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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

Proposal and Recommendations
For the Review of the
Development Loan Committee

5110456
511V-054

BOLIVIA - RURAL EDUCATION I

AID-D.C/P-2120

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RECORD COPY

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20520

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AID-DLC/P-2120

September 18, 1975

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Bolivia - Rural Education I

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed \$4.942 million to the Government of Bolivia to assist in financing the United States dollar and local currency costs of a project to improve the Borrower's system for delivery of education services in rural areas.

No meeting will be scheduled for this proposal. However, please advise us of your concurrence or objection as early as possible, but no later than close of business on September 26, 1975. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee
Office of Development Program
Review

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AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT PAPER FACESHEET
TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE (IF APPROPRIATE DO NOT)
 ORIGINAL CHANGE
 ADD DELETE

PP
DOCUMENT
CODE
3

2. COUNTRY/REGIONAL ENTITY/GRANTEE
BOLIVIA

3. DOCUMENT REVISION NUMBER

4. PROJECT NUMBER
511-0454 ?

5. BUREAU
 A. SYMBOL LA B. CODE 3

6. ESTIMATED FY OF PROJECT COMPLETION
FY 8101

7. PROJECT TITLE - SHORT (STAY WITHIN BRACKETS)
 RURAL EDUCATION I

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 A. INITIAL [9/75] B. FINAL FY [810]

9. SECONDARY TECHNICAL CODES (MAXIMUM SIX CODES OF THREE POSITIONS EACH)
 611 613 616

10. ESTIMATED TOTAL COST (\$000 OR EQUIVALENT, \$1 = —)

A. PROGRAM FINANCING	FIRST YEAR			ALL YEARS		
	B. FY	C. L/C	D. TOTAL	E. FY	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	2007	3217	5224	3295	3217	6512
(GRANT)	(300)	(-)	(300)	(1588)	(-)	(1588)
(LOAN)	(1707)	(3217)	(4924)	(1707)	(3217)	(4924)
OTHER 1.						
U.S. 2.						
HOST GOVERNMENT		883	883	-	2995	2995
OTHER DONOR(S)						
TOTALS	2007	4100	6107	-	6212	9507

11. ESTIMATED COSTS/AID APPROPRIATED FUNDS (\$000)

A. APPROXIMATE PRIMARY PRIORITIES (ALPHABETICALLY)	FY 75		FY 76		FY 77		ALL YEARS	
	D. GRANT	E. LOAN	D. GRANT	E. LOAN	D. GRANT	E. LOAN	D. GRANT	E. LOAN
EH	501	600	300	4924	422	304	1588	4924
TOTALS	500	600	422	2150	350	2174	1588	4924

12. ESTIMATED EXPENDITURES | 75 600 422 2150 350 2174

13. PROJECT PURPOSE(S) (STAY WITHIN BRACKETS) CHECK IF DIFFERENT FROM PID/PRP

To introduce and refine a decentralized prototype rural education system in the twenty rural locations in the Department of Cochabamba by 1980.

14. WERE CHANGES MADE IN THE PID/PRP FACESHEET DATA NOT INCLUDED ABOVE? IF YES, ATTACH CHANGED PID AND/OR PRP FACESHEET.
 Yes No required.

15. ORIGINATING OFFICE CLEARANCE

SIGNATURE
Parke D. Massey

TITLE
Acting Director, USAID/Bolivia

DATE SIGNED
MO: 08 DAY: 01 YR: 75

16. DATE RECEIVED IN AID/W. OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
 MO: 08 DAY: 01 YR: 75

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ANNEX VII DAEC Rural Education I PRP Cable

Indicates Annex printed for DLSC review. Printing of remaining Annexes deferred.

TITLE: BOLIVIA - RURAL EDUCATION I

PART I - SECTION I - SUMMARY AND RECOMMENDATIONS

Project Development Committee

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A. Borrower

The Government of Bolivia (GOB) will be the Borrower. The Executing Agency will be the Ministry of Education and Culture (MEC). The Project will be implemented and administered by the Rural Education Division of the MEC at the national level and the Education Director of the District Education Development Center (DEDC) at the Department of Cochabamba. The loan is made on the full faith and credit of the Borrower.

B. Source of Funds

The amount of the proposed Project is \$ 9.5 million. The Project will include \$1.6 million in grant assistance^{1/} and a \$ 4.9 million loan with a forty year repayment period, including a ten year grace period,

^{1/} Rather than submit a separate PROP the Project Committee decided to integrate loan and grant assistance into one Paper.

with interest of 2% per annum during the grace period and 3% per annum thereafter. The GOB contribution \$3.0 million equals 33 percent of total Project cost, including \$294,000 community contributions and 2.9 million from the Central Budget, including new funding and reallocation of current expenditures.

Timing of Loan Commitment/Grant Obligations (FY) US\$
(000)

(FY)	1976	1977	1978	1979	1980	TOTAL
AID Loan						
(FC)	765	545	338	-	-	1,648
(LC)	1,667	1,196	403	-	-	3,276
AID Grant						
(EC)	300	422	304	300	262	1,588
(LC)	-	-	-	-	-	-
GOB & commun. contrib. (LC)	883	923	440	439	310	2,995
TOTAL	3,615	3,086	1,485	739	572	9,507

C. Description and Justification of Project

Approval of Rural Education I will enable the GOB to embark upon the first step of an intensive program "to establish a more efficient and equitable public education system which is institutionally and substantively responsive to the needs of rural Bolivia". 2/ Its main quantified targets are to increase the enrollment of rural youth in rural schools, decrease illiteracy in rural areas and increase the opportunities for life long education. The purpose of Rural Education I is to create and test a prototype rural education system in a selected rural Department of Bolivia by 1980. It will provide experience in the design and implementation of a comprehensive scheme in a limited geographic area which will enable the MEC to implement a broad rural education reform faster and with great assuredness. The Project is to assist the GOB to decentralize the planning, organization, implementation and evaluation of comprehensive formal and non-formal rural education programs.

The total cost of the program, which will be implemented in the Department of Cochabamba, is approximately \$9.5 million. Project

2/ Sector Goal as interpreted from the Bolivian National Education Development Plan.

remodeling and construction of rural sectional schools, the construction of facilities at 20 nuclear schools and the remodeling of existing facilities and the construction of badly needed new facilities for the Rural Normal School at Vacas.

Loan funds will be used to finance the work of the curriculum and materials development teams, in-service training for 500 rural primary teachers, socio-linguistic research and third-country training in non-formal and bilingual education activities. Loan funds also will provide for two short-term education specialists to work with the DEDC. One specialist will work with the curriculum materials and bilingual teams on articulation and context of primary school materials while the other specialist will examine the impact of Project activities in the nuclear school. Two education specialists will work with the MEC to synthesize the various approaches to formal and non-formal education to develop a viable strategy for introducing these activities in other areas. One non-formal education consultant will help the DEDC to develop and improve their non-formal education strategy and one consultant will work with the Rural Normal School first to examine facilities and their use and second to focus on the curriculum and administrative aspects of the Rural Normal School.

The Rural Education I Project will introduce a level of technology which is new to Bolivia. The planning and development of curricular materials will be decentralized to the Department headquarters. Educational Radio programming techniques will be introduced into the curricula of the Vacas Rural Normal School and subsequently into the homes of the campesinos. Vocational technical training will become an important part of the Rural Normal School and Primary School (grades 6-8) curricula. These techniques have been successfully employed in several other countries.

The non-formal education component has been designed to take advantage of successful programs currently operating in Ecuador, Colombia and Guatemala. Bilingual education techniques are based on those successfully used in Ecuador and Peru. The Project represents a new commitment on the part of the GOB to devote greater resources to the development of rural education. The magnitude of resources to be allocated to the rural education sector is greater than at any time since the original commitment of the GOB to establish schools for the rural area in 1930. Moreover, this is the first in a series of rural education Projects in which USAID, the GOB and other donors will make significant inputs that should contribute to a verifiable transformation of rural Bolivia.

which bilingual education will be introduced into other geographic areas.

(ii) Educator/Linguist. The GOB will fund the position for five years in Cochabamba to coordinate bilingual education activities with other components of the Project especially within the DEDC hierarchy.

(iii) Bilingual Education Technician. The technician will work with the Bilingual Education Materials Team in Cochabamba and the Bilingual Education Specialist in La Paz to develop and adopt new techniques in bilingual education. The position will be funded for five years - three years from USAID funds, two years from GOB funds.

(iv) Curriculum and Materials Technician. The technician will help develop new materials for the Rural Education System in the DEDC in Cochabamba. The position will be funded for five years.

(v) Non-Formal Education Technician Coordinator. The coordinator will work for five years in Cochabamba with the non-formal education group. He will be responsible for coordinating non-formal education activities between the non-formal education group and the DEDC. He also will work with the Rural Education Planning Advisor and the short-term Non-Formal Education Consultant on the non-formal education portion of the baseline data survey and other activities.

(vi) Rural Normal School Technician. The technician will be assigned to the Rural Normal School at Vacas for five years. He will be responsible for working with the Rural Normal School Advisor and Rural Normal School Director in teacher and staff training and curriculum reform activities.

e. Engineering and Construction Support

Project funds will be used to hire a Project Engineer for three years beginning in 1976. He will work with NCDS to develop the self-help construction component of the Project and will have overall supervisory and management responsibilities for construction activities.

2. Construction

Engineering and construction activities include: the renovation and construction of dormitories, dining and kitchen facilities, classrooms, laboratories and skills-training shops at central schools and repairs to 160 sectional schools.

11. Rationale and Strategy

1. Rationale

Bolivian National Educational Development Requirements

The inadequate performance of the rural sector in Bolivia in socio-economic terms has long been recognized as a major problem. That deficiencies in the system and the content of rural education are in some measure responsible for this poor performance is now conventional wisdom. According to the GOB's "Global Diagnosis of Bolivian Education" ^{3/} the major obstacles to the improvement of the quality of rural education are as follows:

- Lack of adaptation of the rural schools to its environment

Rural Education is not based on community needs.

- Lack of teaching materials

The rural schools lack sufficient, practical teaching materials to meet their objectives. The absence of bilingual materials makes learning slower and adds to the motivation to drop out.

- Inadequate teacher preparation

Poorly trained teachers are unable to understand community development needs and organization and to translate those needs effectively into learning programs.

