

GRANT PROJECT - EDUCATIONAL TECHNOLOGY APPLIED TO RURAL
COMMUNITY UNITARY SCHOOLS

PART I: PROJECT SUMMARY AND RECOMMENDATIONS

A. Recommendations: Grant \$452,000

B. Description of the Project

With the Colombian emphasis on improving the social services and living conditions of the poorest 50% of the population, attention has focused on the primary schools of the rural sector because it is in the rural sector where the greatest proportion of the very poor are to be found, and it is here where education has both qualitatively and quantitatively lagged behind the standards that prevail in the rest of the country.

Fortunately, solutions do exist for easing the problem in the rural areas. For some years there have been pilot programs involving unitary schools, schools in rural areas of low population density where one teacher can teach all five grades of the primary school curriculum simultaneously by using individualized instructional materials and activity-based instruction. This contrasts with the traditional one-teacher Colombian school where the teacher usually teaches only one or two grades. The pilot projects have been successful and the next step, while continuing to improve the quality of the unitary schools, is to extend the concept to the other rural one-teacher schools.

The purpose, then, of this grant project is to expand and improve the community unitary schools in three Colombian regions, starting a process which will influence the small, one-teacher schools in all of Colombia as

well as other types of rural schools. To do this, this project will combine the latest findings of educational technology with the best practices to be found in the most advanced of the Colombian unitary school models.

The project will focus on three different geographic areas: Norte de Santander, Cundinamarca, and the coffee producing area centered around Antioquia. The activities will be coordinated through the Planning Office of the Ministry of Education with the operational support of the Rural Divisions of the Secretaries of Education in the target departments.

Norte de Santander and the coffee producing region around Antioquia have shown a special interest in the community unitary schools. Norte de Santander has had the longest history of involvement with the schools. The University of Antioquia and the Department of Antioquia have developed special materials for these schools and have conducted research regarding these programs. The three smaller coffee producing Departments which grew out of the Department of Antioquia (Caldas, Risaralda, and Quindío) have innovative plans for improving and expanding the community unitary school program.

Cundinamarca, although it has the largest number of one-teacher schools (885), has not been a leader in the community unitary school movement. Rather it was chosen for comparison purposes, because of its proximity to Bogotá, and because it would illustrate the problem in extending the unitary school concept to the rest of the country.

The educational objectives of the project are to help effect the following changes in the one-teacher schools:

1. To help change the teacher's role from merely imparting information to guiding the learning process. In effect, the desired change is a student-centered educational experience. The instructional methods and materials place the responsibility for learning on the student and require a minimum of teacher guidance.

2. To help develop a training program for teachers which stresses programmed and individualized instruction. Under this concept, the specific behavioral objective calls for successful achievement by an overwhelming majority of students. The repeater rate for any grade should be less than 15%.

3. To help establish educational objectives sequentially based on the principles of child development and on the child's previous knowledge and preparation.

4. To help develop and distribute proper materials which will be used to meet the objectives stated above.

5. To develop an effective system of formative and summative evaluation as an integral aspect of the learning-teaching process.

6. To help develop a school-community relationship in which the school and other entities share in the political, social and economic development of the community. This would involve such school-centered activities as demonstration garden plots, parent associations, and various non-formal educational programs in health, nutrition, and community organization.

The activities of the project will include technical assistance, research studies, seminars, third-country and U.S. training for leaders of

the unitary school movement, and some demonstration equipment and materials to support the above activities. There will be two long-term consultants, one in educational systems who will coordinate the project and help in planning the necessary steps to introduce the gains from one pilot area into the others and eventually into all of the one-teacher schools of the target departments. The other consultant will be an expert in unitary schools who will work with Regional Teacher Training Centers and Secretaries of Education in planning the various sub-projects to upgrade the unitary schools. The short-term consultants will assist the long-term consultants and their counterparts in their special areas of expertise of the short-term consultants: research design, evaluation, instructional materials, curriculum, and educational technology concepts.

The seminars will be to bring the leaders of the unitary school movement together to share experiences and to discuss the findings of the research studies and to make plans for implementing recommendations.

The research studies will concern the following aspects of the community unitary schools: curriculum, materials, teacher training, educational technology concepts, and scheduling. The short-term consultants will assist in the research studies and serve as resource people in the seminars.

The training activities will be to up-date the unitary school leaders in the developments of rural primary education in neighboring countries and in the application of the findings of educational technology to rural primary education.

The assistance will be programmed over a three year period as follows: FY 1976 - \$150,000; Interim Quarter \$23,000;
FY 1977 - \$176,000; FY 1978 - \$103,000.

C. Summary Findings

This project is timely since the Ministry of Education is developing a major program to improve the quality of its educational system as part of a larger GOC development strategy to improve the lives of the poorest 50% of the population, of whom the rural poor represent the overwhelming majority. The activities proposed in this document conform to the needs for assistance expressed by the Ministry of Education and all indications are that the Ministry, the Secretaries of Education of the departments involved, and the Faculties of Education of the universities which are included, are ready to cooperate fully with the project. The stated purpose of this project is given high priority by all the entities concerned.

The project is technically feasible because it builds on substantial experience in the community unitary school program. There is agreement among Colombian, U.S. and other educational experts that the community unitary school program has made good progress in establishing pilot schools and in the preparation of sample instructional materials. The type of outside assistance offered by this project can serve as a stimulus and make it possible to identify the best unitary practices and spread these into the many one-teacher schools of the pilot regions with an eventual adoption in all of the country's one-teacher schools.

Socially, this project will have an important impact upon the rural Colombians of the pilot regions; and, as the program spreads, to rural Colombians in general. Efficient unitary schools offering five years of instruction will give children of the most remote areas the

tools needed to gain access to the modern world. Because this program is community centered, it can play a significant role in the integrated rural development projects which the GOC is developing and a collaborative role in testing out the materials developed in nutrition education.

Over the long-run, the activities proposed will have an important although unquantifiable economic impact upon the Colombian rural poor. Studies which have been made of the economic impact of education in Colombia show that there is causative link between level of education and level of income. The economic return to primary education is particularly high, and increasing its relevance to the needs of Colombian poor will undoubtedly have a favorable impact on its return. Public expenditures for primary education in Colombia also have the important effect of redistributing income from the 13% richer families to the 87% poorer families, an effect most strongly felt by families with incomes of less than Col.\$12,000 per year, more than 75% of which live in rural areas.

Finally, the project is ready for immediate implementation. Certain aspects of the project have already begun, using project development or technical support funding. Some of the short-term advisors who have helped to develop this project have indicated their willingness to return to help implement it. The Colombian entities are all ready to collaborate.

D. Project Issues

1. Why focus on the unitary schools ?

Over 70% of the rural schools of Colombia are staffed by one teacher. Less than 20% of these are community unitary schools offering at least three years of instruction. There has been enough

experience, though, with the community unitary schools that indicates that the concept can and should be spread to all one-teacher schools.

The community unitary schools have shown a clear superiority over other one-teacher rural schools. In Antioquia, where about 20% of the entering rural students finish the 5th grade, in the community unitary schools the percentage is up to at least 50%. The repetition rate in these community unitary schools is less than 10% in the first grade as opposed to the national average of almost 40% and this rate for the upper grades of unitary schools is about 1%.

A study of the community unitary schools in Norte de Santander indicated that students in these schools showed a marked increase in scholastic aptitude over students in other rural schools.

The data also show that the community unitary schools play a role in rural community development. The schools offer community education, and the teachers become involved in community development activities. On the other hand, schools offering less than three years of schooling are of doubtful economic or social value and have little effect on rural development.

2. Why has not the unitary school concept already spread to other one-teacher schools?

First, there is a gestation period with new concepts during which time they have to prove their worth. Still, it is hard to imagine why such a long period was needed when the little red school house idea is so obviously needed in this rugged, mountainous country. One reason, of course, has been that previous Colombian administrations

have not focused as much sincere attention on helping the rural poor as now. Despite the lip service to the contrary, there has been a greater emphasis on expanding urban primary education.

The Mission is convinced that now these past obstacles have been overcome. The departments involved in this project have pledged the necessary financial, supervisory, and leadership support. The materials are now available, and the teachers, at their present level of competence, can be taught by in-service training to use the new teaching methods. The departments are now also offering incentives for the teachers to use these new methods. The changes called for in introducing the community unitary school concept do not require major changes in school buildings and physical facilities.

There is a law of readiness in development, and there are the following indications that the unitary school concept can now be successfully expanded to the other one-teacher schools: successful pilot school projects, available instructional materials, interested leadership, and suitable teacher training program. The Colombian Government is committed to this project and wants our help.

3. Will not a focus on the unitary school slow down the movement for the consolidation of schools?

Because of the ruggedness of Colombian terrain and the limited transportation facilities, the need for small one-teacher schools will remain for a long time.

Movements to develop a consolidation of facilities such as the rural school community center program (Concentraciones Rurales) include unitary schools as feeder schools for the larger centers.

Certainly, the consolidation of facilities is a desirable program whenever geographic and transportation conditions make this possible, but there is little if any competition between the consolidation movement and the unitary school movement. This project considers the community unitary schools as a transitional stage. Whenever enrollments are large enough to warrant this additional teachers should be secured. The same concepts from this project will work even better when the teacher has to teach fewer than five grades.

PART II. PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Background

1. Previous AID Efforts in the Education Sector

AID has shown great interest in Colombian education since the Point Four program and the assistance efforts have resulted in important improvements. In the early sixties, the schools in the rural areas offered a maximum of two years of instruction. Since the boys and girls attended on alternate days, effectively, there was only one year of schooling available. In 1963, a law provided for coeducation and also established a theoretical equality between the rural and urban school. One of the AID objectives in the education sector since that time has been to make this law's dictum a reality. The pressure caused by the rising level of aspiration, the explosive growth of primary-aged children during this period, and by the migration to the cities has meant that Colombia has had to expand its urban as well as its rural primary schools, and the gap between the urban and rural school has not lessened. Much, if not most, of the expansion of the rural primary schools was in one-teacher schools offering three years or less of instruction. It was difficult to focus on the need for a full five years of instruction when so many areas had no rural schools at all. Although the need for physical facilities has still not been met, the problem is not so acute and more attention can be given to the qualitative factors. With the sector assessments for Educational Sector Loans, attention was focused on the fact that while over 50% of the urban students entering the first grade completed

the fifth, only 7% of the entering rural students completed the primary curriculum. The expansion of the physical facilities has resulted in an estimated increase to 20% of the rural students completing the fifth grade. This slow increase is a major reason for giving greater emphasis to the unitary school concept, as a more appropriate solution for increasing the percentage of rural students who have five years of schooling.

