all technical consultants that insofar as possible the contents of the language arts program is to present an enlightened view of the range of possibilities open to a human being, independent of sex.

Materials are to be evaluated with this clearly in mind. It is not possible, since literature deals with a culture's past and present as well as with its future aspirations, to avoid stories, songs and the like that tend to reinforce negative stereotypes. Nor should we try to eliminate them. They are part of the experience. However, it is the responsibility of teachers and parents to mediate and by comparison, explanation and discussion put such materials in proper perspective.

The things that children read, and sing, and chant and talk about influence their attitudes and ultimately their behavior. There is great potential for dealing with many important aspects of life, including the changing roles of women and men.

F. Environmental Analysis

DS/ED has made a threshold determination that there will be no discernible environmental impact as a result of this project, and that a formal statement is therefore unnecessary.

PART IV: FINANCIAL PLAN

Estimated Cost and Obligated Amount

	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
1. Salaries	\$245,000	445,000	445,000	445,000	445,000	2,025,000
2. Consultant fees	25,500	25,000	25,000	25,000	12,000	114,000
3. Travel & Transportation	13,000	10,000	10,000	10,000	11,000	54,000
4. Per Diem	12,500	12,500	12,500	12,500	7,500	57,500
5. Other Direct Costs	12,000	18,000	18,000	18,000	24,000	90,000
6. Equipment & Supplies	126,000	12,400	15,400	18,000	20,000	191,800
7. Overhead	217,000	261,700	263,200	264,500	259,750	1,266,150
<b>Totals</b>	<b>651,000</b>	<b>785,100</b>	<b>789,600</b>	<b>793,500</b>	<b>779,250</b>	<b>3,798,450</b>

Part V

411 1070-2011-721

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 79 to FY 83  
Total U.S. Funding 3,800,000  
Date Prepared: ..

Project Title & Number: Extension of Rural Primary Schools 931-1017

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: to increase access to primary schooling while improving the efficiency and usefulness of the education system.</p>	<p>Measures of Goal Achievement: -percentage of primary age population enrolled in school -percentage completing primary school. -percentage meeting secondary entrance requirements.</p>	<p>-education statistics of LDCs.</p>	<p>Assumptions for achieving goal targets: -that access to primary education programs will increase enrollment. -that improving program efficiency will lower drop-out and failure rates. -that LDCs will adopt viable, efficient primary education models that are available.</p>
<p>Project Purpose: -to develop a tested model for providing effective primary reading/language arts instruction through the use of radio.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status. -a functioning, tested instructional system that uses radio, will be in place in a developing country.</p>	<p>-on-site visits. -evaluation documents. -LDC and Mission reports.</p>	<p>Assumptions for achieving purpose: -a site meeting selection criteria can be found. -AID, LDC and contractor adhere to project implementation plans and inherent commitments.</p>
<p>Outputs: -a trained cadre of LDC teachers and instructional systems development staff. -an effective language arts program, including methodology, materials and delivery system. -reports and publications 1 Radio/Language arts Planning Manual 1 multi-media dissemination package -literate primary students.</p>	<p>Magnitude of Outputs: -15 development staff and 45 classroom teachers (approx.) -a complete primary program (approximately 520 complete lessons) including all necessary materials. -at least 900 students</p>	<p>-Interviews with AID and LDC staff. -on-site visits to project schools and host country MOE. -examination of evaluation reports, project reports, instructional materials and dissemination packets.</p>	<p>Assumptions for achieving outputs: -funding will be provided at the level required. -project management will provide timely, effective support. -the total project will be implemented as planned.</p>
<p>Inputs: Funding: Technical Assistance: 1) Language Arts/Reading 2) Education Broadcaster 3) Education Evaluation 4) Other, as required Commodities Training (7.5 mos @ 1.5 mo/yr)</p>	<p>Implementation Target (Type and Quantity) \$3,800,000 long-term, on-site --168 mos. -- 54 mos. -- 15 mos. (3 mo/yr) -- Approx: 42.5 mos. (8.5mo/yr) 120 radios, 4 vehicles audio production equipment, print reproduction equipment, staff development.</p>	<p>-on-site visits -Mission, LDC, MOE and Project reports. -procurement records.</p>	<p>Assumptions for providing inputs: -technical assistance personnel with required expertise can be recruited. -budget scheduled and specifications are realistic.</p>