- Lack of coordination between the school and other rural development institutions

Rural schools do not coordinate their activities with other social and economic development organizations working in the rural areas.

- Failure to use the school as a community action improvement agent

Rural schools transmit an urban oriented traditional education which does not include Programs and Projects in health, agriculture rural industries or home economics.

In order to address these problems, the MEC has identified the following activities as necessary to improve the rural education

^{3/} Diagnostico Global de la Educacion Boliviana, Ministerio de Educacion y Cultura. Abril de 1974 Segunda Parte Seccion 1.3 "Educacion de la Comunidad Rural" Page 9.

system: Improved training of rural school teachers; revision of the curriculum and educational materials to reflect local needs and indigenous language and cultural characteristics; development of the Rural Nuclear School System ^{4/} as community focal points; and utilization of property owned by Central and Sectional Schools of the Rural Nuclear School System for agricultural purposes.

USAID generally concurs with the GOB's diagnosis. Both the Mission's Education and Agriculture Sector Assessments have identified poor and inadequate rural education as factors impeding the development of the agricultural economy. These Sector Assessments conclude therefore that the rural populace should be a major target of AID's future program in education both because the predominance of the population is in the rural sector and because the rural sector has not performed well in socio-economic terms.

2. Sector Program Strategy

In the past, the U.S. has assisted the Bolivian education system through a series of projects at the national level as well as with school construction programs. It is now appropriate that the GOB build upon these efforts to extend a better education into rural communities. The complexity of this task is awesome.

Most of the educational leadership in Bolivia has emanated from the MEC; the districts, normal schools and especially the urban school system have typically relied upon the MEC for guidance and assistance. In fact, a paternalistic relationship between the MEC and other parts of the system has developed over the years, especially in the areas of educational planning, curricula, and instructional materials.

The rural "system", on the other hand, except for contacts with the normal schools, has been left largely on its own. Some measure of the problem of improving the rural system is evident in the fact that, in rural Bolivia, two major and between 20-25 minor Indian languages or dialects are spoken through vastly different geographic, economic and climatic regions of the country; and while Spanish is the official language of Bolivia, it has been presumed for much too long that the provision of educators, and educational materials in Spanish would bring about bilingualism and ultimately supplant the native Indian tongues. The evidence

^{4/} The Rural Nuclear School System concept, discussed in the Sector Assessment, is a restatement of the earlier Bolivian idea of the rural nuclear school system with a central multipurpose school surrounded by small feeder or satellite schools, called sectional schools.

suggests the contrary; that the Indian cultural values are very strong; and, that if this large, resilient and creative body is to be incorporated into the nation as full fledged citizenry it must be approached with fuller cognizance of their social and cultural patterns.

Keeping the foregoing in mind, the GOB and USAID devised a strategy to decentralize education in Bolivia. It consists of four different, but interrelated programs: (1) Educational Management and Instructional Development^{5/}, to reorganize and train a staff of education administrators in nine district headquarters; (2) Rural Education I, to organize and implement a comprehensive education program of formal and non-formal education in the rural communities of one of the principal education districts in Bolivia; (3) Rural Education II, Teacher Training, to reorganize and strengthen rural teacher training programs based in part on the experiences and lessons of Rural Education I; and (4) Rural Education III, a nationwide effort to strengthen decentralized rural education programs in every Department of Bolivia.

Rural Education I is being readied for authorization early in FY-1976, for final negotiations and agreement in the first half of FY-1976 and for full implementation over a five year period starting early in 1976. As indicated, this Project will support the carrying out of a comprehensive reform of rural education in a limited geographic area and will cover the entire complex of rural education reform -- curriculum improvement, the introduction of new instructional materials, improved teacher training, experimental use of bilingual education techniques, expanded community (non-formal) education and improved facilities.

Under the first loan, (Educational Management and Instructional Development) the DEDC is to have a new, broader role in strengthening educational systems at the Department level. The Rural Education I Project will give impetus to this role in the Cochabamba DEDC by giving Project implementation responsibility to the Rural School Director for the Department of Cochabamba. Those elements of the education system will be addressed which would have to be improved if rural education is to become more relevant to the learning needs of rural youth in Bolivia.

The third and fourth Projects in the program, Rural Education II and III, are currently scheduled for authorization in about September, 1976, and September, 1977, respectively. The purpose of Rural Education II would be to accelerate improvement in the preparation of rural primary school teachers. The Rural Education II Project will enable the MEC to reduce the number of rural teacher training institutions and to upgrade their quality. The difference in standards between urban and rural normal schools is now a major problem. The urban normal schools have reasonably adequate facilities and programs while

^{5/} (A.I.D. Loan 511-V-051)

Those of the rural normal schools are grossly inadequate. Rural Education II would help begin the process of righting this imbalance and redirect the rural normal schools toward the development of their capacity to contribute to more effective rural learning systems. It also will provide a headstart on the training of teachers who will be necessary to implement the planned national reform of rural education.

The fourth Project, Rural Education III, would build upon all that had gone before. It would support the extension of the integrated rural education reform system to geographic areas beyond Rural Education I. The extent of its coverage would depend on progress made under previous Projects and the degree of financial support provided by the GOB.

E. Geographic Focus

The reasons behind our decision first to address a fully integrated reform program on a geographic specific basis were based on several factors. First, only by seeking to deal with all those major elements and putting them in place can one uncover the difficulties (or hidden advantages) of the attempted system and the interplay of its elements. Second, the analysis of the complex and varied cultural situation, which in Bolivia is important to an education project, would be much more manageable on an area specific basis. Third, by working in one geographic area the MEC will be able to provide evidence of the Project's utility to Bolivian teachers and to study replicability of the program in other areas in Bolivia. With this in mind, the Project Committee met with the Ministry of Education for an extended period of discussions on the question of location for the implementation of the Rural Education I Project. The Department of Cochabamba was selected by the Ministry of Education. The following factors entered into that decision:

Poverty Level: The vast majority of the rural population are subsistence farmers who earn an annual off-farm income of between \$30-120 per year. The rural Cochabamba area is characterized by a minifundia landownership system of about 3.5 hectares per family. The Project Committee believes that the income level, the poor, deprived characteristics of the target group, and the limitations imposed by the minifundia landownership system meet the definition of rural poor as expressed in the Congressional Mandate.

Agricultural Base: The area selected has an agricultural based economy. As it is felt that the future of the country depends primarily on the expansion of agricultural production and that rural education should be strongly supportive of agricultural

development, the highland mining areas of the country were not considered for site selection at this time.

Monolingual, non-Spanish speaking population: As experimentation in bilingual education is an important element of the Project, a Quechua or Aymara speaking area was considered essential.

Supportive Community Activities: The active community education type programs being implemented in Cochabamba are significant reflections of the desire for improvements. The Ministry of Agriculture's planned expansion of agricultural research and extension work and the Ministry of Health's proposed low cost rural health delivery systems, both with planned USAID funding, are expected to assist the rural education reform program in Cochabamba.

Accessibility: Cochabamba is centrally located and accessible to rural teachers and administrators from all parts of the country.

Manageability: Limiting the Project principally to nuclear school districts in one Department increases its manageability especially in terms of the lessons to be learned in district administration, curricula for normal schools and from the process of assessing rural community needs.

Transferability of Experience: The site selection criteria developed by the Rural Education Committee placed emphasis on selecting sites for the Project that possess a high degree of replicability in other areas of Bolivia. The degree of ruralness ^{6/} was considered to be of primary importance. Communities outside of the urban or suburban sphere of influence are more inclined to respond to formal and non-formal rural education initiatives. Emphasis was also placed on selecting various types of sites according to cultural composition and educational level which would approximate all of Bolivia, not just Cochabamba.

For the above reasons the Department of Cochabamba was selected for the Project as best meeting the series of criteria established.

F. Participating Institutions

1. District Education Development Center (DEDC)

As a result of the Management Reform Program initiated by the

^{6/} The Analysis of Rural Learning Needs, Annex V , classified rural communities according to the degree of ruralness. The Project Committee relied on the classification to gain a better understanding of the rural communities and used it along with other information to select Project sites.

1974, the responsibility for all urban and rural educational activities at the Departmental level belongs to the DEDC. The organizational structure of the DEDC includes the Director of Rural Education, curriculum planning offices, materials preparation offices and financial, personnel and general services sections.

2. Within the department of Cochabamba, 20 Nuclear School Systems, each system with its central school (20) and 4 to 13 sectional schools (200), and the Rural Normal School at Vacas were selected for inclusion in the Rural Education I Project, a description of the schools and the selection criteria follows:

a. Project Schools 7

- Community interest in the Project.
- A concentration of poorer, rural people in the area.
- Teachers live in the community.

Other factors which entered into the selection were replicability (that the communities were not atypical), accessibility (that 4-wheel drive vehicles can reach the communities), and a representative sample of all regions in the Department be included.

The Project sites include one central school and up to 13 sectional schools. The population served by the central school totals approximately 2,500 people while each sectional school serves at least 200 people.

Each central school usually has up to eight grades and teachers plus one Director with an average of 190 students. Each sectional school usually has approximately nine students per grade and one combined teacher and administrator.

The Central School in each community is a community center as well as an educational institution. Social and community meetings are frequently scheduled on the school premises. With the addition of non-formal education activities and facilities such as work shops the Central School will be an even more important part of community life.

b. The Rural Normal School of Vacas

Although the Project Review Paper indicates that two Rural Normal Schools will be included in the Project design, the Project

7 The Project also will include control schools to provide a basis for evaluation and measure progress.

Committee and the MRG, after careful consideration of the possibilities, propose to work with only one, the Rural Normal School at Vacas for the following reasons:

- Reduction in overall number of normal schools: The Ministry proposes to reduce the overall number of Rural Normal Schools and to limit them to one for each Department. Inasmuch as it is now GOB policy to establish one Rural Normal School in each Department and it has decided to concentrate on 20 Project sites in one Department it was considered more feasible to work with one Rural Normal School instead of two.

- Manageability: The Project will be easier to carry out with teacher development work being concentrated in one center.

The Vacas School was selected after a careful consideration of the six rural normal schools which now exist in the Department of Cochabamba. Only two of these are general teacher training institutions. The other four are specialized in health, agriculture, music and physical education and were not considered appropriate for this type of an integrated rural development program. Of the two general institutions, Paracaya and Vacas, the latter was selected as being more dedicated to rural development. The students at Vacas come from more rural areas and the spirit of the school has consistently been characterized as outstanding in its orientation toward the needs of the campesino.