One of the planned programs under the Education Sector Loans was for a system of rural schools featuring large rural centers which integrated the various governmental social services (education, health, agricultural extension, and community development) and offered basic education through grade nine. With inflationary pressures, the GOC counterpart funds were reduced and so were the Sector Loans (073 originally scheduled for 25 million was reduced to 10 million) and the rural centers program was greatly reduced. As might be expected this major attempt to integrate the services of many entities faced many difficulties, and among the centers developed, there were some failures as well as successes. This program is continuing but at a much less ambitious and more realistic pace. The GOC has turned most of its attention to the Agricultural Integrated Development Projects in which education is to play a subordinate but important role. The Rural Centers Program, besides playing a precursor role for the Agricultural Integrated Development Projects, has focussed more attention on the educational needs of the rural sector.

The Rural Centers Program provides for unitary schools which serve as feeder schools for the main centers. In the areas where the rural centers have been most successful, there has also been considerable progress made in developing the unitary schools which has

helped to provide the base that should make it possible for the present project to be successful.

In addition to the AID programs which have had a direct effect on this project, other AID programs have had important indirect effects. Probably the most successful of previous AID programs was the development of the diversified secondary schools. This program, which was a joint World Bank-AID effort, resulted in the establishment of 19 comprehensive secondary schools which have a total capacity of 80,000 students. This program showed the value of a practical, relevant curriculum as compared to the elitist-classical system, and was successful in changing the educational system's direction. A law passed in 1974 requires all secondary schools, public and private to adopt more practical curricula. Obviously, it will take years to accomplish this, but the trend has been started towards educational activities which are more closely related to national development needs. As mentioned in another section of this paper, the educational leaders realize that this change in trend must have its equivalent effect on both primary and higher education, if it is to be effective on the secondary level.

Other AID projects which were started under the series of Education Sector Loans involved improving the administration and planning capacities of the Ministry of Education and the Ministry's relation with the departments; the development of a research and curriculum development institutions; the development of teacher training facilities and training programs; the improvement of the University Faculties of Science and Education; the development of

a university coordinating council; the improvement of school libraries; the development of physical education programs, and the development of human resources needed for a modern educational system. If measured against the ambitious goals each sub-project set for itself, these projects did not achieve unqualified success. If measured against the improvement over the conditions when the subprojects began, their success was certainly worth the effort.

The Ministry now has a system to insure that educational allotments to departments go to the sector, although the degree of coordination between the Ministry and the Departmental Secretaries of Education is not as effective as had been hoped. It is now possible, however, to plan this project which will involve a close relationship between the Ministry and the Secretaries of six Departments. ICOLPE, the institution with responsibilities in curriculum development and research, made important advances in these areas, although the Ministry's current thinking is that these matters are so important that they must be brought back into the Ministry. As a result of previous research and curriculum development efforts, there are qualified researchers who are capable of conducting the studies planned under the present project.

There are now the required teacher training facilities for a major in-service training program. Until recently the teacher training program lacked effectiveness because there were some 33 programs with little coordination among them. Recent legislation has integrated the various teacher training programs so that it is now possible to plan a major national program.

The university faculties of education and science with the help of the university council (ICFES) are ready to take the leadership in modernizing the Colombian educational system.

Many school libraries were organized as a result of the stimulus provided by AID. It still is necessary for these libraries to improve their collections and to promote the use of their facilities.

Physical education has made some strides. It is still not a part of the curriculum in most schools, but the value of physical education is recognized and eventually will be taught in all schools.

The process of developing the needed human resources is proceeding almost as planned. Under the Sector Loan, 316 participants received or are receiving training relevant to development needs. The full impact of this program is still to be felt since many of the participants are still in training.

2. The Problem

Despite the fact that Colombia has available many of the resources necessary to provide its young with a good quality primary school education, there has been a very limited confluence of these resources in rural areas. The technological assets that the country has available and which include a national educational television network, a number of well-trained educators (some with doctorates from U.S. universities), large and excellent textbook publishing houses and experience in the use of such instructional media as radio, audio and video cassettes, records and programmed instructional materials, have only had a marginal impact on the quality of rural primary schools. What is now needed is a major effort to transfer these technological advances to the rural sector.

This need is fully recognized by the Ministry of Education which is involved either directly or indirectly in a number of projects designed to upgrade rural elementary schools, by applying some of the sector's overall technological gains to the specific problems of rural areas. Most of the current undertakings are of an experimental nature, and the Ministry will require a great deal of outside assistance to complete them and, more importantly, to apply findings from the various projects to all of the country's rural elementary schools. One task of a major commission of top Colombian educators charged with planning and implementing the program is to seek the help that will be needed.

Some outside assistance for qualitative educational improvements has already been provided. Past AID and World Bank loans have enabled the GOC to engage in ambitious school construction programs and the World Bank and Inter-American Development Bank have continuing loan programs for qualitative educational improvements. The German Mission has cooperated with the GOC in preparing complete Teacher Guides which potentially represent an important qualitative change and the UNESCO-UNDP project, after a false start, is now providing some of the technical assistance needed to upgrade the educational system. Specific GOC policies to develop split sessions and scholarship programs in private schools have led to student enrollment increases and have enabled the government to stress quality now in much of its short-range educational planning. However, the ruggedness of the Colombian terrain, the limited infrastructure in rural areas of the country and the low population density characteristic of the countryside together have frustrated efforts to offer the entire five-year elementary school program in many outlying rural communities.

Low school enrollments make the provision of one teacher for every grade economically unfeasible and therefore instruction is generally offered only through the second or third grade where the demand is most pronounced. One teacher is usually responsible for providing this limited offering. Furthermore, in many agricultural villages child labor is frequently necessary for the family's economic survival and, since some rural education programs are perceived as irrelevant, children often are forced to drop out of school before completing their elementary studies. In fact, less than 20% of rural school children finish the elementary school program. This also reveals the serious gap between the rural and urban sectors. Of the urban children starting the first grade, about 80% eventually finish the five-grade elementary school program (See Annex A).

In the rural sector, 70% of the schools are one teacher schools, another 20% have less than one teacher for each grade taught. Only about 10% have at least one teacher for each of the five grades. If the students in the rural sector are to complete the primary grades, it is obvious that the teachers must be capable of teaching more than one grade at a time, and in the case of the one-teacher school, he must be able to teach all five grades at the same time. To keep the children in school, strategies must be implemented to increase curriculum relevance and the teachers must be provided with the tools necessary for the five grades to be taught simultaneously.

The community unitary schools are designed to be responsive to these development needs of rural communities. They are to offer

the full five year curriculum, but they are also to practice a variety of techniques not found in the traditional Colombian one-teacher school. In the traditional schools, the teacher directs the learning-teaching process and the student is a passive recipient of facts. He is not prepared to take risks, innovate or creatively experiment with alternative answers to the daily questions that rural life poses. Instruction in the traditional school is characterized by the student copying from the blackboard, limited or no textbook use, choral repetition of lessons, and rote memorization. On the other hand, the community unitary school, which uses programmed or individualized instructional materials, emphasizes the importance of the student as the key factor in the learning-teaching equation.

The unitary schools methods are designed to create a student who is able to evaluate alternative solutions to daily problems, and then apply them creatively. The system fosters the growth of student responsibility and places on the student the major burden for determining what he learns. In this system the teacher guides the student's education, but does not deliver a set of facts to him. Learning is active, not passive. It is a system of learning by doing where the student advances at his own individual pace.

These characteristics are promulgated in a number of ways. Instructional grouping is by levels, rather than grades, which permits greater programming flexibility and latitude for individual differences. Individualization is achieved through the use of programmed materials and learning activity cards which a student works through

at his own rate. Learning takes place utilizing activity areas that permit students to manipulate real materials and carry out small experiments related to their studies. Scheduling in some schools allows the student not to attend classes when his labor is needed on the family's landholding by providing him with home-study material. Student activities emphasize group work and develops leadership potential through a system of co-government which gives students a large voice in school affairs, discipline and administrative and housekeeping tasks. Student evaluation and promotion policies are designed to eliminate or greatly reduce holdovers by enabling students to pass to the next grade whenever they are ready.

In addition to several smaller projects, there have been two major pilot programs to test the community unitary school concept.

Since 1968, the University of Antioquia, in cooperation with the provincial Secretariat of Education, has been developing a set of student workbooks using programmed instruction. With these materials, a teacher can successfully teach all five elementary grades and up to 65 students. The workbooks, which provide students with a rural point of reference for their learning cover the major subject areas of the elementary school curriculum and permit students to work at their own pace. The materials also facilitate flexible school scheduling and reduce the necessity of children's coming to school five days a week; they can do some work on their own at home. The program is designed to develop a sense of responsibility, inquisitiveness and problem solving ability, characteristics that the traditional instructional methods have not promoted. While this

project has already had a significant impact on rural education, several important tasks remain to be completed.

Units of instruction have not yet been designed for the fifth grade, no long-term evaluation of the materials has been performed, and use of the materials is confined to 46 schools where the teachers are specially screened. For the project to reach its full potential, the materials must be complete for all five grades and evaluative studies are needed which analyze results obtained with these materials in terms of student academic performance, pupil attrition rates, school grade repetitions, and parental and student attitudes.

These evaluations must be comparative and data on the variables mentioned above must also be obtained concerning the use of the materials in other parts of the country and with teachers more representative as a group of the country's rural teaching force than the teachers now participating in the project. Studies are also needed to compare these materials with other rural education curriculum models so that the best features of other models can be incorporated into the unitary school methodology.

In Norte de Santander, another unitary school project is currently functioning and achieving favorable results. Although in this Department the materials prepared are designed to inculcate in students the same attitudes and skills as in Antioquia, as well as to provide a similar curricular relevance and scheduling flexibility, there are a number of fundamental differences between the projects. The major emphasis has been on training rural teachers to design their own individualized instructional

materials. This program reaches about 35% of the one-teacher schools in the Department. In Norte de Santander, the model unitary school in Pamplona has been engaged in teacher training efforts since 1960. The program provides excellent school supervision and follow-up activities.

The Norte de Santander Project needs evaluative research similar to what is required to round out the University of Antioquia's program. An end-product of such research would be the identification of each system's most positive features and the design of a revised unitary school methodology applicable to the country's rural areas, that incorporates those features from each province that provide the highest payoffs in terms of student academic performance, pupil retention and the progressive extension of the entire elementary program to all rural youngsters. Grant and consultative assistance can be used both in the evaluative studies and in the expansion of these on-going projects.

The Departments of the coffee producing area which grew out of the Department of Antioquia -the Departments of Risaralda, Quindío, and Caldas- are included in the present project because all are in the process of expanding their community unitary school programs. These Departments have taken the lead in preparing models and instruction for teacher-made learning centers and other instructional material so that the experiences from these three small Departments can make an important contribution to the overall project.