ADD 241, Ch 3, HR 3

**ANNEX A: PID**



## Project Identification Document

### Extension of Rural Primary Schools FY '77

#### I. 1. Summary

Title: Extension of Rural Primary Schools

Duration: 3-5 years

Formal primary schools in the rural areas of many developing countries suffer acutely from a series of interrelated problems: (a) too few schools, (b) a small percentage of school-age children attend school, (c) of those who do attend school the majority drop out before completing the primary grades, (d) nearby schools often do not go beyond the first few grades, (e) many of those who continue to attend repeat more than one grade, (f) few qualified teachers wish to teach in rural schools, and (g) instructional materials are usually in very short supply.

We propose a three part research and development program designed to test alternatives which can supplement and increase the instructional resourcefulness of rural primary schools.

#### 2. Research Purpose

The purpose of this research and development program is to determine how the systematic methodologies and delivery modes of educational technology can be used to improve both student and teacher performance in rural primary schools while at the same time increasing the opportunity for more children to attend and complete their basic primary education.

The program will consist of three distinct projects varying in the complexity with which each intervenes into the present system. The primary focus will be on the systematic use of radio as the delivery mode of instruction. The levels of instruction can be illustrated as follows:

- a. This project will be a replication under controlled conditions of the radio primaris project in Mexico. The Mexican project extended the rural primary school from 3 to 6 grades by using radio in conjunction with the teachers of the first 3 grades as monitors.
  - b. The second project will experiment by adapting the existing curriculum to radio instruction, as an option, but will also include more extensive in-service teacher training, materials support and administrative backup.
  - c. The third project will research the effects of reorganizing the system built on the use of radio as a core of instructional delivery. This intervention could approach in breadth that of the Korean educational reform. The development of a new, relevant curriculum would be basic to this project, as would options for reorganizing classroom and administrative structure.
3. Significance and Rationale for the Research

As AID strives to implement its mandate to assist the development of the poor majority in those countries least advanced, it must, as one alternative, find new ways of improving and extending the existing development institutions already in place. For many

of the people in the rural areas of poor countries, human resource development primarily means formal schools. Although the formal education system will never be able to accommodate all school age children as it is presently conceived and administered, the potential means exist for significantly increasing the numbers it can serve and successfully bringing them to a level of basic competency.

Presently most rural primary schools are not complete. In countries whose per capita GNP is below \$120, only 36% of the total rural schools have the total number of primary grades. Unfortunately, as the per capita GNP increases to \$250 the figure drops to 32%. As access is poor so is efficiency. In Latin America only 22% of those entering primary school in the rural areas actually complete their primary education.

This research effort holds the possibility of increasing dramatically the number of people who can be educated and with the single high standard of quality that radio instruction can provide the chances for reductions in total dropouts and repeaters is substantial. Radio has been and is being used for instruction throughout the world. Most of these efforts, however, are in urban areas and fewer still have been thoroughly evaluated. Nevertheless we do know that radio can teach. We do not know to what degree it can carry the instructional burden by itself or what supporting interventions must be made to ensure its success.

4. TA/EHR began a comprehensive research and development program into the organized use of radio as an instructional delivery system with an evaluation of the Mexican radio primaria program in 1972. Subsequently, we developed a research project with Stanford University in a rural area of Nicaragua to examine one central component of such systems - the feedback loop from students to those who control the learning. That project is just completing its second year. We also plan a small research project for FY 76 on the presentation variables which make successful radio programs interesting and capable of holding the listeners' attention.

We intend to strengthen and expand the already developing network which extends worldwide on the use of radio as an instructional delivery system.

5. Utilization of Research Results

The request for information and assistance on the implementation of radio instruction continues to increase dramatically. We anticipate an extensive publication schedule from the beginning of these projects with money allocated for conferences and workshops as well.

- II. Financial Requirements and Plans.

1. At the present time we are planning to implement this R&D effort as three distinct projects. We estimate the first project at \$500,000, the second at \$1,000,000 and the third at \$1,500,000. The total program would therefore be \$3,000,000. Fiscal year 77 funding requirement is \$800,000 for the initial phase.
2. The costs listed above would be the cost to AID.