Approximately 400 students attend the Vacas Rural Normal School. At present they study under a general rural primary teacher's training program. Course material covers traditional subjects. Because it is located in a rural area, considerable emphasis is given to rural oriented activities including agriculture and community development.

G. Beneficiaries

a. Indirect Beneficiaries

It must be understood that this Project involves the development of a prototype in the near term, which, if successful will benefit the majority of Bolivia's rural population. More specifically, the indirect beneficiaries would include the rural population in the department of Cochabamba and the families of the students participating in the program. The GOB estimates that the indirect beneficiaries in Cochabamba would be 120,000 rural farm families, 42,700 rural primary school students, 245,000 out-of-school youth and adults, 1,000 rural normal school students and approximately 1,800 teachers in the Department of Cochabamba.

The student's family generally lives in a one or two room adobe house with unplastered walls, thatched roof and dirt floor. Windows do not generally exist in houses in colder areas and screens are a rarity in the warmer zones. The house offers little privacy and often is shared with the domestic animals. The family food intake is normally unvarying and lacks nourishment^{8/}, consisting mostly of starches and most family members are affected with respiratory and parasitic disease^a. The inclusion of health and nutrition and other basic concepts in the formal and non-formal school curricula may therefore have a significant indirect impact on these families.

b. Direct Beneficiaries

The direct beneficiaries are the 12,000 rural farm families in the Department of Cochabamba. Cultivating approximately 3.5 hectares of land and raising up to 20-55 head of sheep or llama are the principal activities of this group. Crop production is largely subsistence in character and based on traditional production techniques. Family labor is used intensively in land preparation, tending the sheep and llama, seeding, insect and pest control, harvesting and marketing. The level of investment in fixed capital is low. Common characteristics of farming practices in rural Bolivia include the use of primitive plows and digging tools, native varieties of seed and livestock breeds long indigenous to the continent. Crop yields, wool production and, consequently resource productivity and farm income are low by Latin American standards^{9/}.

The health facilities in the 20 communities are marginal. Based upon a survey of facilities in 10 of these communities, only five

^{8/} The GOB and Mission estimate that the calory intake for rural Bolivians is between 18-20,000 calories, 4,000 below the level considered necessary for proper nourishment.

^{9/} The FY 77 Annual Budget Submission presently estimates the Bolivian rural per capita income in the range of \$80 to \$120.

have any type of health facilities; the community near the Rural Normal School of Vacas has a health post and receives adequate attention from health officials in Cochabamba. In one other site a new post was inaugurated recently but has not been assigned a health worker. In the other areas, health officials visit the communities on an average of once every two months.

c. Direct Participants

Project participants include the following:

1) Approximately 11,077 rural primary school students who currently receive less than a quality education at schools located in the 20 Project sites. Eighty percent of the students, 8,895, are in the first three grades of primary school, 7,322 attend sectional school and 4,000 attend the central schools of the nuclear systems. One thousand six hundred and thirty three students attend grades 4 through 5, and 548 attend grades 6, 7 and 8.

2) Approximately 108,000 out-of-school youths and adults in the 20 Project sites. (The non-formal programs which will be offered at the rural nuclear schools will extend educational services by the end of the third year to people who are beyond the reach of the system). These people live in communities where the population is about 200, and the nuclear aggregate is about 2,500 people. The large majority of the adults are illiterate, at least 80% do not speak Spanish fluently, much less read or write.

3) Approximately 400 rural normal school students at the Rural Normal School of Vacas. The typical rural normal school student is more likely to be female than male and between ages 18-23. If at one time they were ethnic rural individuals they seem to have lost those characteristics, assumed Western orientation and become upwardly mobile. While some are truly oriented to be teachers (and fully aware of the frustrations and limitations of teachers) a good many of them have been attracted to the Rural Normal School by: (a) the security of employment in the teaching professions; (b) the possibility of entering the urban system through the rural system and c) the fact that normal schools provide the only secondary education in rural areas.

The vast majority of the rural population in the target areas are subsistence farmers who are poor not only economically -on the average earning an annual off-farm income of approximately \$ 50 but in their condition of health. As a general rule, the rural population has only limited access to health facilities and generally relies on traditional community health practitioners for many of the services they receive. The typical rural family consists of 5-9 members often including grandparents and other relatives. The housewife, if in the childbearing years, is either pregnant, has

just given birth, or has suffered an abortion. Probably as many children have died as are still living with the family. Children usually go barefooted and members of the family, if they live in the high valleys, seldom bathe.

- A) Approximately 520 teachers who teach in the 20 Project sites, including 490 rural teachers, 19 normal school teachers and 10 rural development technicians. They are more inclined to solving rural problems in terms of the urban paradigm. That is, they are not now interested in rural curriculum and bilingual education and tend to view the needs of education as teaching the 3R's. They are also very proud of their profession and often express the opinion that they are as good as the urban teacher. They claim that they have to deal with the problems of the rural area in addition to traditional educational problems.

H. Expected Benefits

Project accomplishments will contribute to a more practical education and a longer exposure to practical education for rural school students. The Project will provide a more extensive practical program for out-of-school youth and young adults that will enrich their lives and enable them to contribute more effectively to the economic and social growth of their communities. As indicated in the Economic Analysis Section of the Project Paper, the proposed strategy is considered to be the most cost effective approach^{10/}. Although it is difficult to quantify results on a cost-benefit or income basis, the analysis indicates that the cost/benefit ratio of 1.1 will be achieved and that the internal rate of return will be more than 10%.

Teachers will be better trained to exert a positive influence on the social and educational development of the rural community. Rural primary school enrollment would increase by about 30% from 1975 to 1980. The cohort flow would increase by about 63% in the 20 sites ^{11/} during the life of the Project. As a result of improved teacher training and an increase on non-formal education the illiteracy rate for rural people is projected to decrease from 80 percent to 70 percent by the end of the Project in 1980. (See logical framework for additional benefits).

^{10/} See Economic Analysis Part II, Section I A and Annex V, Exhibit 4.

^{11/} It is estimated that 606 students completed fifth grade in the Project are in 1975. The number will increase to about 955 by 1980.

1. Assumptions 1.

The proposed Project accepts the MEC's analysis of rural education problems as correct, and adopts the strategy of seeking to address all the elements of the analysis in an integrated way. The assumption that the GOB will provide essential financial support for educational development is based on conversations and correspondence with the Ministers of Finance and Education and their staffs.

The assumptions regarding the technical analysis are based upon the best evaluation and research that could be provided by Mission and TDY technical personnel in the course of preparing the Project Paper. For further information on these analysis please refer to Part II, Section II of this Paper.

12/ The Logical Framework Annex provides information in the specific assumptions of this Project.

PART I : SECTION II - MAJOR PROJECT COMPONENTS

A . Curriculum Reform and Preparation of Learning Materials

1. Orientation Seminar ^{1/}

The Project will support a three-week Orientation Seminar under the direction of the Rural Education Director at the Rural Normal School of Vacas for 80 sectional teachers, 20 nucleo directors, 6 normal school teachers, 2 supervisors and 2 district administrative personnel. The objectives of this orientation are to present an overview of the Project goals and methods and a philosophical orientation; to create a favorable attitude toward bilingual education; and to encourage active participation of the teacher corps in education and community development. (See Table 1, Componential Analysis).

During the Orientation Seminar, participants will discuss improvements in the rural education system and the teacher's role in this process. On the basis of these discussions, the Departmental Director of Rural Education in consultation with the Curriculum and Instructional Materials Specialist will select the Bilingual Education Team to develop teaching materials.

The last week of the Seminar the participants will learn how to gather data and how to use it in evaluating their work in the 20 Project communities. This effort will include training in interviewing techniques, data recording and feedback.

2. Community Surveys

After the seminar, a baseline data survey will be initiated by the participants under the direction of the District Education Development Center (DEDC). The duration of the survey will be approximately two weeks. With the information obtained from the survey, the Curriculum Reform Commission and materials preparation teams described below will be able to make specific changes in the curriculum content of new materials. It will also provide information on parent/community support for their local schools and suggest ways in which this can be enhanced.

The baseline data survey will include:

- a. a school profile - school statistical data including attendance, dissection and promotion data; history of the teaching staff; school population statistics by age, grade and sex;

^{1/} Although MEC and Mission personnel have participated in numerous discussion sessions with rural teachers and Department of Cochabamba level personnel, the Project Committee and the MEC feel that it is necessary immediately after formal, final approval of the Project, to hold the orientation seminar to provide additional information to teachers about the Project and to serve to organize initial activities.

b. a community profile - community statistics including estimates of population, principal occupation and activities, commercial activity, market roads and access, water supply, building types and community organization;

c. community opinions - including interviews with parents and teachers to determine personal history, language usage, attitudes with respect to the adequacy or inadequacy of the curricula and suggestions for non-formal education programs and simple vocational ratings and language proficiencies and school skills tests;

d. a physical assets inventory - describing the physical plant and equipment of the central and sectional schools, including teacher housing facilities and their adequacy. The descriptions will include repair and maintenance needs.

e. community support profile - analyzing the types of support provided the school and teaching staff; financial support; in-kind donations of goods and services, etc., with the purpose of determining whether such support is a disincentive to school attendance.

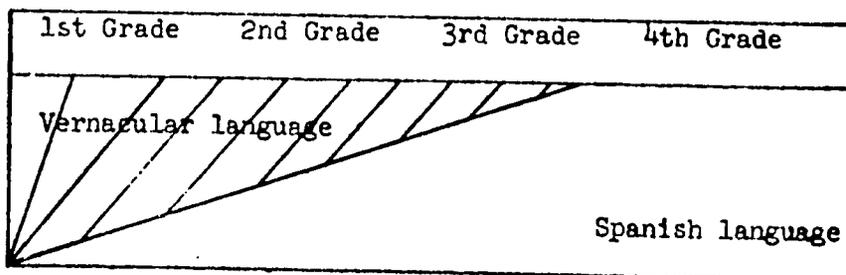
3. Curriculum Reform Commission

This Commission will work with the MEC and the DEDC to rewrite the new curricula for grades 1 - 8 which will be used at the 20 Project schools. In this process the Curriculum Reform Commission will establish informal consultations with the Ministries of Agriculture and Health to insure that suitable materials dealing with Agriculture and Health are included in the curricula. The activity should require no longer than five to six months (from February to June or July). In the remaining six months of the year commission members will serve as instructors for the in-service training group of 500 teachers.