The Department of Cundinamarca which surrounds the Special District of Bogotá has the largest number of one-teacher schools of any Department and yet has been one of the slowest in developing

unitary schools. The Departmental Government now has recognized its backwardness and has asked for help. It has been selected for this project as what might be considered an experimental control unit in order to test the possibilities of spreading the unitary school concept throughout the country.

The following table indicates the types of rural primary institutions in the target departments.

<u>Department</u>	<u>Number of 1-teacher schools</u>	<u>Number of unitary schools</u>	<u>Estimated number of rural primary schools</u>
Antioquia	645	46	921
Caldas	80	15	100
Cundinamarca	885	0	1,264
Norte de Sant.	480 (est)	250	686
Quindío	93	30*	133
Risaralda	266	54	380

* Projected for January, 1976.

Although this project focuses on the one-teacher school where the need for help is greatest, it is not limited just to these schools. The concepts are also to be applied to all rural primary schools. It is to be expected that when the one-teacher schools adopt the community unitary school concepts, school enrollments will increase and in many communities there will be need for at least one more teacher. The project recognizes that the community unitary school program is a

transitional phase, and that, to be successful, the program must also include plans for school expansion.

The same material developed for this program can be used for the more fortunate rural schools where there is a teacher for each grade, or where there is more than one teacher but fewer teachers than the number of grades in the school.

B. Detailed Description

1. Narrative

In this project the assistance is designed to be strictly catalytic. The inputs from AID are to help bring together the Colombian resources in such a way that the unitary school programs will improve and expand. There is the implicit assumption that such Colombian resources do exist in the form of successful pilot projects, interested and dedicated teachers, prototype instructional materials, and teacher-training infra-structure. To test this assumption a feasibility survey was made which showed that the planned AID inputs could have the desired influence.

a. Technical Assistance

This grant will fund a long-term consultant in Educational Systems and a long-term specialist in Community Unitary Schools. The consultant in Educational Systems will coordinate the assistance of the short-term advisors who are specialists in the following areas: Instructional Materials, Evaluation and Research Design, Curriculum, and Educational Technology. He will also advise the Ministry of

Education concerning the application of some of the advances of the comprehensive secondary school program (such as the problem-solving curriculum approach) to the unitary schools.

The Community Unitary School Specialist will advise the National and Departmental Community Unitary School Committees, help evaluate curriculum and instructional materials for community unitary schools, and advise the teacher training programs.

The Instructional Materials Specialist will work with his Colombian counterpart to evaluate the material that already exists in relation to the unitary school curriculum and will help design the additional materials that are needed. He will also assist in the process of evaluating the adult rural instructional materials as to their applicability in the unitary schools and the applicability of unitary school materials to adult rural non-formal educational programs.

The Research and Evaluation Specialist will assist the other specialists and their Colombian counterparts in designing research studies concerning the unitary schools that are practical, and can provide the information needed for rational decision-making. The studies are also to be simple enough to make the research process continuous.

The Curriculum Specialist will work with the curriculum designers of the Ministry and the departmental Secretaries of Education to help simplify the curriculum for the unitary schools and make it more relevant to development and community needs.

The Educational Technology Specialist will be a generalist in the field of Educational Technology, and will help in developing the seminars and in keeping the leaders involved in this project aware of the latest educational technology concepts which are useful to rural education.

The two long-term consultants are already on board having been hired to help in the development of this project. Both are well accepted by their Colombian counterparts because of a recognition of their ability and their desire to be helpful. The four short-term advisors have been identified and are ready to assist if called upon in case equivalent TDY assistance cannot be obtained from AID/W. All of the short-term advisors have been in Colombia and understand the culture and the educational system.

b. Training

The training will be limited to short-term training for leaders who work with the expert consultants in the implementation of this project. The focus will be on developing the ability to apply the best educational technology principles to the community unitary schools. The participants will be identified and their training programs developed by USAID, the technical advisors, and the Colombian counterparts in consultation with U.S. universities and educational institutions.

Invitational travel grants will permit Colombian educational leaders from this project to visit neighboring countries to see what progress has been made in projects related to the use of educational

technology in schools similar to the Colombian community unitary schools. Because of the nature of this project, the cross-fertilization of ideas will be especially useful.

c. Seminars and Workshops

The seminars and workshops will focus on bringing the leaders of the unitary school movement together for a serious exchange of the findings based on their experiences and studies. One of the first activities proposed is a major national seminar to discuss this project and build on the great interest already expressed in upgrading and expanding the community unitary schools. This seminar will build on the understanding which resulted from two previous national meetings on the community unitary school held during the project's development stage. The seminar will also be related to the major Florida State-National Pedagogical University Seminar on Educational Technology held for education professors and leaders this past July and will capitalize on the interest and impetus for change generated through that program.

Following the National Seminar there will be a series of regional workshops in each of the project's target areas. These workshops will be to continue the interest developed at the National Seminar, to bring the findings down to the grass roots level, and to give the top leaders in this program a chance to see for themselves what is transpiring in each of the regions.

In addition to these seminars, there will be workshops held to discuss the findings of the research studies and to analyze how the recommendations can be implemented.

There will also be follow-up seminars to the Florida State National Pedagogical University Seminar to keep the university professors keyed into this project. With the experience that the Colombian leaders gained in co-sponsoring the first seminar, it will be possible for them to assume the leadership in these following seminars with some consultant assistance from a short-term advisor in educational technology from Florida State. While the first seminar was general and rural education was only one phase of the program, subsequent seminars are to focus on the application of educational technology to the community unitary schools. In the series of seminars previously discussed, the participants will be primarily the actual practitioners in the community unitary school movement. The participants in the university seminars will be education professors with leaders from other educational entities attending as observers. Obviously, there will be considerable overlapping between the two groups of participants.

d. Studies

Although there are a few good studies concerning rural education in Colombia including one by Dr. Bernardo Restrepo of the University of Antioquia on the impact of programmed materials and flexible scheduling on the rural student's performance, and another by Robert Drysdale of the Ford Foundation on the effect of several variables on rural school attendance, repetition, and desertion, there is a need for more information on present programs and an evaluation of the curriculum and instructional materials.

The emphasis of the studies will be to provide practical solutions to problems. The studies are to be as simple and inexpensive as possible so that either the information gathering can be a continuous process or the studies can be easily replicated. The short-term consultant on Evaluation and Educational Research Design will help design the research projects.

The studies planned under this project are:

- An evaluation of the set of programmed and other materials developed by the University of Antioquia for the community unitary schools. This will involve the completion of the curriculum materials currently being prepared by the university.
- A study on the use of ACPO's adult rural education materials for use in the community unitary schools.
- A study on the teacher training programs for the community unitary schools.
- A study on curriculum development for the community unitary schools.

e. Demonstration Materials

In order for the other phases of this project be most effective, it will be necessary to have small amounts of demonstration equipment and materials to supplement those provided by the GOC. Examples of the kinds of items to be procured are innovative instructional materials from the U.S. and materials on unitary schools from Spain and other Latin American countries. Procurement of specific items will be made on the basis of needs identified by USAID, the technical advisors and their Colombian counterparts.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS																																																																													
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>A. 1 Goal: To improve the quality and availability of primary education in rural Colombia so that it is more effective in meeting the needs of the rural poor.</p>	<p>A. 2 Measures of Goal Achievement</p> <ol style="list-style-type: none"> Drop-out Rate: to increase the percentage of students entering the rural primary school who finish the fifth grade from 20% to 80%. Repetition Rate: From repetition rates for some grades as high as 40%, the rate should be dropped out so that no grade has more than 10% repeaters. School attendance: from an average rate of 60% in attendance, the average should rise to over 80%. Teacher Qualifications: Preparation of rural teachers who are at least secondary school graduates should increase from 50% to at least 80%. 	<p>A. 3 L. 1</p> <p>2.</p> <p>3.</p>																																																																												
<p>B. 1 Project Purpose</p> <p>To improve, unify and expand the Community Unitary School Program in three regions of Colombia and to create the conditions which will permit the further improvement of the program and its expansion throughout rural Colombia.</p>	<p>B. 2 End of Project Conditions</p> <ol style="list-style-type: none"> A revised and improved unitary school curriculum with associated tracking materials will be in use in 90% of the one-teacher school in the three regions so that: <ol style="list-style-type: none"> the repetition rate for these schools will be less than 10%. 80% of the students will finish the fifth grade. There will be a semi-automatic promotion system. A national level organization will be in place and will have a program for disseminating the unitary school program to areas outside of the three regions. A system for continuously evaluating the program and feeding back improvements will be established and functioning. 	<p>B. 3 Me</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p>																																																																												
<p>C. 1 Project Outputs</p> <ol style="list-style-type: none"> Revised and improved curriculum for community unitary schools. Instructional materials designed, produced and distributed. Supervisors and teacher trained through pre-service and in-service training program Evaluation program for selecting best features of present unitary schools. Educational planners and leaders trained through technical assistance, leaders' seminars, and out-of-country training. Recommendations resulting from research studies and seminars. Manual prepared and distributed for unitary school teachers. 	<p>C. 2 Magnitude of Outputs</p> <ol style="list-style-type: none"> Curriculum for all 5 grades resulting from 72 man-months work by local curriculum experts with 15 man months of technical assistance. Instructional materials for all five grades with 10,000 copies total distributed and in use. 50 supervisors, and 1,000 teachers trained in unitary school concepts and methodology. Evaluation programs resulting from 60 man/months made by local experts and 12 man/months technical assistance. Educational leaders trained seminars (40 leaders each) - 3 during first year, 1 during 1 Q., 3 during second year, 5 during third year Seminars include 12 man/months of technical assistance. Training Ed. Tech. concepts 2 leaders each year, 2 m/m. Instructional Materials - 2 leaders for 5 m/m second and third years. Observation studies 5 for 1 m/m each year. Recommendations from 5 research studies (one completed during 1 Q., 1 during second year, 3 during third) and 13 seminars as detailed above. 1000 manuals distributed 	<p>C. 3 Mas</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>																																																																												
<p>D. 1 Project Inputs</p> <p>AID - Dollar financing as follows:</p> <table border="0"> <tr><td>Technical Assistance</td><td>223,000</td></tr> <tr><td>Participant Training</td><td>34,000</td></tr> <tr><td>Invitational Travel</td><td>17,000</td></tr> <tr><td>Seminars/Workshops</td><td>80,000</td></tr> <tr><td>Studies</td><td>83,000</td></tr> <tr><td>Demonstration Materials</td><td>15,000</td></tr> <tr><td>TOTAL</td><td>452,000</td></tr> </table> <p>GOC - Peso financing as follows (Dollar equivalent) (GOC will bear all costs for operating pilot schools, teacher training programs, etc. at an estimated cost of at least 500,000 per year).</p> <p>Direct Project Costs</p> <table border="0"> <tr><td>Salaries, counterparts and participants</td><td>200,000</td></tr> <tr><td>Local travel costs</td><td>25,000</td></tr> <tr><td>Local cost seminars</td><td>80,000</td></tr> <tr><td>Publications</td><td>100,000</td></tr> <tr><td>Office facilities, supplies, etc.</td><td>100,000</td></tr> <tr><td>Miscellaneous</td><td>100,000</td></tr> <tr><td>TOTAL</td><td>605,000</td></tr> </table>	Technical Assistance	223,000	Participant Training	34,000	Invitational Travel	17,000	Seminars/Workshops	80,000	Studies	83,000	Demonstration Materials	15,000	TOTAL	452,000	Salaries, counterparts and participants	200,000	Local travel costs	25,000	Local cost seminars	80,000	Publications	100,000	Office facilities, supplies, etc.	100,000	Miscellaneous	100,000	TOTAL	605,000	<p>D. 2 Schedule of Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>FY 76</th> <th>1 Q.</th> <th>77</th> <th>78</th> <th>Total</th> </tr> </thead> <tbody> <tr><td>1. Technical Assistance</td><td>89</td><td>23</td><td>95</td><td>16</td><td>223</td></tr> <tr><td>2. Training</td><td>7</td><td></td><td>17</td><td>10</td><td>34</td></tr> <tr><td>3. Invitational Travel</td><td>4</td><td></td><td>8</td><td>5</td><td>17</td></tr> <tr><td>4. Seminars/Workshops</td><td>28</td><td></td><td>20</td><td>32</td><td>80</td></tr> <tr><td>5. Research Studies</td><td>18</td><td></td><td>30</td><td>35</td><td>83</td></tr> <tr><td>6. Demonstration Materials</td><td>4</td><td></td><td>6</td><td>5</td><td>15</td></tr> <tr><td>TOTALS</td><td>150</td><td>23</td><td>176</td><td>103</td><td>452</td></tr> </tbody> </table>		FY 76	1 Q.	77	78	Total	1. Technical Assistance	89	23	95	16	223	2. Training	7		17	10	34	3. Invitational Travel	4		8	5	17	4. Seminars/Workshops	28		20	32	80	5. Research Studies	18		30	35	83	6. Demonstration Materials	4		6	5	15	TOTALS	150	23	176	103	452	<p>D. 3 Me</p> <p>1.</p> <p>2.</p> <p>3.</p>
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TECHNOLOGY-UNITARY SCHOOLS