3. It is anticipated that these field projects would require considerable financial input from the host country collaborator. The contributions in kind would be well above the 25% requirement.

III. Development of the Project

The first step in the development of these projects will be the drafting of an airgram in October 1975 describing the general thrust of this R&D program. This will be sent to all of our missions with the request for them to comment on the topic's appropriateness for their region.

If a reasonable number of missions support the general priority area, then TA/EHR will begin to formulate a draft PP. We intend to use the services of the National Institute of Education (NIE) personnel to assist in this development. The draft PP will be finished in February 1976.

A significant effort will be put into the development of a research plan that will enhance the value of the conclusions reached. There will need to be developed a basis for cost-effectiveness comparison among the several levels of this experimental program and with alternatives, including the traditional system. In addition to these comparisons, it is vital that the research identify the particular methods within each experimental condition that work well and that may be transferable to other systems.

These problems are demanding of outstanding research design talent, which we expect to provide through NIE and through experts who have worked on such problems under field conditions.

ANNEX B: Sociocultural Considerations

The project will be designed to be compatible with the socio-cultural environment based on these considerations:

What instructional objectives and subject-matter are appropriate for this society's real and perceived needs and values?

What instructional methods are congruent with the culture?

What kinds of messages are likely to achieve the objectives?

How can evaluation activities in this setting be perceived as positive rather than as negative?

What staffing and personnel patterns will be nondisruptive to existing system?

Language arts content is by its nature culture-bound. Great care must be taken to ascertain what is acceptable and what is proscribed within the specific cultural context. Issues revolve around questions of content, language, style, and form, and general communication questions.

In designing programs to enable people to learn to read, the following questions are fundamental: What will people read? Why will they read? Who should teach reading? How can a person be taught to read?

The answers will come from an analysis of the cultural environment. A determination must be made of the society's information collection, storage, and communication pattern.

What will be read?

A. What will people read about?

What do people think about, talk about, write about and remember?

Which information or topics are general and which are restricted to certain groups or individuals? Which topics are tabu? Which are basic to the group? What new information or topics should be introduced? What should primary children read about?

B. What do they have to read?

What written materials are in the environment already? Who writes and for what purposes? What mass distribution facilities are available? What would stimulate the production of more written materials?

C. What language or languages will people read?

What language or languages are spoken or understood in the community? What is the national language? The lingua franca? the medium of instruction in primary, secondary and tertiary education institutions? In what languages are published materials available?

In determining appropriate content, we must find out what children of this culture are interested in and what adults of this culture believe children can legitimately and overtly talk about and read about. It is important to ferret out tabus and valued topics, as well as to discover what children really like to talk, read and think about. The children themselves are the best source of information about interests, and much of the early formative data-collection will explore that question. Teachers and other LDC personnel will provide feedback on proposed topics, lessons and materials. Parents and community leaders will be asked to react to materials being considered for inclusion in the program.

An important part of determining appropriate content will be to consider the country's development goals and to include content that supports them. For example, stories, poems and language activities that contain information about ecology, hygiene, sanitation, nutrition, the physical environment, and the like would be logical inclusions.

Media has great potential for shaping a society's beliefs, attitudes and behaviors. Traditional folklore embodies and transmits to new generations the beliefs and value systems of the culture. It is a major medium for enculturation. Similarly, pop media reflects and influences changes that are occurring in a society. It is important that both potentials be recognized as content is selected for the language arts/reading programs.

Examples of sensitive and crucial issues, in terms of development are: 1) roles of women, 2) importance of family planning, and 3) importance of "scientific" attitudes related to human approaches to problem solving, vs, traditional fatalistic approaches and appeals to authority for solutions. Other specific issues involving religious or other practices may arise in a given locale, such as retaining status symbols that are counter-productive to

development efforts (i.e. cattle ownership in Somalia which results in denuding land which results in erosion), or caste systems that result in social inequity and in inefficiencies in the economic system. People charged with educating the young are in especially sensitive and vulnerable positions, requiring that they constantly exercise judgment involving choices between opposing educational goals. On the one hand the need to enculturate the young into the traditional society, and on the other hand, the need to use education as a force for change in what is perceived as positive directions.