The Commission will include 17 members: 10 rural school directors, 3 normal school professors, 1 Rural Education Official from Cochabamba, 1 Rural Education Official from La Paz, a National Education Office employee, and 1 Curriculum Development Office employee.

4. Bilingual Education Team

a. The Bilingual Education Team and the Upper Grades Teaching Materials Team will use the skeletal curriculum to prepare primary level textbooks for each grade. The first three grades of the 20 Project schools will use the bilingual education techniques, proposed by GOB educators, including the gradual replacement of the vernacular language by Spanish, as shown below:



A team of six teachers (selected at the Orientation Seminar by the Bilingual Education Specialist and the Rural Education Director in consultation with representatives of the Bilingual Education Office) will develop curriculum and teaching materials for bilingual education. The team will work out of the DEDC. From the 1st of March to the end of October, 1976, the team will work on Grade I materials including texts in reading, writing, math and Spanish as a second language. The team will spend its first two weeks working with the Curriculum Reform Commission to develop a general strategy and then separate to develop bilingual materials respectively. It will spend eight months each year in preparation of materials and four months teaching rural primary teachers during their in-service course.

5. Upper Grades Teaching Materials Development Team

After the Curriculum Reform Commission has prepared the skeletal curriculum, six of its members will be selected by the Departmental Director of Rural Education and the Curriculum and Instructional Materials Specialist to develop teaching/learning materials for the 4th through 8th grades. The team will work out of the DEDC. The work should be completed by November, 1980. (See Table 1 for a description of proposed curriculum content). The members will work for four months each year as instructors at the in-service teacher training course (B1 and B2 Page 20) and the remaining eight months on materials preparation. The Industrial Arts Specialist stationed at the Rural Normal School also will work with this group to develop practical skills related courses.

6. Normal School Curriculum

a. Framework for Rural Normal School Education - The Teacher's Role

Grant funds will provide a long-term advisor to work with normal school staff and students for five years to develop the curricular framework for normal school education. Compared to the curriculum activities at the primary level discussed above, the Rural Normal School Advisor will be working in a more unstructured setting. He and the Bolivian Rural Normal School Technician will attempt to serve as catalysts in helping rural normal school teachers define their roles in relationship to rural community needs and move the focus of rural education in the direction of these needs. Over the five-year period the advisor and the rural normal school teachers will focus on such topics as: (a) defining the role of the rural normal school teacher in light of the larger needs of the community; (b) helping the teacher understand how to relate to the rural community in general, and to its educational needs in particular; and (c) tracing the relationships of the rural normal school students to those of the rural primary school student.

The inputs into the Rural Normal School curriculum include all of the contributions of the Curriculum Reform Commission and all

Materials developed by both the Bilingual Team and Upper Grades Materials Team. In addition, the method utilized to accomplish Rural Normal School Curriculum Reform will include inputs from the community through compilation, interpretation and application of base-line data. Moreover, the new techniques devised under this Project will become part of the Normal School Curriculum.

The DEDC staff will participate in the Rural Normal School Curriculum Reform through monthly meetings at Vacas. This will enable those involved in Curriculum Reform at the Rural Normal and Rural Primary School levels to discuss new ideas with the administrators who in turn will be able to keep abreast of recent developments in this area.

b. New Curriculum Development 2/

A new curriculum will be developed by the Normal School staff and students during the first three school years of the Project. It will be based on:

- Basic guidelines of curriculum reform proposed by GOB educators and technical consultants (See Table 1 Componential Analysis of Rural Education I, Curriculum Reform and Instructional Materials).
- Inputs from the Curriculum Reform Commission working at same time.
- Inputs from DEDC monthly participation.
- Inputs from the Rural Normal School Advisor, Rural Normal School Technician, Bilingual Education Specialist and Industrial Arts Specialist.

Based upon the foregoing, the formal education curricula will be substantially revised and new materials will be added. In addition, a new technical track will be created to prepare students as technical teachers in the central school grades six through eight. The two tracks will include new material in radio education technology and programming, bilingual education and non-formal education materials development.

c. Implementation of New Curriculum

To implement the curriculum changes described above, Project funds will be provided to the Rural Normal School at Vacas for a library, science laboratory, shops, vocational agriculture center,

2/ Educational Consultants and MEC personnel have indicated to the Project Committee that adequate materials are available for the Rural Normal School level and, in most cases, do not need to be created especially for Project needs. Ample Project funds are being provided to purchase new texts based on the new curriculum.

and generally improved accommodations, for 400 students. Office equipment will be supplied as well as a small power plant, a small broadcast transmitter and two four-wheel drive vehicles.

d. Socio-Linguistic Research

This research area has been provided with \$42,000 under the Educational Management and Instructional Development Loan and will be provided with supplemental funding under this Project. The study will start in 1975 or early 1976 and will be expected to last for three years. It aims at securing relevant data on school-community profiles, linguistic usage and cultural linguistic values and attitudes which are needed both for the development of bilingual education materials for this Project and for extension of the use of such materials on a national scale. This study will be supervised by the Rural Education Division in La Paz and the Rural Education Director in Cochabamba. It will receive technical assistance from the Bilingual Education Specialist and the Bilingual Education Offices in La Paz and Cochabamba (within the DEDC organization). The research organization will operate out of the Vacas Rural Normal School and will work with that institution to develop a research capability. **

B. Teacher Training

1. Staff Training Courses

A four-week staff training course will be given at the Rural Normal School of Vacas in curriculum reform and bilingual education teaching materials prior to the first in-service training course (described below) for rural primary teachers. The training will familiarize the in-service training staff (members of the Curriculum Reform Commission and Bilingual Education Team plus the 10 remaining Rural School Directors) in materials to be used during the in-service training courses. This staff course will be under the direction of the Curriculum and Instructional Materials Specialist, Rural Normal School Advisor and the Bilingual Education Specialist in cooperation with DEDC personnel and Rural Normal School Teachers.

2. In-Service Training

a. Group of 500

Following the staff training, a period of 7 weeks will be devoted to in-service training for the 500 rural teachers in the 20 nuclear systems. This training program is projected for three consecutive summer vacation periods and will include lectures, classes on the curriculum reform, techniques for upgrading teaching, and practice teaching using newly developed materials and techniques and methods for evaluating effectiveness of new materials. Instructors

** The Sweat-Daniere study of school finance indicated that the user fees levied upon parents may be a significant factor in non-enrollment and drop-out levels. Based on this study and the community support profile (p. 17), tests will be conducted within the project area on the thesis that such fees are a disincentive to rural student retention and alternative support techniques may be utilized to achieve the same purposes.

will involve the teachers as participants in the rural educational reform process teaching them to the extent possible to be continuously alert to the educational needs of the community and the process by which the teacher can cause improvements in the system.

b. Group of 65 ^{3/}

A specialized seven-week training course for 65 sixth, seventh, and eighth grade teachers ^{4/} will be scheduled for the fourth year of the Project. The training course will be supervised by the Upper Grades Teaching Materials Development Team. Course content will explain that new materials have been developed by the team for sixth, seventh, and eighth grades and how these materials should be used in the classroom. The course will emphasize job-oriented training activities. Teachers will study materials to be used in the rural general and rural vocational tracks (See Table 1 for a description of these two tracks).

3. Short-Term Observation and Specialized Training

Participants in the Curriculum Reform Commission, Bilingual Education and Upper Grades Materials Development teams require broad exposure to the impact of bilingual education on the lives of rural children. For this reason, four groups of ten people each should visit both Ecuador and Peru for observations of bilingual education projects. Directors of nuclear systems, normal school teachers and all members of the Bilingual Education Team will participate in this observation-training. Four groups of five specialists will be retrained in certain aspects of the Non-Formal Education Program. These programs will be arranged by the MEC in La Paz and coordinated by the DEDC in Cochabamba.

4. Normal School Students

The Project provides the following training for Normal School students:

a. The three-year teacher training course for normal school students will change its emphasis toward a more rural-oriented course of study and preparation. More consideration will be given to the relationships between the Rural Normal School and the rural environment, rural parent and rural child.

^{3/} This Group of 65 also forms part of the 500 teachers (2a) who received in-service training during the first 3 years of the Project.

^{4/} Since over 86% of rural primary students leave school prior to completion of the fifth year, this Project places primary emphasis on activities within the 1-5 grade range. Materials will be developed and teachers trained within the 6-8 grade range but no immediate attempt will be made to increase the number of teachers or classrooms. Rural Education II and III will help train more teachers as the needs arise.

b. The three-year technical teaching program will prepare about 20% of the Rural Normal School student body to become technical teachers in agriculture, crafts, animal husbandry, health, sanitation or mechanics. This proposed new training will help provide the rural communities with much needed technical expertise in health and nutrition, elementary mechanics, new agricultural technology and crafts for home and industries. Most of the student body will have access to courses in rural development, psychology, anthropology, education, language, and communications.

c. The MEC and the Project Committee believe that the creation of the Technical Teacher Certification Program at the Rural Normal School of Vacas will enable the rural school system to become more responsive to the development needs of rural Bolivians. ^{5/} One of the major effects of these changes will be to decrease the number of normal school graduates going into the overpopulated general teaching field and increase the number of pedagogically trained technical teachers.

5. Training for Administrators

The DEDC's role is especially crucial to the success of this Project, and, accordingly the training provided by this Project also will involve administrators from the DEDC. Specifically, the DEDC will participate in the short-term training and observation programs in third countries, in the orientation seminars and subsequent teacher training programs. It will also participate in the community specific training sessions and in continuous on-the-job training under MEC and technical assistance guidance.

6. Community-Level Training Sessions

The success of this initial approach to the communities also is crucial to the future effectiveness of the Project's formal and non-formal education components. To take this difficult step successfully, the Project requires the organization of training sessions for community members. These training sessions will be offered four times each year. They will bring together participants ^{6/} from each of five nuclear school communities, or a total of 20 participants per session. Altogether about 80 individuals would receive training each year in community organization and needs. The training will be supervised and coordinated by the Non-Formal Education Working Group, although they would serve both formal and non-formal program components.