	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
is h des at s	<p>A. 3</p> <ol style="list-style-type: none"> 1. Statistical Reports of MinEd Planning Office 2. Research Results 3. Interviews and personal observation 	<p>A. 4 Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> 1. The GOC won't pass-through on its commitment to focus help on the poorest 50% of the population. 2. The GOC is serious in its commitment to use an educational technology approach to modernize its school system and is serious in its recognition that the primary problems of education in Colombia are problems related to quality. 3. Personnel turn-over in MinEd will not reduce level of competency. 4. Level of expenditure for Education will at least keep up with inflation.
	<p>B. 3 Means of Verification</p> <ol style="list-style-type: none"> 1. Survey of research study findings and statistics from Ministry and Departments. 2. Survey of programs in three regions. 3. Survey of Departmental records regarding grades offered by schools. 4. Survey of Ministry Programs 	<p>B. 4 Assumptions Affecting Achievement of Purpose</p> <ol style="list-style-type: none"> 1. Ministry and Departmental Secretaries will continue to give emphasis to unitary school programs. 2. Researchers are with some technical competence, capable of giving practical recommendations. 3. Some good proto type materials are available. 4. There are successful pilot projects. 5. Teacher-training infra-structure available
	<p>C. 3 Means of Verification of Putputs</p> <ol style="list-style-type: none"> 1. Report of Technical Advisors 2. USAID records 3. Reports/records of seminar/workshop sponsors 4. Reports of Technical Advisors and study implementors 5. USAID records 	<p>C. 4 Assumptions Affecting Achievement of Putputs</p> <ol style="list-style-type: none"> 1. Inputs available as planned 2. Experts are available as planned 3. Training programs will be available
8 6 0 5 12 15 5 13	<p>D. 3 Means of Verification of Inputs</p> <ol style="list-style-type: none"> 1. USAID Controller Records 2. GOC Budget 3. Departmental Budgets 	<p>D. 4 Assumptions affecting Provision of Inputs</p> <ol style="list-style-type: none"> 1. GOC will provide required amount of pesos 2. Inflation will not affect real value of inputs.
<p>8 Total</p> <p>6 223</p> <p>0 34</p> <p>5 17</p> <p>12 80</p> <p>15 83</p> <p>5 15</p> <p>13 452</p>		

3. Inter-relationships between Project and other GOC-AID Programs and other Levels of Education.

This grant project was originally to be closely related to a larger loan project to use an educational technology approach to upgrade the quality of all rural primary schools of Colombia, but as has been noted, this grant project will stand on its own merits and was not dependent on the loan for meeting its objectives.

The present project will be complementary to the Non-Formal Education grant project and to the Small Farmer Training Loan. The Non-Formal project is designed to improve the non-formal educational activities in rural areas. The Loan project will assist the rural mobile skills training program of the National Apprenticeship Service (SENA) and will upgrade and expand the rural community leader program of the Cultural Action Program (ACPO). ACPO has developed many supplementary educational materials to complement its radio-school literacy programs. Some of these, especially the educational supplement of its weekly newspaper, El Campesino, the simple textbooks for adult education and the books in the "Rural Popular Library Series", may be suitable for rural elementary schools, perhaps with minor adaptations. ACPO would cooperate in a research effort designed to evaluate the appropriateness of these materials for teaching rural children and the identification of modifications in the materials that must be made for their use in rural schools.

The project should also have important relationships to the programs on which the GOC is focusing most of its attention overall, the Integrated Rural Development Projects (DRI) and the National Nutrition Plan. The DRI project is an integrated approach to the development of selected agricultural areas in which small farmers predominate. The one-teacher schools located in these areas when they are in the departments selected for this project will receive special attention to convert them into community unitary schools. The National Nutrition Plan proposes to develop an intensive nutrition education program. The plans are for the community unitary schools to do special try-outs of the materials developed.

The Rural Community Centers (Concentraciones Rurales) have included the community unitary schools as feeder schools for the larger Centers which will offer a basic education program of nine grades. This project will assist the Centers program in converting the one-teacher schools to community unitary schools in the target departments.

Another tie-in concerns the Comprehensive Secondary School Program which was supported by AID and World Bank Loans and is now operating in 19 locations throughout the country. The innovations of this program are being extended to all secondary schools (private and public) through a recently passed law which requires the adaptation of the program's key features by all secondary institutions. The GOC recognizes that the secondary schools cannot be an educational island and that the gains they have made in terms of curricular relevance, the introduction of a problem-solving approach to learning and their emphasis on learning rather than teaching, must now filter downward to elementary

schools and upward to universities. With regard to this expansion of the comprehensive secondary school concepts, the GOC has recognized the need for technical assistance.

The upward filtering can be seen in the attitude of the Colombian Faculties of Education which have increasingly felt the need to provide active and dynamic leadership for the entire education system. In doing so, the faculties have tried to bring to bear the resources of educational technology on a variety of sectoral problems. The National Pedagogical University, for example, has organized two educational technology seminars for educators from other universities and the Ministry, with guidance from Florida State University through USAID sponsorship using program development funds. The current project would provide for a series of educational technology seminars, also to be sponsored by the National Pedagogical University, whose purpose will be the application of current technology to the solution of rural education problems.

PART III. PROJECT ANALYSIS

A. Technical Analysis

For this project to be successful, the following ingredients must be present:

1. Top priority assigned to the unitary schools by the Ministry of Education and the Secretaries of Education in the Departments involved.
2. Previous experience in the selected community unitary schools departments to provide a base for this project.
3. Available instructional materials to evaluate.
4. A nucleus of rural teacher-trainees in the in-service training centers and the participation of at least one normal school to each Department involved.
5. A nucleus of trained researchers in the universities involved who can do the research studies.
6. U.S. experts available to assist in the areas specified.

This project resulted from the great interest in the community unitary schools which has been developing over a long period and has become especially pronounced over the past several months. The Ministry of Education and the Departmental Governments involved are all most enthusiastic about a major attempt to expand and improve the community unitary schools. All gave the project top priority and evidenced a willingness to collaborate to the fullest extent possible.

As presented in the background section, with the exception of Cundinamarca, the Departments have had considerable experience in pilot projects and experimentation with the unitary schools.

Five of the departments also have developed materials for the unitary schools. However, these will need to be completed for the full five grades and be printed for use in the other departments.

There are teacher trainers available in the Regional Centers where the selected Departments are located and there has been considerable experience in in-service education. All the departments are ready for more extensive in-service training to prepare teachers for the unitary schools.

To date, the research on the unitary schools has been fragmentary, but there are people in the selected universities who are interested in the unitary school movement and who are capable of providing the technical assistance needed to carry on the proposed studies.

The long-term advisors were brought on board to help during the project development stage. The short-term consultants have all been in Colombia either as visitors or on the project.

There are already good evidences of the commitment to this project. The preliminary meetings on the unitary school held this past year showed a sincere interest by the Ministry and other educational leaders to improve and expand the community unitary school concept. The Florida State-National Pedagogical University Seminar on Educational Technology, although limited to 50 participants, often had over 100 in attendance with large numbers of observers from the Ministry and other educational entities.

All those who are to be involved in this project were checked as to their commitment. It was explained that this is to be a catalytic program on AID's part, that AID is only to furnish a small share of the resources and that the GOC and the Departmental Governments must provide the bulk of the project's support. The Colombian leaders pledged top support, and agreed that our resources could provide the flexibility needed for a success.

B. Economic Analysis

In view of the fact that this project will provide a small amount of technical assistance and a small amount of financing for research studies, workshops, and training, a cost/benefit analysis of the effects of the project throughout the Colombian educational system is not possible. Nevertheless, a number of studies which have been made of the economic effects of education in Colombia will be discussed below in order to demonstrate the central point of this section which is that this project is appropriate to the Congressional concern that AID concentrate its efforts on the poor, especially the rural poor.

The first point to be made is that Colombia, like any other modern or modernizing society, displays a high degree of correlation between levels of education and income. Miguel Urritia Montoya, present Chief of the Colombian National Department of Planning, has shown that the unequal distribution of education in Colombia roughly parallels the unequal distribution of incomes. The rich and poor people in urban areas generally enjoy greater educational opportunities than do the

poor people in rural areas. Moreover, the link between education and income is a causative one. In an article entitled "The Distribution of Income in Colombia," Urrutia concludes that, "Perhaps the principal determinant of the differentials in the income from work is the distribution of education" 1/.