Those involved in curriculum development, both US and host country personnel, will be making those decisions. US personnel will be charged with the responsibility of learning as much as possible about the country's mores, goals and development needs; with exercising good judgment; and with influencing the LDC to move toward the development of attitudes that are likely to have advantageous effects, in terms of helping that country achieve the goals of improving quality of life for all. This should take place through open, cooperatively arrived at decisions concerning content selection, and with full disclosure of intent.

US personnel should make every attempt to have the instructional material content reflect AID's developmental aim of improving quality of life, which of necessity will involve sensitive issues, including AID's emphasis on the role of women in development, but should make every effort to avoid violating the sensibilities of the local culture... a tall order.

In determining effective style it will be necessary to examine perceived rules of propriety in terms of levels of formality of language used, use of humor, child language vs, revered adult language, and ideal vs, real language used.

In considering sender/receiver aspects of the broadcasts, it is essential to determine cultural patterns relating to audience groups, appropriate topics for groups of varying age, sex, and role compositions, authorized senders for various kinds of messages and other aspects of the communication process that will affect choice of radio broadcaster, format for printed materials, and classroom instruction practices.

Cultural aspects of communication that relate directly to the program are as follows:

How can audio message be used effectively to achieve the goals of the primary reading program:

a) Audience receiver:

Who can assist in the language instruction program? Possible audiences, in addition to the learners themselves, are parents and other interested adults in the community; teachers; older students who can collect and write materials for primary children to read and who can serve as tutors; school administrators; local observers; and others.

b) Message:

What kinds of messages will be broadcast?

What mix of information, persuasion, entertainment, expression, and audience interaction will serve the purposes of the project?

What formats will be effective? What language will be utilized? What levels and styles of language will be most effective? What cultural and societal information affect message design.

c) Media:

What media mix will be used?

In Addition to radio, what other media will be used?

What alternative combinations are effective and what are the cost/effective factors that enter into the decision-making? What information about the society and infrastructure support affect these decision?

What broadcasting schedules are most effective?

How long should broadcasts for different purposes be?

What times during the day are most efficient? What information about the culture, the school and the community affect these decisions?

d) Sender:

Who will send the messages?

What sender images and roles facilitate receptivity?

Should speakers be children, adults, parent figures, leaders, hero figures, teachers, clowns, male, female?

What information about the community and the culture affect the decision?

e) Feedback:

How will the message senders know the audience reaction?

How will feedback loops be established? How can message effectiveness be determined?

f) Response:

How will message senders respond to feedback?

What mechanism for revising messages and for responding can be established?

What communication networks can be established or strengthened to support the program?

What software development and production facilities can be established or strengthened to support the program?

What technological support facilities can be established or strengthened to support the program?

Decisions about content, methodology, message design and implementation will be based on a background study carried out during the first phase of the project and on ongoing formative evaluation throughout phase two, as the instructional program is developed and tried.

Diffusion to other groups

The following characteristics of the project make it likely that diffusion will occur both within the host country and in other areas as well:

- The program addresses a pressing and generally recognized need, to provide effective primary education that will develop functional literacy for most children.
- The program will be designed to be logistically feasible in LDC's and to compare favorably with more traditional methods, in terms of costing.
- The project will test the extent to which previous research findings relating to radio instruction are generalizable

across cultures and across subject matters, maximizing the potential usefulness of findings.

- One of the criteria for site selection is the LDC's stated intention to institutionalize the instructional program, should the project prove to be successful.
- The instructional program will be built on assessments of sociocultural and psycholinguistic factors of the country that relate to reading/language arts instruction, and will be revised until it succeeds within that setting. The program will be designed to be effective for the widest range of the population, possible. One criteria for site selection will be the extent to which the site is typical of a larger segment of the population in terms of first language and culture.

#### Social Impact

The potential for positive impact is great. During the project primary children in several communities will receive effective language arts/reading instruction. It is likely that their communities will be affected, as well. There is evidence from the Nicaragua project that communities with a radio project class had high numbers of out-of-school listeners, many of whom listened regularly to the lessons, even though they did not have the supporting print materials.

Indirect positive impact may occur through the students themselves. Families often rely on one literate member for information and for literacy instruction. Reading materials which children take home will more than likely be examined by other members of the family. Not only could this prove to be a communication channel, but perhaps a literacy skill development opportunity as well.