^{5/} The Rural Learning Needs Analysis, Annex V, Exhibit 1 identified the need for a practical/technical oriented education as second only to the need for basic education among young people.

^{6/} Most participants will be members or leaders of the various community resource groups.

TABLE 1

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-Page 1

COMPONENTIAL ANALYSIS OF RURAL EDUCATION I

CURRICULUM REFORM AND INSTRUCTIONAL MATERIALS

PROJECT COMPONENT	PARTICIPANTS	TIME FACTOR	SUGGESTED DESCRIPTION OF SKELETAL CURRICULUM
Curriculum Reform and ^{1/} Instructional Materials ^{2/} I. Primary Education Curriculum Reform 1st. thru 8th grade) <div style="border: 1px solid black; padding: 5px;"> <u>MATERIALS PRODUCED</u> Rural Bolivia Primary Curriculum 1,000 copies </div>	17 member Curr. Reform Com. Team 10 Nuclear System Directors 4 Rural Normal School Teachers 3 MEC Represent- atives	6 months following orientation seminar Mar 15 to Sept. 15, 1976	Grade 1 <u>Content</u> to: -acquaint the rural child with school and class- room procedures; respect for order; clean- liness, hygiene and health; courtesy and consideration for others; patriotic symbo- lism and significance; and civic authority. <u>Method</u> -develop language skills for oral and written expression and learn relationship of printed page to his known world and its capacity to expand that knowledge.
A. Basic Primary 1 Bilingual Material a. First Grade <div style="border: 1px solid black; padding: 5px;"> <u>MATERIALS PRODUCED</u> 10,000 Reading Primer 150 p. 10,000 1st. Readers 150 p. 750 Teachers' Manual (Spanish as a 2nd. Language) 750 Teachers' Manual (Math.) 75 p. 750 Syllable & World Building Manual 750 Teachers' Manual (Writing) </div>	6 members Bilingual Education Team 5 Rural Primary Teachers 1 Rural Normal School Teacher	8 months March 15 - Nov. 15, 1976	<u>Method</u> by learning: -reading and writing in the vernacular and as- sociating written to oral language. -Spanish as a second language relating com- parative and contrastive features of both languages. -mathematic concepts and processes using vi- sual and tactile teaching materials, post- posing abstract graphic symbols till the final week of Grade I. -social and natural sciences based on environ- mental reality and contained in primer and first reader.

^{1/} See note at end of table.

^{2/} During the Orientation Seminar (See Table 2, Componential Analysis of Rural Education I, Teacher Education, No. 1) the Curriculum Reform Commission and Bilingual Education Team will be organized.

PROJECT COMPONENT	PARTICIPANTS	TIME FACTOR	SUGGESTED DESCRIPTION OF SKELETAL CURRICULUM																																																											
<p>B. Intermediate Primary</p>	<p>Same team as A.2.</p>	<p>8 months Mar. 15 Nov. 15 1978</p>	<p>Grades 6, 7 & 8 Language Tool Subjects: Mathematics Reading Writing General knowledge curriculum for Grades 6, 7 and 8 will have two tracks: Rural General & Rural Vocational.</p>																																																											
<table border="1"> <thead> <tr> <th colspan="4">MATERIALS PRODUCED</th> </tr> <tr> <th colspan="4">Rural General</th> </tr> </thead> <tbody> <tr> <td>6th Gr.</td> <td>2,500</td> <td>Text</td> <td>1</td> </tr> <tr> <td></td> <td>2,500</td> <td>Text</td> <td>2</td> </tr> <tr> <td></td> <td>2,500</td> <td>Text</td> <td>3</td> </tr> <tr> <td></td> <td>2,500</td> <td>Text</td> <td>4</td> </tr> <tr> <td>7th Gr.</td> <td>1,800</td> <td>Text</td> <td>1</td> </tr> <tr> <td></td> <td>1,800</td> <td>Text</td> <td>2</td> </tr> <tr> <td></td> <td>1,800</td> <td>Text</td> <td>3</td> </tr> <tr> <td></td> <td>1,800</td> <td>Text</td> <td>4</td> </tr> <tr> <td>8th Gr.</td> <td>1,500</td> <td>Text</td> <td>1</td> </tr> <tr> <td></td> <td>1,500</td> <td>Text</td> <td>2</td> </tr> <tr> <td></td> <td>1,500</td> <td>Text</td> <td>3</td> </tr> <tr> <td></td> <td>1,500</td> <td>Text</td> <td>4</td> </tr> </tbody> </table>			MATERIALS PRODUCED				Rural General				6th Gr.	2,500	Text	1		2,500	Text	2		2,500	Text	3		2,500	Text	4	7th Gr.	1,800	Text	1		1,800	Text	2		1,800	Text	3		1,800	Text	4	8th Gr.	1,500	Text	1		1,500	Text	2		1,500	Text	3		1,500	Text	4	<p>RURAL GENERAL</p>		<p>RURAL VOCATIONAL</p>	
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<p>Mathematics Social Studies Science Language</p>			<table border="1"> <thead> <tr> <th>RURAL GENERAL</th> <th>RURAL VOCATIONAL</th> </tr> </thead> <tbody> <tr> <td> <p>Health Education</p> <ol style="list-style-type: none"> 1. Personal hygiene 2. First aide; physical and mental 3. Prevention of infections/contagious diseases 4. Typical illnesses <p>Home life education</p> <ol style="list-style-type: none"> 1. The home 2. Nutrition 3. Child care 4. Sewing, weaving, etc. <p>Rural Environment</p> <ol style="list-style-type: none"> 1. Use, exploitation and conservation of resources 2. Socio-political & geographical aspects; social and community organization; the significance of history and its consequences; land description and its influence on human life and activity. 3. The economy; sources of production and market values; other possible production. </td> <td> <p>Agricultural Education</p> <ol style="list-style-type: none"> 1. Types and use of soils 2. Crops - annual & perennial 3. Seed selection, fertilizers, c rotation, contour plowing. 4. Planting orchards and vegetable gardens (variety, health, etc. 5. Industrialization and manufacture of products 6. Irrigation 7. Animal husbandry and veterinar techniques 8. Preparation of animal products <p>Rural Crafts</p> <ol style="list-style-type: none"> 1. Weaving 2. Ceramics 3. Carving 4. Basketry 5. Modeling <p>Carpentry</p> <ol style="list-style-type: none"> 1. Use and care of tools 2. Making wooden toys, furniture and simple windows and doors </td> </tr> </tbody> </table>		RURAL GENERAL	RURAL VOCATIONAL	<p>Health Education</p> <ol style="list-style-type: none"> 1. Personal hygiene 2. First aide; physical and mental 3. Prevention of infections/contagious diseases 4. Typical illnesses <p>Home life education</p> <ol style="list-style-type: none"> 1. The home 2. Nutrition 3. Child care 4. Sewing, weaving, etc. <p>Rural Environment</p> <ol style="list-style-type: none"> 1. Use, exploitation and conservation of resources 2. Socio-political & geographical aspects; social and community organization; the significance of history and its consequences; land description and its influence on human life and activity. 3. The economy; sources of production and market values; other possible production. 	<p>Agricultural Education</p> <ol style="list-style-type: none"> 1. Types and use of soils 2. Crops - annual & perennial 3. Seed selection, fertilizers, c rotation, contour plowing. 4. Planting orchards and vegetable gardens (variety, health, etc. 5. Industrialization and manufacture of products 6. Irrigation 7. Animal husbandry and veterinar techniques 8. Preparation of animal products <p>Rural Crafts</p> <ol style="list-style-type: none"> 1. Weaving 2. Ceramics 3. Carving 4. Basketry 5. Modeling <p>Carpentry</p> <ol style="list-style-type: none"> 1. Use and care of tools 2. Making wooden toys, furniture and simple windows and doors 																																																						
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TABLE 1 (Cont.)

PROJECT COMPONENT	PARTICIPANTS	TIME FACTOR	SUGGESTED DESCRIPTION OF SKELETAL CURRICULUM
<p>2. Spanish language materials Grades 4 & 5</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><u>MATERIALS PRODUCED</u></p> <p>4th Grade 375 Teachers' Guides, Language 375 Teachers' Guides, Mathematics 5,000 Reader IV¹ 2,500 Reader IV² 5,000 Reader S.S. & Sc. 5,000 Math. Textbook</p> <p>5th Grade 4,500 S.S. Readers 4,500 Science Readers 4,500 Math. Text</p> </div>	<p>Upper Grade Materials Team 6 member team (chosen from 17 member Curriculum Reform Commission Team).</p>	<p>8 months March 15 - November 15, 1977</p>	<p>Grade 4 & 5 <u>Content</u> to: -expand general knowledge of social sciences including the home, family relationships, community and classroom members, responsibilities and rights of each member; locations, mapping of community, market, water sources and means of communication. -increase general knowledge of natural sciences; flora and fauna, natural phenomena - rivers, mountains, sun, moon, stars; rocks and soils; community production, experimentation with new agricultural productions.</p> <p style="text-align: center;"><u>Method</u></p> <p>by learning: -through reading, writing, mathematics and language subjects. Materials from 4th Grade through 8th Grade can introduce contrastive language and cultural aspects which will help the child master the second language, and improve his own self-image and attitude toward his language and culture.</p>

TABLE 1 (Cont.)