Second, many studies have been made in Colombia which demonstrate that investments in education have a high rate of return. In a study entitled "The Effect of Unemployment and Growth on the Rate of Return to Education: The Case of Colombia," Marcelo Selowsky concludes that, "Under all sorts of adjustments by unemployment and growth, the rates of return to primary and university education remain extremely high and extremely low, respectively." 2/ Moreover, the rates of return calculated by Selowsky show little or no sensitivity to alternative projections of education supply: that is, projections of an increased supply of labor with primary education does not have the effect of substantially lowering the internal rate of return to investment in primary education.

Selowsky's study was basically oriented toward education in urban areas since, at the time the study was done in 1968, data on the rural sector was not adequate for the needs of a rigorously quantitative analysis. Nonetheless, Selowsky concludes that, "Even without having data to evaluate the effects of education in the rural areas, we think the above recommendation (that first priority should

1/ (Miguel Urrutia Montoya, "La Distribución del Ingreso en Colombia," Administración y Desarrollo (journal of the Escuela Superior de Administración Pública), No.14, 1974, p.16. See also Urrutia and Clara Elsa de Sandoval, "Distribución de la Educación y Distribución del Ingreso," Revista del Banco de la República, Jan. 1971, pp.12ff.)

2/ (Marcelo Selowsky, "The Effect of Unemployment and Growth on the Rate of Return to Education: the Case of Colombia," Harvard Development Advisory Service Economic Development Report No.116, Nov.1968, p.63 ff.).

be given to primary schooling in Colombia) is also valid for the agriculture sector." 3/

Another study done by C.R.S. Dougherty on the optimal allocation of educational investment in Colombia confirms Selowsky's principal recommendation that priority should be given to primary education. Dougherty's study calculates the rates of return on the various levels of education which he derives from varying sets of assumptions concerning growth of the educational system and the number of students entering the first year of each level; number of workers in each of various educational classifications and the projected wage rates over time for each; elasticity of substitution of labor in one classification for labor in another; the costs and internal efficiency of the educational system, etc. Dougherty concludes that, "Under any plausible set of assumptions the rates of return to primary and secondary education are both around 20% and will remain near the level for the next fifteen years." 4/

A third point to be made is that investments in primary education, the focus of this project, have a beneficial impact on the poor, particularly the rural poor. Urrutia has noted that in Colombia, the

3/ (Selowsky, p. 66).

4/ (C.R.S. Dougherty, "The Optimal Allocation of Investment in Education," unpublished, March, 1969, p. 27).

only government expenditures which have a clear redistributive effect are those for health, primary education, and low-cost housing. 5/ This conclusion is confirmed by a lengthy and considerably detailed study published by the World Bank, entitled Public Expenditures on Education and Income Distribution in Colombia. 6/ The study calculated the distribution of income in both the urban and the rural sectors, establishing income groups and the number of families in each. It then calculates the incidence of direct and indirect taxes and of public educational subsidies for each of the several income groups previously derived.

The study demonstrates that public expenditures for primary education redistribute income from the 13% richer families to the 87% poorer families, the cut off point being an income of 60,000 pesos per year. The redistributive effect is felt most strongly by families with incomes of less than 12,000 per annum --40% of total families-- more than 75% of whom live in the rural areas. These families receive 87% of their taxes back in the form of various subsidies for primary education. It is illuminating to note that public financing for secondary education has a very different effect since it redistributes income from the 40% poorest and the 13% richest families to two middle income groups composing about 40% of total families with

5/ (Urrutia, p.18.)

6/ (Jean-Pierre Jallado, Public Expenditures on Education and Income Distribution in Colombia, World Bank Staff Occasional Papers, No.18, 1974).

incomes ranging from 12,000 to 60,000 pesos and 80% of whom live in urban areas. Public subsidies for higher education have a similar effect except that the families subsidized have incomes between 24,000 and 120,000 pesos, comprise about one-third of total families, and live almost exclusively in urban areas.

Rural families as a whole receive an average of about 50% of their taxes back in the form of educational subsidies, almost entirely for primary schooling, while urban families receive an average of only 30% for all levels of education.^{7/} Therefore, a peso spent on primary education will have a proportionally greater impact on rural families as a whole than on urban families. It will also have a proportionally greater impact on low-income rural families than on middle and upper-income rural families.

This project focuses on rural primary education, and seeks to up-grade educational leadership, refine educational technologies and practices currently in use, and introduces new ones in the unitary schools. The studies which have been cited above demonstrate clearly that the qualitative improvements in rural primary education which will result from this project will have a beneficial economic impact on the rural poor.

^{7/} Jallade, pp. 39-41.

Financial Plan

AID Inputs

AID - Dollar financing as follows:

Technical Assistance	223,000
Participant Training	34,000
Invitational Travel	17,000
Seminars/Workshops	80,000
Studies	83,000
Demonstration Materials	15,000
T O T A L	452,000

GOC - Peso financing as follows (Dollar equivalent)

(GOC will bear all costs for operating pilot schools, teacher training programs, etc., at an estimated cost of at least 500,000 per year).

Direct Project Costs:

Salaries, counterpart and participants	200,000
Local travel costs	25,000
Local cost seminars	80,000
Publications	100,000
Office facilities, supplies, etc.	100,000
Miscellaneous	100,000
T O T A L	605,000

Schedule of AID Inputs

	<u>FY 76</u>	<u>I,Q.</u>	<u>77</u>	<u>78</u>	<u>Total</u>
1. Technical Assistance	89	23	95	16	223
2. Training	7		17	10	34
3. Invitational Travel	4		8	5	17
4. Seminars/Workshops	28		20	32	80
5. Research Studies	18		30	35	83
6. Demonstration Materials	4		6	5	15
T O T A L S	150	23	176	103	452

C. Social Analysis

Colombian aspirations for more education have risen rapidly and the Government has made tremendous efforts to expand public school enrollments as shown by the increases since 1968 to the present (primary 2.2 million to 3.8 million, secondary 298,000 to 500,000). However, the GOC has been much slower in changing the system so that it more nearly meets the needs of a changing society and a developing economy.

Despite the stated objective of programs to expand the rural schools, the rural sector has continued to lag behind national norms. The expansion that has occurred has largely resulted in more of the same: one-teacher schools offering one or two years of schooling and with little relevance to the community development needs.

Since secondary schools are almost non-existent in the rural sector, primary education has to be considered as terminal education and yet the major purpose of the primary curriculum, in the rural as well as in the urban schools, is to prepare for the next level of education. The main purpose of the rural schools must be to help the people to live more successfully in their environment. Unless the rural schools have this type of relevance, additional schooling may only speed up the migration to the cities.

It is customary to speak of two Colombias: that which is very much a part of the modern world and that which has changed little since the time of Columbus. But Colombia is now in the midst of great social ferment. Unfortunately, the formal education

System has not helped people to understand sufficiently and relate effectively to the changing social conditions; thus, changes have led to distortions. There is evidence to show that modern trends have reached out into even the most remote areas, but the cultural lag is very apparent with scenes such as a farmer listening to his transistor radio as he plows his field with a team of oxen and a wooden plow.

Fortunately, the previous AID projects have provided a base for making necessary qualitative educational reforms in the rural primary schools. For example the comprehensive secondary school opened the entire educational system to new trends of thought. The old classical program was challenged by practical programs and after some eight years of trial by fire, the latter have shown their greater value as recognized by the Government decree requiring the application of practical programs in all the secondary schools. But the sorting out process by social classes still persists, and there has been the fear that the practical programs would not offer the same status. The practical programs were just added to, in great part, the old elitist system thus providing cluttered curricula. Also, there has been a tendency to focus on certain aspects of the comprehensive schools for generalization into the overall system: the practical curricula and the grading method. This present project will help to develop a feedback system for the rural primary schools which will show the importance of these and other aspects, such as the overall methodology which includes teaching by objectives, emphasis on the learning process, and use of problem solving approach. The feedback should also help show that education must be related to the

development process if it is to receive the community and financial support required for quality programs.

The thrust of this project will be to help make the educational program in the rural schools more relevant. Only with a feedback process can the inertia of present programs and practices be effectively challenged. Also, new programs need to be developed which have greater practical value in changing living conditions in the rural areas, and these programs will have to be subjected to proper trials before they are adopted.

Another important aspect of the Colombian unitary schools is that although the best Colombian teachers are providing excellent and appropriate experiences for their students, these accomplishments tend to be isolated since few mechanisms exist to take advantage of them by generalizing them into the system. Through the evaluative techniques which this project is to help develop the examples of excellence that will be identified and used to stimulate progress throughout the rural schools. These evaluative techniques can also help measure the relevance of the rural educational programs to the development process. There is a realization that what is needed is an education which not only provides social mobility, but also breaks down the rigidities of a class system that limits exploitation of the intellectual resources of the poorer people. A good feedback system should help to realize this vision.

This project is intimately related to the project in non-formal education and the project in population studies. Although this project will help to make the formal education system more effective and more

relevant, it is recognized that with rapid population growth, the formal system will not reach all children. The non-formal education project then is complementary to this project in that the non-formal educational activities may reach part of the rural population which the formal has not and will not in some cases be able to reach. The project in population studies is complementary in that it addresses directly the problem of the population growth rate in the rural areas.

D. Evaluation Plan

The first phase of the plan will be to make a survey to establish base-line data. This survey will use both the statistical and case study techniques and will include visits to all the pilot schools and a representative sampling of the unitary schools and some regular one-teacher schools in each department. The available materials will be studied and appraised as to objectives, feasibility of activities, motivational aspect, relevancy to rural environment, and the amount of teacher guidance required. Visits will be made to the teacher training centers, the rural education departments of the Secretaries of Education, and to the pilot normal schools to assess strengths and weaknesses of the various programs affecting the unitary schools. Possible research activities will be discussed with educational research specialists of the universities.

An evaluation committee made up by the Planning Officer of the Ministry, the Project Manager, the Systems Advisor and three Colombian leaders in the Unitary School Movement will meet at least at six month intervals, first to go over the base-line survey data and the PERT Chart to see if activities are closely related to needs and are programmed in a reasonable fashion.

At subsequent meetings of the committee, the group will study the progress made in relation to the plan and make adjustments needed in the PERT Chart.

Each activity will have specific objectives which will be set up by those included at the beginning of the activity, and an evaluation in terms of the objectives will be made at the culmination of each activity.

As much as possible, the various activities will be viewed as parts of a process rather than discrete events so that the evaluation will be made in terms of how the activities are contributing to the two basic processes: the improvement of the unitary school programs and the expansion of the unitary school concept into the other one-teacher schools.

PART IV. IMPLEMENTATION ARRANGEMENTS

A. Administrative Arrangements

1. Recipients

- (a) The Planning Office and the Rural Primary School Section of the Educational Technology Division of the Ministry of Education.