Every effort will be made to establish linkages between the reading materials development component of the project and outside publishing and distribution agencies so that literature developed for use in the project schools could become generally available to the public.

It is difficult to envision this project having a negative impact on the society, given the built-in formative evaluation dimension. It is true that negative feelings and disequilibrium often occur when large numbers of the young acquire skills and knowledge that are not the property of the older generations. However, most societies value literacy and education for the young, in spite of the tensions between generations that result.

Another possible source of negative impact relates to the assumption that this project will, in fact, produce a viable, affordable efficient system that can, within a few years, provide primary education for an entire population of children. When that occurs, we will be faced with the problem of vastly increased numbers of primary school graduates who will be clamoring for more education or for suitable employment within their communities.

Part V

1011 1020-2011-721

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 79 to FY 83  
Total U.S. Funding 3,800,000  
Date Prepared:

Project Title & Number: Extension of Rural Primary Schools 931-1017

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: To increase access to primary schooling while improving the efficiency and usefulness of the education system.</p>	<p>Measures of Goal Achievement: -percentage of primary age population enrolled in school -percentage completing primary school. -percentage meeting secondary entrance requirements.</p>	<p>-education statistics of LDCs.</p>	<p>Assumptions for achieving goal targets: -that access to primary education programs will increase enrollment. -that improving program efficiency will lower drop-out and failure rates. -that LDCs will adopt viable, efficient primary education models that are available.</p>
<p>Project Purpose: -to develop a tested model for providing effective primary reading/language arts instruction through the use of radio.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status. -a functioning, tested instructional system that uses radio, will be in place in a developing country.</p>	<p>-on-site visits. -evaluation documents. -LDC and Mission reports.</p>	<p>Assumptions for achieving purpose: -a site meeting selection criteria can be found. -AID, LDC and contractor adhere to project implementation plans and inherent commitments.</p>
<p>Outputs: -a trained cadre of LDC teachers and instructional systems development staff. -an effective language arts program, including methodology, materials and delivery system. -reports and publications 1 Radio/language arts Planning Manual 1 multi-media dissemination package -literate primary students.</p>	<p>Magnitude of Outputs: -15 development staff and 45 classroom teachers (approx.) -a complete primary program (approximately 520 complete lessons) including all necessary materials. -at least 900 students</p>	<p>-interviews with AID and LDC staff. -on-site visits to project schools and host country MOE. -examination of evaluation reports, project reports, instructional materials and dissemination packets.</p>	<p>Assumptions for achieving outputs: -funding will be provided at the level required. -project management will provide timely, effective support. -the total project will be implemented as planned.</p>
<p>Inputs: Funding: Technical Assistance: 1) Language APLS/Reading 2) Education Broadcaster 3) Education Evaluation 4) Other, as required Commodities Training (7.5 mos @ 1.5 mo/yr)</p>	<p>Implementation Target (Type and Quantity) \$3,800,000 long-term, on-site --168 mos. -- 54 mos. -- 15 mos. (3 mo/yr) -- Approx. 42.5 mos. (8.5mo/yr) 120 radios, 4 vehicles audio production equipment, print reproduction equipment, staff development.</p>	<p>-on-site visits -Mission, LDC, MOE and Project reports. -procurement records.</p>	<p>Assumptions for providing inputs: -technical assistance personnel with required expertise can be recruited. -budget scheduled and specifications are realistic.</p>

APPENDIX 3

Addendum to PP: Extension of Rural Primary Schools  
Project No. 931-1017

Item 1: Children to be served { Add to page 10, 2.c.}

The instructional program will be designed to teach reading to children who are beginning primary school. Until a specific country has been selected it is not possible to state which specific ages or grades {kindergarten, first} will be utilizing Level I.

Item 2: Using the mother tongue

For clarity, on page 19, paragraph 2, the second sentence should read:

"Therefore, procedures will be built into the readiness and beginning reading levels of the program that use the child's mother tongue as a bridge into the processes of reading and writing, even in school systems where the official policy is that the ultimate goal is to use a national language as the medium of instruction."

In other words, the child's mother tongue will be used to facilitate the transition into using a second language that will be the major medium of instruction.

Item 3: Evaluation Activities

The attached pages 18 a and 18b should be inserted into the PP.