PROJECT COMPONENT	PARTICIPANTS	TIME FACTOR	SUGGESTED DESCRIPTION OF SKELETAL CURRICULUM
<p>b. Second Grade</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><u>MATERIALS PRODUCED</u></p> <p>8,500 Intermediate Readers 8,500 Social Studies Readers 8,500 First Spanish Readers 750 Teachers' Transitional Reading Manual 750 Teachers' Manual (writing guide, dictation and simple composition) 750 Teachers' Guide (Math.)</p> </div>	<p>Same Team as A.l.a.</p>	<p>8 months March 15 - November 15, 1977</p>	<p>Grade 2 <u>Content</u> to: -widen circles of relationships: school, community, neighboring communities, the department. -identify interrelationships of family members and community and the natural elements of the rural ambient. -create awareness of community members social activities and their contribution to society.</p> <p style="text-align: center;"><u>Method</u></p> <p>by learning: -intermediate reading in the vernacular with social/natural science curriculum content. -writing with dictation and simple composition exercises. -intermediate Spanish with oral exercises and transitional reading in Spanish. -mathematics; formulas, weights & measures, problem solving related to community activities.</p>
<p>c. Third Grade</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><u>MATERIALS PRODUCED</u></p> <p>7,000 Bilingual Social Studies Text 7,000 Bilingual Natural Science & Environment Text 7,000 Math Work Book Guides 600 Teachers' Programmed Writing Guidebook 600 Programmed Math. Schedules</p> </div>	<p>Same Team as A.l.a.</p>	<p>8 months March 15 - November 15, 1978</p>	<p>Grade 3 <u>Content</u> to: -transmit the new curriculum content with emphasis on rural and national ambient and functional relationships within the community, department and the nation using bilingual texts.</p> <p style="text-align: center;"><u>Method</u></p> <p>by learning: -advanced reading in the vernacular. -composition in the vernacular on topics known to the child. -beginning writing in Spanish. -problem solving related to community activities based on math studies.</p>

TABLE 1 (Cont.)

PROJECT COMPONENT	PARTICIPANTS	SUGGESTED DESCRIPTION OF SKELETAL CURRICULUM																	
B. Intermediate Primary (Cont.) <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;"><u>MATERIALS PRODUCED</u></p> <p style="text-align: center;"><u>Rural Vocational</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Agriculture</td> <td style="padding: 2px;">2,500 text 1</td> </tr> <tr> <td></td> <td style="padding: 2px;">2,500 text 2</td> </tr> <tr> <td style="padding: 2px;">Rural Crafts</td> <td style="padding: 2px;">2,500 text 1</td> </tr> <tr> <td></td> <td style="padding: 2px;">2,500 text 2</td> </tr> <tr> <td style="padding: 2px;">Carpentry</td> <td style="padding: 2px;">2,500 text 1</td> </tr> <tr> <td></td> <td style="padding: 2px;">2,500 text 2</td> </tr> <tr> <td style="padding: 2px;">Mechanic and Metal Work</td> <td style="padding: 2px;">2,500 text 1</td> </tr> <tr> <td></td> <td style="padding: 2px;">2,500 text 2</td> </tr> </table> </div>	Agriculture	2,500 text 1		2,500 text 2	Rural Crafts	2,500 text 1		2,500 text 2	Carpentry	2,500 text 1		2,500 text 2	Mechanic and Metal Work	2,500 text 1		2,500 text 2		RURAL GENERAL	RURAL VOCATIONAL
	Agriculture	2,500 text 1																	
	2,500 text 2																		
Rural Crafts	2,500 text 1																		
	2,500 text 2																		
Carpentry	2,500 text 1																		
	2,500 text 2																		
Mechanic and Metal Work	2,500 text 1																		
	2,500 text 2																		
<p style="text-align: center;">Regional Culture</p> <ol style="list-style-type: none"> 1. Knowledge about and appreciation for regional cultural values. 2. Folklore, art, customs, traditions, contributions to society, etc. 3. Medicine <p style="text-align: center;">Recreational Activities</p> <p>Bolivia, the continent, the world; people, production and growth.</p>	<p style="text-align: center;">Mechanics and Metalwork</p> <ol style="list-style-type: none"> 1. Use and care of tools. 2. Repairing artifacts, making utensils, tools. 3. Sheetmetal working, plumbing, welding, etc. 																		
C. Socio linguistic Research	Socio linguistic Research Organization	TIME PERIOD																	
		3 calendar years, 1976, 1977, 1978																	
II. Rural Normal School Curriculum Reform ^{3/}		<p>Note: This curriculum (1st-5th grs.) does not look much different from other primary curricula. However, the materials for rural Bolivia differ from others in specific content to teach the same basic concepts. The method is also important: the learner will be taught to discover facts, not merely memorize them.</p>																	

^{3/} See Table 2 , Componential Analysis of Rural Education I, Teacher Education
 The close association between Curriculum, and Training of Rural Normal School Teachers is seen in this table.

TABLE 2

COMPONENTIAL ANALYSIS OF RURAL EDUCATION I
TEACHER TRAINING

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	COURSE CONTENT
<p><u>Teacher Training</u></p> <p>1. Orientation Seminar for Personnel; Selection of teams and development of Base-line Data Survey</p>	<p>120 persons including: 80 sectional teachers, 20 Central School Directors, 4 Rural Normal School teachers, 3 supervisors and representatives from the District Education Office and Bilingual Education Offices and DEDC</p>	<p>3 weeks at the beginning of the Project, 1976</p>	<p><u>General Orientation and Discussion</u></p> <ul style="list-style-type: none"> a) Define and understand basic objectives and methodology of Rural Education I. b) Language and Culture in education in Cochabamba and the world. c) Theory and Practice in teaching techniques including Bilingual Education theory and methodology. d) The Rural Education status-quo in Bolivia and the objectives of curriculum reform and teacher training needs. e) Testing attitudinal, technical-pedagogical and language aptitudes of all participants. <p><u>Preparation for Base-Line Data Survey</u></p> <ul style="list-style-type: none"> a) Objectives of Rural Education I and methods of evaluating measurable parameters. b) Designing questionnaires and forms for recording data. c) Contact with the Rural Community leaders and parents of school-age children: <ul style="list-style-type: none"> - eliciting participation - securing community commitment - stimulating interest and enthusiasm - recording the data d) Organizing the division of labor e) Role-playing interviews <p><u>The Base-line Data Survey</u></p> <ul style="list-style-type: none"> a) Technique:

TABLE 2 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	COURSE CONTENT
			<p>b) Responsibility for getting questionnaires and forms to central school Directors and to the Commissions.</p> <p>c) Processing the data for computer analysis by the teams.</p> <p>The District Director of Rural Education, Curriculum and Instructional Materials Specialist, Rural Normal School Advisor, Bilingual Education technician and Curriculum and Materials Technician will be responsible for the Seminar.</p>
<p>2. Training Rural Normal School Teachers</p>	<p>Various Rural Normal School Teachers (20)</p>	<p>Rural Normal School Academic year for life of the Project (1976-1980) for 40 weeks</p>	<p><u>Group Development</u></p> <p>a) Define role of rural normal school teacher.</p> <p>b) List and categorize the rural normal school teachers' felt needs.</p> <p>c) List and categorize the positive qualities of a rural school teacher.</p> <p>d) Describe education for a rural primary student.</p> <p>e) Trace the relationship of rural normal school teacher through rural normal school student to rural primary student.</p> <p>f) Define the role of the rural normal school student in curriculum reform.</p> <p><u>Small Group Activities</u></p> <p>Carry out small group activities related to study areas, i.e., sciences, social studies, psychology methods, language, arts-shops-agriculture, health and sanitation-physical education, (six or seven groups).</p> <p><u>Curriculum Design and Development</u></p> <p>a) How to determine study areas of major need for a rural community.</p>

TABLE 2 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	COURSE CONTENT
3. Training Rural Normal School students.	Rural Normal School students (400).	Rural Normal School Academic School Year 1976-1980.	<p><u>A Relevant Curriculum</u></p> <p>Provide the student with a curriculum which corresponds to rural learning needs including vocational skills in agriculture, industry, animal husbandry, veterinary techniques, rural crafts, carpentry, elementary mechanics and metal works. Teach the use of radio as a communications tool in non-formal education.</p> <p><u>Bilingual Education Techniques</u></p> <p>Teach a vernacular language in the Rural Normal School, provide the students with the bilingual education techniques and teaching materials oriented toward basic skills of school and community, including mastery of Spanish as a second language.</p> <p><u>Cultural Anthropology</u></p> <p>Stimulate appreciation for the culture of the local community in its historical context. The process of change.</p> <p><u>Teaching Techniques</u></p> <p>Instill the concept of the teacher as a guide and stimulus instead of the faultless authoritarian figure.</p> <p>Develop the concept of working as part of a team with fellow teachers and members of the community.</p> <p>The Rural Normal School Staff, Rural Normal School Advisor, Bilingual Education Specialist, Rural Normal School Technician, Industrial Arts Specialist and Education Radio Specialist will be responsible for the training.</p>

TABLE 2 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	COURSE CONTENT
<p>In-Service Staff Training Seminars</p>	<p>Members of Curriculum Reform Commission, the Bilingual Education Materials Team and the 10 remaining nuclear system directors.</p>	<p>Four Weeks for three consecutive Years: 1977, 1978, 1979.</p>	<p><u>Organization of the In-service Summer Training Course.</u> <u>Teaching Curriculum by stimulating involvement.</u> <u>Division of Responsibilities.</u> <u>Recording and Utilizing Feedback from Discussion Sessions and Practice Teaching Classes.</u> <u>Teaching Bilingual Education concepts.</u> <u>Use and Significance of Bilingual Education Teaching Materials.</u> <u>Stimulating Student Participation, student expression and the solving of problems by reasoning.</u> <u>Understanding Teacher/Student/Parent Relations.</u> <u>Teacher involvement in the community.</u></p> <p>The Curriculum and Instructional Materials Specialist, Bilingual Education Specialist, Rural Normal School Advisor, Curriculum and Materials Technician, and Educator/Linguist will be responsible for the training.</p>
<p>5. In-Service Teacher Training Courses</p>	<p>500 Rural Primary Teachers.</p>	<p>7 weeks of vacation for three consecutive years: 1977, 1978, 1979.</p>	<p><u>To modify the behavior of the In-service teacher for a more effective role in the classroom and in the community, through:</u></p> <ol style="list-style-type: none"> 1. Training in the interpretation and use of the new curriculum developed specifically for rural Cochabamba. 2. Training in the theory and practice of bilingual education. 3. Training in the use of materials and bilingual education methodology for Grade 1 of primary education. 4. Training in the use of materials and bilingual education methodology for Grade 2 of primary education. 5. Training in the use of materials and bilingual education methodology for Grade 3 of primary education.