In order to implement its educational technology program, the Ministry of Education is in the process of developing an Educational Technology Division. This will bring together elements which formerly were outside of the Ministry. The Colombian Pedagogical Institute, ICOLPE, is being dissolved and its curriculum development and some of its research functions will be transferred to this new division. Some of the educational functions of the School Construction Institute, ICCE, are also to be exercised by the division.

A new organization, the Educational Technology Division of Technology Division of the Ministry, will be taking over experienced personnel from these other entities. Some of the technical assistance used in the project development efforts of USAID has been directed to helping in the formation of this new division.

It will be the function of the Planning Office of the Ministry and its Rural Primary School Section to orchestrate the various activities of this project and:

- 1) Receive and disseminate to all departments reports and information concerning unitary schools.
- 2) Provide evaluation and feedback to departments on their specific unitary school activities.

3) Direct the Ministry's representative (Delegado) in each department concerning project funds.

(b) Secretary of Education of each target department and the Departmental Rural Primary School Division will have these responsibilities for this project:

1) Supervise the unitary schools.

2) Authorize teachers to participate in in-service training activities and authorize supervisors to attend leadership training programs.

3) Coordinate departmental participation in the project.

4) Distribute materials necessary for program to the schools.

5) Supervise pilot normal school in preparing unitary school teachers.

6) Hold monthly meetings to evaluate project and to report to Ministry.

(c) The Regional Teacher Training Center will provide in-service training for unitary school teachers and leadership training for the supervisors.

(d) A pilot normal school in each of the target departments will

1) Give pre-service teacher training

2) Operate a demonstration unitary school

3) Try-out and evaluate unitary school instructional materials

4) Participate in evaluation of the project in monthly departmental meetings.

- (e) The university will conduct research and participate in program and materials development and evaluation as arranged by agreement with the Ministry of Education.

To assist the official organizations there will be an advisory committee on the National level and for each of the departments. These advisory committee will include representatives from other entities involved in rural development such as ICA, the Colombian Agricultural Institute, so that the unitary school project is assisted by the wider concerns of the integrated rural development movement.

AID - The project will be administered by the present staff. One direct-hire American technician and one local-hire professional will devote about half-time to the project and the rest of their efforts will be complementary to this project. AID will assume the major responsibility for project monitoring and evaluation. It will contract for long and short-term advisory personnel and will arrange all U.S. and third-country training. It will prepare the documentation necessary for obligating funds and for arranging the training and technical activities.

AID/Washington - AID/W will be responsible for the review, approval and funding of this project. It will backstop the project and keep Mission informed of progress related to the other rural primary education projects. It will assist in the selection of, and obtain clearances for, long and short-term advisors and TDY assistance as required. It will arrange for the participant training programs.

The National Planning Office. The National Planning Office will concur in the project agreement and other documentation for the implementation of the project. It will participate in project evaluation and replanning.

	June	July	August	Sept.	October	Nov.	Dec.	Jan. 1	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan. 1	Feb.	March	April	May	June	July	August	
	(1)	(2)	FY 1976		(3)	(4)		I. Q.	(1)	FY 1977		(3)	(4)	(1)	FY 1978		(3)	(4)										
TECH. ASSISTANCE	EDUCATIONAL SYSTEMS																											
	Unitary School Specialist																											
	Research Design Specialist																											
	Instructional Materials Specialist																											
STUDIES	Ed. Tech. Concepts Specialist																											
	Curriculum Specialist																											
	Unitary School Materials																											
	Teacher Training																											
SEMINARS	ACPO Materials																											
	Curriculum Study																											
	Schedule Study																											
	Ed. Tech. Sem.																											
TRAINING	Regional Ed. Tech																											
	Unitary Material Regionals																											
	Ed. Tech.																											
	Regional Ed. Tech																											
Ed. Tech																												
Regional Ed. Tech																												
Ed. Tech.																												
Teacher Training																												
ACPO Materials																												
Curriculum																												
E.T. Center																												
Florida Perú																												
Guat.																												
E.T. Center																												
Brazil																												
Inst. Materials Prep.																												
Inst. Materials Prep.																												

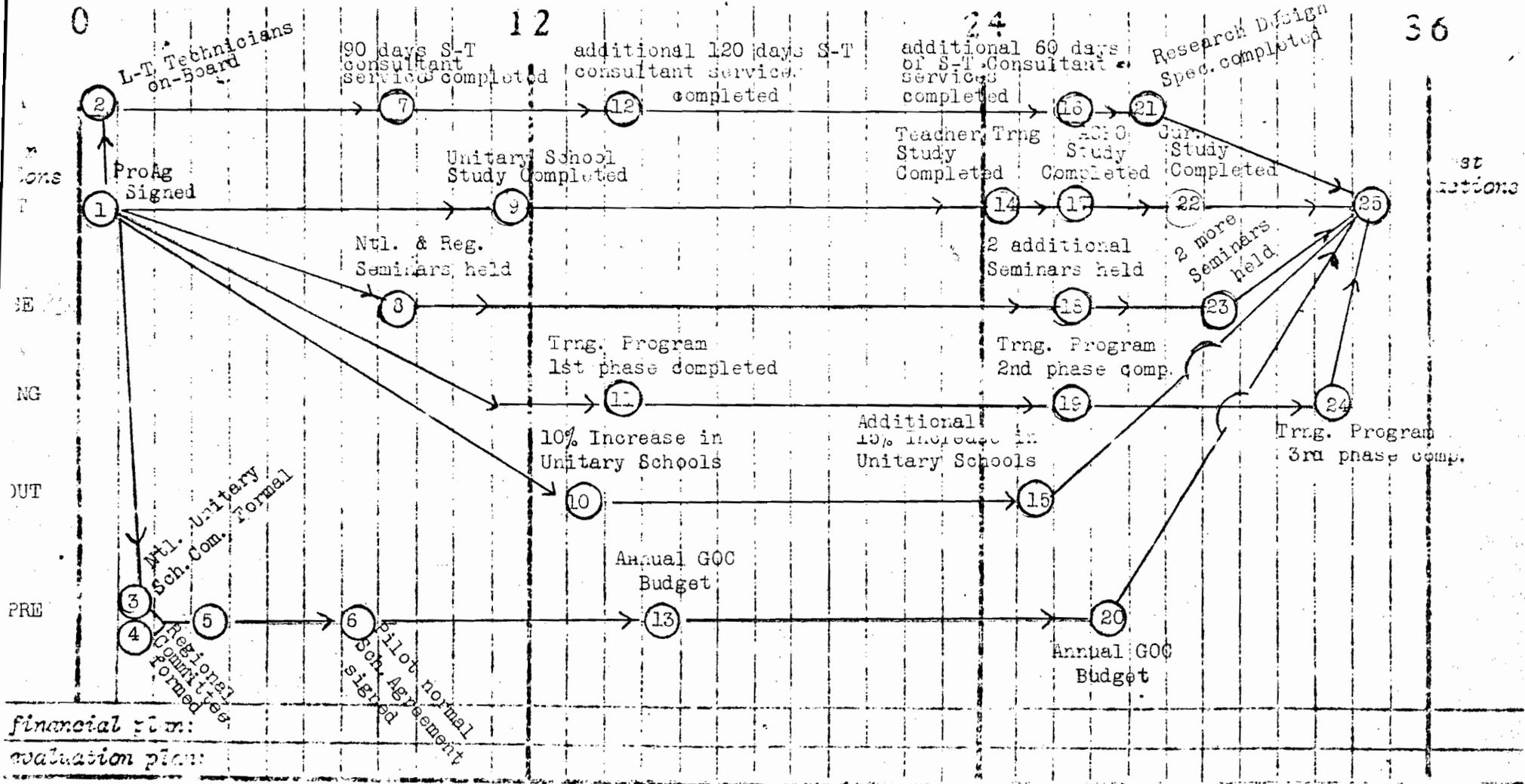
PROJECT AGREEMENT

- Sub-Project
- Cundinamarca
- Risaralda
- Antioquia
- N. de Santander

1st National Sem.
Regionals

country: Colombia	project no:	project title: Educational Technology	date: / /	original / revision#	PI# app#
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1975	1976	1977	1978
Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sep.	Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sep.	Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sep.	Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sep.



financial plan:
evaluation plan:

SAMPLE FORM

country: Colombia	project no:	project title: Educational Technology	date:	/ / original / / revision #	apprd:		
<u>CPI NARRATIVE</u>							
	<u>Date</u>		<u>Responsibility</u>				
1.	10/15/75	Project Agree- ment signed and other documenta- tion prepared.	USAID & GOC	5.	Jan. '76	Annual Budgetary allotments made (at least 10% higher in real terms than prior years) for each of the above De- partments (States).	GOC
2.	10/15/75	Long-term tech- nicians en-board. School systems & Unitary School specialists needed.	USAID	6.	5/31/75	Written agreements signed for one pilot normal school in each of the above six Departments.	GOC
3.	11/ 1/75	National Unitary School Committee formed.	GOC	7.	6/30/76	Ninety days of short- term consultant services completed in areas of research design and instruc- tional material.	USAID
4.	11/15/75	Regional Committees formed for: a) Norte de San- tander b) Antioquia c) Cundinamarca d) Risaralda, Quin- dio & Caldas	GOC	8.	6/30/76	National an regional seminars held on educational technology applied to rural areas.	GOC

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APPENDIX 5.1. ATTACHMENT

SAMPLE FORM

country: Colombia	project no:	project title: Educational Technology	date:	/ / original / / revision #	approd:
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<u>CPI NARRATIVE</u>						
	<u>Date</u>		<u>Responsibility</u>			
9.	9/30/76	Unitary School study completed. principal curriculum models identified and critiqued.	GOC	13.	1/31/77 Annual budgetary allotments made (at least a 15% increase, in real terms, over prior year) for six selected departments. (See CPI No. 4)	GOC
10.	11/30/76	Ten percent increase in Unitary schools realized in the six departments selected.	GOC	14.	12/31/76 Teacher training study completed with participation of at least one pilot normal school in each of the selected departments.	GOC
11.	12/31/76	First phase of Training Program completed - Inter-nation component.	GOC	15.	11/30/77 Additional 15% (total 25%) increase in Unitary Schools realized in six selected departments.	GOC
12.	12/31/76	An additional 120 days of short-term consultant services completed in areas of: a) instructional material b) educational technology	USAID			

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March 1988

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SAMPLE FORM

country: Colombia	project no:	project title: Educational Technology	date:	/ / original / / revision #	approved:
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<u>CPI NARRATIVE</u>							
	<u>Date</u>		<u>Responsibility</u>		<u>Date</u>	<u>Responsibility</u>	
16.	12/31/77	Additional 60 days of short-term consultant services completed in: a) instructional materials b) educational technology	USAID	20.	1/31/75	Annual budgetary allotments made (at least 25% higher, in real terms, than prior year) for six selected departments. (See CPL#4)	GOC
17.	12/31/77	ACPO materials study completed.	GOC	21.	2/28/78	Research Design Specialist services completed.	USAID
18.	12/31/77	At least two additional seminars held on educational technology applied to rural areas.	GOC	22.	3/30/78	Curriculum study completed.	GOC
19.	12/31/75	Second phase of training program completed. International component.	GOC	23.	4/30/78	Two additional seminars held on educational technology applied to rural areas.	GOC

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SAMPLE FORM

country: Colombia	project no:	project title: Educational Technology	date:	/ / original / / revision #	approved:
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CHI NARRATIVE

	<u>Date</u>		<u>Responsibility</u>
24.	7/31/78	Third phase of training program completed. International component.	GOC
25.	8/30/78	End of Project	USAID & GOC

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CLASSIFICATION X-1204V

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ANALYTICAL ASPECTS OF PRIMARY EDUCATION

IN COLOMBIA

by

James W. Fox

September 10, 1975

I. Summary

This paper provides basic historical data and analysis of Colombian primary education for the period 1937-74. Basic data, based on Ministry of Education statistics, is shown on Tables I through IV, with Tables V through IX providing some statistical analysis of the data. Two basic conclusions emerge from the analysis: first, that Colombia has made great strides, especially since 1950 towards providing universal primary education to its children; and second, that sufficient teachers and classrooms are already in place to fully cover the education needs of the primary-school aged population, but that the efficiency of the system is seriously inadequate, so that major attention should be given to improvement in the quality of primary education.