TABLE 2 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	COURSE CONTENT
			<p>6. Studying the understanding and manipulation of Grade 4 materials.</p> <p>7. Training in use of Grade 5 materials.</p> <p>8. Experience and training in methodology which emphasizes student participation in planning and implementation of learning activities.</p> <p>The In-Service Training Staff, (number four above) will be responsible for the training. DEDC personnel from other Departments will attend the seminars as observers.</p>
6. In-Service Teacher Training Course	65 Rural Primary Teachers of Grades 6, 7 and 8	7 weeks of vacation during fourth year of the Project 1980	<p>Training of 6th, 7th & 8th grade teachers to use materials related to the two tracks of upper primary education - rural general and rural vocational.</p> <p>Material Development Team Staff will be responsible for training.</p>
7. Observation trips	40 persons including curriculum and material development teams & representatives of District Education Office and Bilingual Education Offices	4 trips of two weeks each for 4 groups of 10 during first year of Project, 1976.	<p>Observation of bilingual education programs in Ecuador and Peru following the Orientation Seminar and with specific guidance for registering observations, for application in design and development of curriculum reform and teaching materials in Bolivia. The Bilingual Education Specialist will be responsible for this training.</p>

TABLE 2 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	COURSE CONTENT
			<p>b) Simple survey design and execution to determine needs objectively.</p> <p>c) Importance of base-line data studies.</p> <p>d) Interpretation and use of data gathered to design curriculum content.</p> <p>e) Evaluation of results of new curriculum design.</p> <p>f) Redesigning curriculum to fulfill stated needs.</p> <p>g) Need for flexibility to meet changing conditions.</p> <p>h) Rural normal school student in curriculum change.</p> <p><u>Transfer of Technology</u></p> <p>a) In this Project, why do we teach by involvement and participation?</p> <p>b) Explain the contrast between student-teacher relationships in involvement versus lecture type instruction.</p> <p>c) Demonstrate the value of creative participation versus rote memory learning.</p> <p>d) Relate this technology to the solution of community problems.</p> <p>The Rural Normal School staff, Rural Normal School Advisor, Bilingual Education Specialist, Rural Normal School Technician, Industrial Arts Specialist and Education Radio Specialist will be responsible for this training activity. The Curriculum and Instructional materials Specialist from the DEDC in Cochabamba will consult periodically with the Rural Normal School staff.</p>

Alternative Teacher Incentives

The Preliminary Education Sector Assessment and subsequent analyses have signaled the high loss rate of rural teachers as a major constraint to improving the quality and efficiency of public education in the rural areas. The programs supported under the Education Management and Instructional Development loan (L-051) and this loan will do much to improve the capability of the teacher and school system to provide a quality project. Those teachers participating in the in-service and pre-service training program will receive salary increases from the MEC for their added effort. The MEC will also be asked to covenant to undertake an in-depth analysis of the pay and allowance structure for rural teachers. This program element is aimed at developing and testing low-cost, non-salary incentives which could be used by the MEC to encourage rural teachers to stay on the job. To this end, approximately \$670 thousand in project loan funds will be made available to finance experimental use of non-salary incentives. The following areas for experimentation are illustrative of the types of programs which may be supported from this fund:

Teacher Housing: Teacher housing at both the central and sectional schools is inadequate or non-existent. Largely MEC owned, they are crudely constructed, lack sanitary facilities, and often consist of only one room per teacher. This works an unnecessary hardship on teachers with families, sometimes numbering four, five, or six. In one average size room, the family lives, cooks, eats, sleeps, bathes - and stores furniture and personal effects.

In view of the above, funds will be made available on a grant, or possibly loan, basis to the MEC, to the communities and to the teachers themselves either to upgrade present housing or to construct completely new housing. Consideration will also be given to providing seed capital for a teachers savings and loan association in the area which would permit the teachers to buy, own and improve their own properties. The object of such experimentation would be to permit the uptrading of teacher housing at the lowest possible cost to the MEC.

Financial Incentives: In recognition of the MEC decision not to grant overall salary increases at this time, consideration will be given to channeling funds to teachers for extra-curricular activities in support of both the formal and non-formal educational components of the project. This would mean that funds could be provided to communities to hire local school teachers to conduct after-hours classes and supervise community improvement projects. Funds could also be utilized to mobilize teachers to go to surrounding communities to provide similar services. The purpose of this financing would be to provide additional income to the teacher based on his special abilities and leadership role in the community.

Self and Family Improvement: Consideration will be given to providing seed capital to a teachers cooperative-credit union. This organization operated by the teachers could provide personal loans tailored to the felt needs of the teachers, i.e., vehicle loans, educational loans and consumer credits, the object being to improve the teachers' access to more of the amenities of modern life.

C. Non-Formal Education

In view of the relative lack of GOB experience with, and absent the existence of any reliable definition of, non-formal education, this project will test several experimental methods of selecting and delivering non-formal education, in order to develop a replicable MEC program which is entirely adapted to the rural Bolivian context and rural community needs.

The Rural Education I Project does not propose to select specific activities to be introduced in the community. The Rural Learning Needs Analysis has identified the types of activities in which the communities are most likely to engage themselves, which are generally in basic skills areas. After completing the baseline data surveys, the community and its teachers will review the results informally, and discuss possible projects with a representative of the Non-Formal Education Working Group. Together, they will assist the community resource group within the community to develop the selected activities. A typical community would be assisted by the following:

1. The "in place" Staff

The purpose of the non-formal education component is to provide an opportunity for out-of-school youth and adults to continue their education. GOB support and community contributions will finance non-formal education activities identified by the community. For example, if the community wants to sponsor a literacy campaign to teach people Spanish or give a course in weaving in Quechua, the MEC will be in a position to

assist the communities to obtain these services. The approach is very similar to that used in Community Development strategies. The difference is that the MEC approach uses an in-place staff, i.e., the rural teachers. Most of the training takes place in the community, not at a distant training center. PL 480 and Counterpart A funds may also be used to support MEC initiatives in non-formal education. For example, these supplementary funds might be used to finance construction of workshops at selected central schools, or to assist given communities wishing to contract with the rural teacher to provide extra-curricular services in non-formal education activities.

2. Other Groups

The non-formal education strategy also is based on the formation and development of the following groups:

a. Non-Formal Education (NFE) Working Group

Ten technicians, working out of the Cochabamba DEDC, are to help communities establish programs ^{7/} of Non-Formal Education by advising the inter-sectoral groups and individual communities on project feasibility and initiation, focusing on project scope, structure, organization and financing. They will coordinate with the field personnel of other Ministries and private agencies in the areas of health, agriculture and campesino development. The group's primary operational role will be to link the communities with the non-formal education organizations. This groups will also be responsible for preparing non-formal education materials to be used under bilingual conditions

^{7/} The Rural Learning Needs Analysis, Annex V, indicates that the four primary rural learning needs for adult men and women would be met by programs in practical skills; financial transactions; investment and credit; and Home Economics and Management.

or finding other organizations to do this. It will be semi-autonomous from the Cochabamba Rural Education Division in planning and implementation, but administratively dependent on the MEC for funding, office space and personnel.

b. The Multisector Group

Composed of officials from the Ministries of Health, Agriculture, National Community Development Service and Education, it will also include public and private organizations such as Radio San Rafael, the Adventist Mission, CORDECO 8/, and POTRAMA 9/. The group's functions will be: (i) to advise the non-formal education group on the feasibility of initiating projects and programs; (ii) to voice the represented institutions' interests and plans, and especially their potential linkages to projects; and (iii) to periodically provide pertinent information on the individual agencies' programs and projects to insure that the advisory role produces economic results.

As examples, the following organizations are expected to participate in the various community projects:

ACLO: a private church-related community development organization, would be responsible for community promotion and coop education once a community made the initial commitment to the program;

FOMO: the Ministry of Labor's skills training program, would be responsible for development of construction skills among local workers; and

SNDC: the National Community Development Service, would provide building materials and technical supervision for construction projects.

It would be unrealistic to discount the problems to be encountered in realizing intersectoral cooperation. Ministries and organizations working in the rural area have traditionally been independent. The non-formal education strategy requires the integration, trained personnel in multiple and difficult roles - technical, rural oriented and Quechua speaking. At the national level, the Ministries and other organizations participating in the Project will enter into agreements with the MEC and Ministry of Finance (MOF) that identify funding sources, objectives and staffing levels. At the community level, intersectoral cooperation will depend upon the type of assistance requested by the community resource groups and the community councils.

c. The Community Resources Group

Charged with the day-to-day functioning of the local non-

8/ CORDECO is the Cochabamba Departmental Development Corporation.

9/ A local handicraft store in Cochabamba that sponsors classes in weaving and design.

formal education program, this group will consist of program leaders, 10/ technical educators, participants, and representatives of the local government and the central and sectional schools. The Rural Education Planning Advisor and the Non-Formal Education Technical Coordinator, supported by the non-formal education and multisector groups, will attempt to assure that the appropriate mix of personnel and inputs reach the community on time. The resource group will be formed in conjunction with the community's request and its projection of its needs. The groups may use the community central and sectional schools as resource centers.

d. The Community Councils

The Council, selected from members of the community resource groups, and community leaders, would be responsible for initiating new community projects as well as for negotiating with other communities when planning joint projects or programs. The Council also will be in charge of arranging financing within the community for projects selected by the Community Resource Groups and negotiating agreements with the technical services organization that will work with the specific project. To foster the generation and exchange of information within and among communities, the strategy envisions a series of periodic meetings at regional and provincial levels where council members who are working with specific projects can meet with council representatives from other communities who work with similar projects to discuss strategies and solutions to problems as they surface.

3. Financial Support

Non-formal education involves both skill training and project development activities. Two sources of funds will be available to support the community projects. Fund sources from within the Department of Cochabamba and a support fund provided from Project financing. The financial support fund of \$100,000 allocated from loan funds including GOB matching funds will be disbursed for projects that are developed by the community. Approximately \$5,000 is available per nuclear school community. One half of the amount will be granted to the community. The other half will be provided on a matching fund basis. No hard and fast rules have been established as to the type of projects that will be eligible for funding. The Non-formal Education Working Group will look at each proposal in light of its relationship to non-formal education and its potential contribution to the economic development of the community.

D. Support for the Major Project Components

1. Technical Assistance

a. Two advisors funded initially under the Education Management Project will continue to work under this Project. They are:

10/ Community members with technical or leadership capability.