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II. Overall Growth

The overall growth rate of primary education in Colombia has been quite impressive over the past 35 years, as is indicated by Table I. For the period as a whole, the annual growth rate is slightly above 6.5% per year in the number of students. An adjustment of this figure for the fact that primary education included five years after 1952, compared with four before, would move the rate slightly downward to 6.2% per year. Given the rate of growth of the primary-education age group during the period somewhere between 2.5% and 3.2%, it is clear that coverage of the population has been increasing at a fairly high rate. The data in Table V, which breaks the growth into shorter periods, indicates that the major growth has occurred since 1950, with pre-1950 rates perhaps not even keeping up with the growth of population. The decade of the 1950's was the period of fastest growth, with enrollment growing at a rate of 11% per year between 1950 and 1960. Between 1960 and 1970, the growth rate slowed to 7%, and between 1970 and 1974, slowed further to about 4%. The fact that the 1970-74 rate of growth of enrollment is relatively slow suggests that most of the enrollment growth during this period is "vegetative", due to overall population growth, and not due to rapid expansion of the system. Consequently, we can assume for further analysis that enrollments during this period are relatively normal (i.e., primary enrollments do not include large numbers of out-of-age children who are attending because schools have just become available.)

Statistics are also available, though not presented here, on the breakdown between public and private elementary schools. Private

schools account for about 15% of all primary education, almost entirely in urban areas. Their share of total enrollment has risen over time from less than 5% in the late 1930's.

III. Pupil-Teacher Ratios

The long-term trend of pupil-teacher ratios is shown in Table IV. The ratio began to rise in the late 1950's, but there has been a gradual improvement during the last several years. The ratio for 1974, of 31 students per teacher in urban areas and 32 per teacher in rural areas, can surely be considered adequate for a country at Colombia's stage of development. According to the statistics, there were a total of 123,000 primary teachers in the country in 1974.

IV. Retention Rates and Enrollment by Grades

The data on retention rates and enrollment by grades shown in Tables III and IV shows substantial improvement over time in these variables. The rates shown are thought to be based on initial matriculations, with no information available concerning the extent to which pupils drop out during a school year or between school years.

The retention data is summarized for the earliest and latest cohorts available (classes entering in 1937 and 1970) in Table VI. Both cohorts are representative of the cohorts of nearby years, and the long-term trend between them is fairly steady, so that the data seems fairly reliable. The 1937 class data shows that 23% of those entering the first grade reached the (then-highest) fourth grade, with about 40% of those matriculating in any year dropping out before the beginning of the next year. By 1970, over half of the entering first-grade class

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reached the fifth year of elementary school, with about 25% dropping out before the second year, and only 10-15% of those entering in any subsequent year failing to enter the following.

In rural areas, the picture is somewhat different. Dropout rates between first and second grade did not improve significantly during the period, with a loss for both years of about half of the class. For subsequent years, however, there is substantial improvement--though retention rates continue to be far below those in urban areas, with only about 10% of an entering first grade class reaching the fifth grade. Whereas in 1937, 80-90% of those entering the second and third year failed to enter the following year, the percentage by 1970 was down to about half, and to 30% between fourth and fifth years.

The analysis of retention rates, as we have done here, is generally an appropriate indicator when the problem of repeaters is minimal. When there are widely different percentages of repeaters in different grades, however, it is no longer appropriate. Since, as indicated in the following section, there are huge numbers of repeaters in the first and second grades, retention rate analysis does not provide an adequate picture of the education situation. In particular, the fact of 1.4 million students in first grade does not imply that there should be space for that number of students in subsequent years, since there are fewer than 750,000 thousand children of any primary-school age. The other 650,000 may represent a one-time problem, but no classrooms should be built to deal with it. Rather, attempts should be made to deal with the problem through two shift operation or other similar means.

V. The Primary School-Age Population

The next step in the analysis is to compare the number of children in school with the number of children of primary-school age in Colombia, in order to determine the magnitude of the task remaining to obtain complete coverage. Unfortunately, results of the 1973 census are not yet available, so we will have to rely on estimates of this population. The estimates are based on a 1974 survey by the Corporación Centro Regional de Población (CCRP). Since the total population figures for 1973 from the survey (23.2 million) are significantly higher than those released from the 1973 population census (22.5 million, assuming 7% under-enumeration) they may overstate the actual primary-age population. We have also chosen to use the 5-9 age group from the estimate--though the 7-11 age group appears to be more appropriate for estimating primary-age population--in order to keep the estimate on the high side to be sure that there is no understatement of the population. The results are shown in Table VII.

The results are indeed startling. Although we have taken care to make certain we are not underestimating the primary-age population, we find only 3.5 million in the appropriate age group, compared with primary-school enrollment of more than 3.8 million. The over-enrollment is most apparent in first grade, where there are 742,000 five-year-olds, but 1,369,000 enrolled. It is clear that repeating of grades is extremely widespread, especially in the first several grades. The table also breaks down grade-by-grade coverage between urban and rural areas, under the assumption that 60% of the population is urban. From this data, it seems clear that fifth grade

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enrollments in urban areas is about equal to the number of children of the appropriate age, but attendance in rural schools falls off drastically after second grade, and fifth grade, enrollments are only about 20% of the appropriate age group.

In reality, one might suspect that high levels of repeaters in rural areas are simply due to the fact of lack of availability of the following grade, so that students might enter first or second grade several times, simply because there is nothing else available.

The impact of this type of repetition on the quality of education received by the children is unknown, but one suspects it is not very high.

The fact that more students attend primary schools does not fully answer the question as to whether or not all children attend primary school. To answer this latter question, we need to investigate the question of the age composition of primary-school children. Unfortunately, no recent data is available concerning this indicator, with the 1968 Education Census providing the most recent data. This is summarized in Table VIII. As indicated by the table, there was a substantial difference between the ages of the children attending primary schools and the "ideal" ages.

Depending on the grade, between 40% and 55% of the students in any grade were more than one year older than the desired age for the grade. Though the table does not establish unequivocally how many children do not attend school, it does set a floor on this figure.

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Since 72% of the ten-year-olds attended school (83% in urban areas and 59% in rural areas) attended school in 1968, we can conclude that at least that percentage have some schooling. Since some will drop out before they are ten, and others not begin until later, the actual percentage should be somewhat higher.

Since enrollments grew significantly between 1968 and 1974, it would be useful to know what the impact of this growth was on the figures from the previous paragraph. We have made a tentative calculation of this in Table IX, under the assumption that the age-structure of students in 1974 was the same as in 1968. (This should understate the result, since--given the relatively slow growth of enrollment during this period--the relative importance of out-of-age students should have declined.) The figures indicate that at least 85% of all children (93% in urban areas and 73% in rural areas) attend some school. Given the various downward biases of the calculations, it seems possible to conclude that virtually all urban children have some schooling, and that the great majority of rural students (i.e., at least 80%) do so also.

VI. Past Analysis of the Primary Education Problem

It is interesting to relate the previous analysis to past AID and GOC discussions of the problems of primary education. The AID Education Sector Analysis, done in 1972, makes no attempt, despite its more than two hundred pages, to deal with the question of increased efficiency as the basic problem in primary education, despite the fact that the previous year was probably the first in which the number of students.

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began to exceed the number of children in the primary target group. This analysis was used as a basis for extensive further construction of primary schools. Similarly, recent analyses by the GOC of the primary education problem (the Exposicion de Motivos in 1973 for the proposed tasa educativa, and the 1975 Programa Nacional para el Mejoramiento Cualitativo de Educación), both provide statistics indicating an extensive need for additional classrooms and teachers as part of the solution to the problems of primary education. Both seem to use the same basic assumption--that all students from seven to fourteen years old should be in primary school--and, consequently, provide data indicating a need to reach two million or so additional students. This is only true, of course, if one takes as the norm the completion of a five-year course in eight years.

VII. Implications of the Data

If the data and reasoning presented here are correct, there are several policy implications. First, there are already sufficient teachers and classrooms to handle all of Colombia's primary education needs. Already more students are being taught than the population of the primary-school age group.

This point should continue to be valid for some years into the future, assuming that recent estimates of declining birth rates are accurate.

These estimates indicate that fertility has been declining fairly rapidly for the past several years--at a rate sufficient to keep the absolute number of births each year from rising. If this is so, the number of children of primary school age should level off by 1978 or 1979.

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Secondly, the data suggest that far greater emphasis should be placed on increasing the productivity of the primary education system. The fact that as many as 85% of first year students may repeat the year is startling, and indicative of serious education quality problems. Third, while improvement in primary education should not require additional overall resources, it should involve a considerable redistribution of the existing resources. In particular, teachers and classrooms need to be transferred from the first two years--where pupil loads should fall drastically as a result of improved quality--to the last two years, where it is clear that considerable lack of resources exists, generally in rural areas. Fourth, it seems likely that continued emphasis on construction of new primary schools might be detrimental to primary education in Colombia by focusing resources and attention on relatively unimportant problems, leaving the critical problem of poor quality and high repeater rates to get even worse. This might certainly be concluded from the GOC analyses referred to above. It would seem to me that the problem is sufficiently serious that we should consider making our proposed new loan to the education sector contingent upon the GOC seriously addressing the problems addressed in this paper.

TABLE I

STUDENTS MATRICULATED

PRIMARY SCHOOLS IN COLOMBIA
(Thousands)

<u>YEAR</u>	<u>URBAN</u>	<u>RURAL</u>	<u>TOTAL</u>
1937	214	239	453
1938	205	230	435
1939	197	226	423
1940	212	233	445
1941	207	238	445
1942	^{1/}		
1943	^{1/}		
1944	^{1/}		
1945	208	238	446
1946	235	269	504
1947	248	284	532
1948	^{1/}		
1949	268	299	567
1950	284	309	593
1951	333	330	663
1952	391	338	729
1953	471	374	845
1954	510	393	903
1955	576	425	1001
1956	633	440	1073
1957	673	439	1112
1958	913	580	1493
1959	968	600	1568
1960	1051	639	1690
1961	1128	664	1792
1962	1232	716	1948
1963	1314	782	2096
1964	1400	813	2213
1965	1462	812	2274
1966	1575	827	2402
1967	1711	875	2586
1968	1827	955	2782
1969	2085	1023	3108
1970	2214	1072	3286
1971	2345	1121	3466
1972	2412	1192	3604
1973	2512	1240	3752
1974	2554	1290	3844

^{1/} Data for these years is inconsistent with those of neighboring years.

TABLE II

PRIMARY EDUCATION
STUDENT/TEACHER RATIOS

<u>YEAR</u>	<u>URBAN</u>	<u>RURAL</u>	<u>TOTAL</u>
1937	31	42	36
1938	27	38	32
1939	29	38	33
1940	30	39	34
1941	26	38	31
1942 <u>1/</u>			
1943 <u>1/</u>			
1944 <u>1/</u>			
1945	26	33	30
1946	27	34	30
1947	26	35	30
1948 <u>1/</u>			
1949	28	34	31
1950	27	35	30
1951	27	35	30
1952	29	36	32
1953	32	36	33
1954	29	35	31
1955	29	35	31
1956	29	36	32
1957	29	35	31
1958	37	43	39
1959	37	42	39
1960	36	42	38
1961	35	40	37
1962	36	39	37
1963	35	38	36
1964	35	37	36
1965	35	37	36
1966	35	36	35
1967	36	37	37
1968	36	38	36
1969	37	39	38
1970	38	39	38
1971	38	39	38
1972	35	38	36
1973	34	35	34
1974	31	32	31

1/ Data

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TABLE III

STUDENTS MATRICULATED BY YEAR
RURAL AREAS

YEAR	<u>NUMBER (thousands)</u>					<u>Total</u>	<u>Retention Rate ^{1/}</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>		<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
1937	143	75	19	2		239					
1938	141	71	17	2		230	49.4				
1939	141	69	15	1		226	49.4	10.3			
1940	145	73	14	2		233	51.6	10.3	1.1		
1941	148	76	12	2		238	52.5	8.8	1.1		
1942											
1943											
1944											
1945	151	79	7	1		238					
1946	170	89	9	1		269	58.9				
1947	181	93	9	1		284	54.8	5.9			
1948											
1949	191	97	9	2		299		5.3	1.0		
1950	199	99	9	2		309	52.1		1.0		
1951	212	105	11	3		330	52.5	5.6			
1952	213	106	13	6		338	50.1	6.7	3.0		
1953	242	118	12	2		374	55.3	5.6	1.0		
1954	256	122	12	2		392	50.4	5.8	1.0	0.2	
1955	277	131	14	3	1	426	51.2	6.0	1.2	0.3	
1956	282	138	15	4	1	440	50.0	5.9	1.5	0.4	
1957	278	139	17	4	1	439	49.3	6.3	1.6	0.5	
1958	373	174	24	7	2	580	62.7	8.6	2.4	0.7	
1959	384	181	27	7	2	600	48.4	9.6	2.5	0.7	
1960	406	192	31	8	2	639	50.0	8.2	3.0	0.9	
1961	419	197	34	10	3	663	48.5	8.8	2.7	1.2	
1962	444	213	41	13	5	716	50.9	10.0	3.5	1.2	
1963	471	230	54	19	8	782	51.8	12.8	4.6	2.0	
1964	479	236	63	24	10	812	50.2	14.2	5.7	2.6	
1965	466	235	71	28	13	813	49.1	15.0	6.2	3.0	
1966	466	238	76	32	15	827	51.2	15.9	6.7	3.3	
1967											
1968	522	269	123	56	28	998		26.3	12.0	5.9	
1969	545	281	119	47	31	1023	53.7		10.1	6.7	
1970	565	292	129	50	36	1072	53.6	24.6		7.7	
1971	585	304	138	53	40	1120	53.8	25.4	10.1		
1972	608	321	156	63	52	1200	54.8	27.7	11.6	9.9	
1973	625	331	167	77	57	1257	54.5	28.6	13.6	10.6	
1974	636	340	178	82	54	1290	54.4	29.3	13.9	9.6	

^{1/} Based on 100 students entering first grade.

TABLE IV

STUDENTS MATRICULATED BY YEAR
URBAN AREAS

<u>YEAR</u>	<u>NUMBER (Thousands)</u>					<u>Total</u>	<u>Retention Rate</u> ^{1/}				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>		<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
1937	94	57	40	23		214					
1938	90	55	38	22		205	58.4				
1939	88	54	36	19		197	59.5	38.5			
1940	91	60	39	22		212	68.4	43.5	23.0		
1941	88	58	38	22		206	63.9	43.6	24.2		
1942											
1943											
1944											
1945	87	60	38	22		207					
1946	97	68	45	25		235	77.9				
1947	102	72	47	27		249	74.4	53.3			
1948											
1949	111	78	50	29		268		48.7	30.1		
1950	119	80	53	32		284	72.2		31.5		
1951	138	95	60	40		333	79.8	54.1			
1952	153	106	74	58		391	76.8	62.7	51.9		
1953	172	122	87	58	31	470	80.0	63.1	49.1	28.2	
1954	183	138	91	60	36	508	80.4	59.7	43.7	30.5	
1955	207	145	106	71	46	576	79.2	61.5	46.6	33.5	
1956	225	157	115	80	54	631	75.8	63.0	46.8	35.7	
1957	234	168	123	87	60	672	74.5	59.4	47.4	35.2	
1958	342	219	162	111	78	912	93.6	71.8	53.7	42.5	
1959	345	239	172	122	90	968	69.6	73.6	54.2	43.4	
1960	373	257	194	134	94	1052	74.4	56.5	57.1	41.6	
1961	391	271	207	148	110	1127	72.8	60.1	43.3	46.8	
1962	419	293	229	166	125	1232	74.9	61.4	48.0	36.7	
1963	439	308	244	182	140	1313	73.6	62.5	48.9	40.6	
1964	458	325	264	197	156	1400	74.2	62.9	50.4	41.8	
1965	456	339	279	217	171	1462	74.0	63.5	51.7	43.8	
1966	483	354	304	241	193	1575	77.5	66.3	54.9	46.2	
1967											
1968	534	390	326	262	223	1735		67.6	57.4	48.6	
1969	640	463	400	320	261	2084	86.7		66.2	57.3	
1970	671	487	431	343	282	2214	76.1	80.7		58.4	
1971	701	511	462	367	304	2345	76.3	72.2	68.8		
1972	699	492	473	375	312	2351	70.2	70.5	58.6	58.4	
1973	723	532	502	396	332	2485	76.1	71.6	59.1	51.9	
1974	733	541	522	411	346	2553	74.9	74.7	58.7	51.6	

^{1/} Based on 100 students entering First Grade

TABLE V

RURAL GROWTH RATES, PRIMARY ENROLLMENTS

<u>PERIOD</u>	<u>AVERAGE GROWTH RATE (%)</u>
1937-50	2.1
1950-60	11.0
1960-70	7.1
1970-74	4.0

TABLE VI

RETENTION RATESCOLOMBIAN PRIMARY EDUCATION

	<u>U R B A N</u>		<u>R U R A L</u>	
1	100	100	100	100
2	58.4	76.3	49.4	53.8
3	38.5	70.5	10.3	27.7
4	23.0	59.1	1.1	13.6
5	--	51.6	--	9.6

TABLE VII

PRIMARY-AGED POPULATION, AND EDUCATION COVERAGE, 1974

<u>AGE</u>	POPULATION (Thousands)	
7	742	
8	720	
9	699	
10	679	
11	<u>659</u>	
	3,499	

<u>GRADE</u>	<u>ENROLLMENT</u> (Thousands)	<u>COVERAGE OF AGE GROUP (%)</u>		
		<u>URBAN</u>	<u>RURAL</u>	<u>TOTAL</u>
1	1,369	165	214	185
2	881	125	118	122
3	700	113	64	97
4	493	101	30	73
5	400	87	20	61

TABLE VIII

STUDENTS ENROLLED BY AGE AND GRADE, 1968
PRIMARY EDUCATION

(Thousands)

Age	Grade					Total
	1st	2nd	3rd	4th	5th	
7 and under	385	38	-	-	-	423
8	249	138	31	-	-	418
9	156	143	82	22	-	403
10	110	124	101	55	17	407
11	64	84	83	68	42	341
12	44	66	69	69	59	307
13	22	34	43	49	53	201
14 and over	23	31	39	53	80	226
TOTAL	1,053	658	448	316	251	2,726

RELATIVE DATA (Percentages)

Age	Not in		In School by Grades				
	School	In School	1st	2nd	3rd	4th	5th
7 and under	35.0	65.0	91.0	9.0	-	-	-
8	33.3	66.7	59.6	33.0	7.4	-	-
9	32.3	67.7	38.7	35.5	20.3	5.5	-
10	28.5	71.5	27.0	30.5	24.8	13.5	4.2
11		57.5	18.8	24.6	24.3	19.9	12.3
12		54.5	14.3	21.5	22.5	22.5	19.2
13		41.8	10.9	16.9	21.4	24.4	26.4
14 and over			10.2	15.1	17.3	23.4	35.4

TABLE IX

EDUCATION COVERAGE, BY AGE, 1968

(Thousands)

<u>Age</u>	<u>Population</u>		<u>School Enrollment</u>		<u>% in School</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
7	352	299	257	165	73	55
8	339	288	255	163	75	57
9	321	274	249	153	78	56
10	307	262	254	154	83	59
11	320	273	223	119	70	44
12			151	106		
13			135	68		
14 +			<u>159</u>	<u>69</u>		
			1,735	999		

ESTIMATED EDUCATION COVERAGE, 1974

<u>Age</u>	<u>Population</u>		<u>School Enrollment</u> *		<u>% in School</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
7	445	297	378	213	84.9	71.7
8	432	288	375	210	86.8	72.9
9	420	280	367	198	87.4	70.7
10	407	272	378	199	92.9	73.2
11	396	264	328	154	82.8	58.3
12			222	137		
13			199	88		
14 +			<u>234</u>	<u>89</u>		
			2,554	1,290		

* Based on assumption that age-Distribution of enrollment in 1974 was the same as in 1968.

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