TABLE 3
 COMPONENTIAL ANALYSIS OF RURAL EDUCATION
 NON-FORMAL EDUCATION

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	ACTIVITY AND MAJOR ACTORS
1. Non-Formal Education Working Group - Selection and set-up.	Rural Communities	Feb. - April, 1976	On the basis the Rural Learning Needs Inventory, ^{1/} the group will be made up of approximately ten specialists in finance and organization, marketing and pricing, health, nutrition, agriculture and animal husbandry, home economics and management, literacy and community education, cottage industry and artisan crafts and cooperative organization and management.
2. Design Baseline Data Survey	Non-Formal Education Working Group	Feb. - March 1976	The Non-Formal Education Technical Coordinator and Rural Education Planning Advisor and working group will work with Survey Designers at Teachers' Orientation Seminar to insure inclusion of questions on non-formal education.
3. Non-Formal Education Working Group training including design of initial approach to communities.	Non-Formal Education Working Group and rural communities	Feb. Sept. 1976	Training will include participation in and analysis of Baseline Data Survey. Based on analysis of Baseline Data Survey and communities reaction a design for the initial approach to communities will be developed. In-country and foreign training ^{2/} will be provided to working group as needed. The Non-Formal Education Technical Coordinator, Non-Formal Education Consultant, Rural Education Planning Advisor and the rural communities through resource groups and councils will assist in early application of this strategy.

^{1/} See Annex V, Exhibit 1.

^{2/} Sites in Ecuador and Colombia are being considered for training.

TABLE 3 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	ACTIVITY AND MAJOR ACTORS
4. Multisector Group organized by Non-Formal Education Working Group, Ministries and private organizations.	Non-Formal Education Working Group and Rural Communities	July - Aug. 1976 with continuing contacts throughout the Project	Ministries and organizations will sign agreement recognizing need for intersectoral cooperation. They will establish multisector group, indicate the personnel who will participate in the group and identify funds to be used in non-formal education activities. Non-Formal Education Working Group Members, the Non-Formal Education Technical Consultant, the Rural Education Planning Advisor and the Director of Rural Education will work with the Ministries to form this group. The Multisector Group will select its own leaders. It will review non-formal education proposals prepared by the communities and working groups and make recommendations as to how the Project should be changed and suggest organizations that may want to participate in the activity. The Community Council will be responsible for submitting proposals to the Multisector Group.
5. Community Resource Groups organized	Individual Rural Communities	Aug. - Dec. 1976 and throughout the Project	Organization of community working groups in charge of day-to-day functioning of non-formal education programs at the community level by the community and non-formal education group.
6. Community Training Courses	Groups of Rural Communities	4 weeks, 4 times per year for 4 years	Training community members in their communities for skill acquisition and personal growth with the objective of having <u>campesinos</u> take-over Project implementation in the short-run. The Non-Formal Education Working Group will be in charge of training.

TABLE 3 (Cont.)

PROJECT COMPONENT	PRIMARY BENEFICIARY GROUP	TIME PERIOD	ACTIVITY AND MAJOR ACTORS
7. Community Councils organized	Rural Communities	Aug. - Dec. 1976 and throughout the Project	Community Council will be formed by community leaders and community resource group members. The council will represent individual community interests when joint community planning is required and take charge of institutionalizing the generation and exchange of information between communities. The council also will be responsible for approving resource group proposals, obtaining community contributions for the activity and negotiating agreements to pay for and supervise technical assistance provided by non-formal education organizations.
8. Regional, Provincial and Departmental Seminars	Leaders of rural communities and their communities	Periodically during 2nd, 3rd and 4th year of Project.	Community councils and resource groups will organize meetings to plan inter-community activities and exchange information. This will lead to greater economic, social and political participation of individuals in their communities. The Non-Formal Education Working Group will participate in the meetings as they are needed. It is hoped that the councils and resource groups will provide the leadership responsibility and the working group serve as a source of technical information.
9. Evaluation of field activities	Rural Communities	10 weeks at end of each year, 1976, 1977, 1978, 1979 and 1980.	On the basis of a yearly evaluation covering technical assistance, the development and integration of Resource Groups and Councils, cooperation and coordination with the Multisector Group and other Ministries, the Non-Formal Education Working Group will design activities to more clearly meet development needs in the 20 Project communities and to extend its program to other areas of Cochabamba and the country.

(i) The Rural Education Planning Advisor who will begin to work in 1975 under the Education Management Program and continue to provide technical assistance in the area of non-formal education, beginning in late 1977 for a period of 3 years. 11/

(ii) A Resident Bilingual Education Specialist will work with curriculum reform and materials in the first three primary grades. His activities will be funded for three years (beginning early 1977) beyond the 18 months of services funded under the Management Reform Project. He also will be responsible for working with the Rural Normal School Advisor to develop bilingual materials for the Rural Normal School and to develop achievement tests in indigenous languages with the short-term Education Consultants and local technicians. He also will work with the proposed sociolinguistic research study.

b. Rural Education I proposes to grant fund long-term technical assistance for:

(i) Curriculum Development: A resident Curriculum and Instructional Materials Specialist, with professional experience in developing native culture, environment, language, and daily life components of primary school curriculum. The Specialist will work with the teams dedicated to this aspect of the Project during a period of five years beginning in 1976; will collaborate with the Sociolinguistic Survey Team during execution of their work to identify cultural and daily life materials suitable for instructional uses; will contribute to teaching, curriculum redesign and materials preparation and assist in supervision of Quechua language instruction in the Normal School. In making contributions to curriculum change and materials development in the primary schools this Specialist will work under the guidance of Bolivian technicians, particularly those concerned with curriculum, materials, and bilingual education.

(ii) Teacher Training: The Rural Normal School at Vacas will have the services of a Rural Normal School Advisor throughout the life of the Project. This person will be responsible for guiding the development of the curriculum, to advise on texts and library materials, to consult on modern methodology and teacher education and to maintain liaison with the primary school curriculum and materials development teams. The advisor will begin work in 1976.

(iii) Teacher Training, Technical Skills: The Rural Normal School also will have the services of an Industrial Arts Specialist who will be responsible for development of the Rural Normal School skill training track in technical education for intermediate grades (6, 7, 8) in the Rural Primary Schools. The advisor will develop technical materials to be taught to Rural Normal School students and sixth, seventh and eighth grade technical teachers. The advisor will work at the Normal School for 2 years beginning in 1977.

11/ He will also serve as coordinator of Rural Education I Project activities with the DEDC and the Cochabamba Rural Education Division.

(iv) Educational Radio Specialist. Grant funds will provide financing for this Advisor for two years beginning in 1977 to supervise the development of radio as an effective communications tool in non-formal education. The specialist will work with the Vacas Rural Normal School staff, DEEC personnel and representatives of the Ministries of Health and Agriculture to prepare programs in agriculture, animal husbandry, health hygiene, sanitation and weather. In addition, programs in cultural and linguistic activities will be prepared under her guidance. The Rural Normal School's 1000 watt broadcasting transmitter, purchased with Project funds, will broadcast technical and cultural information programs with content designed specifically for the rural campesino.

c. In addition Project funds will be used to provide for short-term loan funded technical assistance as follows:

(i) Education Materials: The DEEC will have the services of an Education Materials Consultant for three months in 1977, and 1978. The consultant will work with the Curriculum Materials and Bilingual Teams on articulation and content of primary school activities including the logical flow of skeletal curriculum, content of children's materials, and improvements that can be made to the materials prepared by the teams.

(ii) Evaluation of Normal Schools. During three months in 1976 the Normal School Consultant will evaluate the physical site, its facilities and their use with particular emphasis on what improvements may need to be made and how they should be made. During three months in 1977 the consultant will focus on the qualitative aspects of education -organization and administration, curriculum, the faculty, the director, evaluation of teacher methodology and practice-teaching methods.

These two consulting periods are designed to give an accurate picture of the needs as well as progress made to meet the needs, propose changes and assist in the evaluation of the Project at the Rural Normal School.

(iii) Rural Nuclear School Consultant. The Consultant will spend six man-months in 1977 evaluating the impact of Project efforts in the Rural Nuclear School system. He will evaluate the components of the Project and make specific recommendations for change that would be appropriate for this Project and future projects.

(iv) Non-Formal Education Consultant. The non-formal education consultant will spend four months per year during the first three years of the Project working with the non-formal education group of ten technicians in Cochabamba. In coordination with the Rural Education Planning Advisor and Non-Formal Education Technical Coordinator, he will help to improve the non-formal education strategy and to prepare for its introduction into other geographic areas.

(v) The transfer of experience gained in the Primary School and Rural Normal School component of Rural Education I needs to be carefully gauged. To this end, the Project will support the short-term assistance (20 m/m over three years) of two Educational Consultants. These educators will help develop a strategy for the transfer of Project activities in the Primary Schools and Rural Normal Schools to other areas of the country. The strategy envisions the on-going efforts of long-term, short-term, GOB technical advisors and staff to seek methods of extension. The two advisors would help these groups synthesize the various approaches to accelerate the selection and initial implementation of a viable mechanism.

Specific strategy statements will include but not be limited to the following subjects:

- Orientation of Rural Education Supervisors and Nuclear System Directors;
- Curriculum Reform and local adaptation;
- Bilingual education methods and materials introduction;
- In-Service training of teachers;
- Upper grade curriculum and materials introduction;
- Methods of working which include the participation of the learner in planning his learning experiences; and
- Attitude changes toward and among rural peoples.

In addition, the two consultants will work directly with the Ministry of Education for the purpose of studying the question of setting norms under conditions of regional diversity, and for setting up the staff in the bilingual office and non-formal office and procedures for establishing and implementing those norms. These consultants will work with the Ministry to begin to develop the structure, staff, and procedures that will be required to judge the value of Project results in revising existing norms and diffusion strategies and to develop the strategy for extending the norms and strategies into other geographic areas. In addition, some Research and Evaluation funds approved under the FY 1974 Education Management loan will be used to procure short-term technical advisory services to develop recommendations of alternative rural teacher incentives which are suitable for testing with funds available under the Rural Education I project.

d. GOB Technical Assistance

Since certain areas of the Project deal with topics in which Bolivian technicians have a great deal of training, the GOB has decided to provide funds to establish technical positions 12/ to work with loan and grant funded technical advisors.

The GOB will establish the following positions:

(1) Bilingual Education Specialist. The specialist will work with personnel in the Ministry of Education's Bilingual Education Office in La Paz for five years to develop the strategy through

12/ The personnel assigned to these positions are either not now working for the GOB, or, if they are working for the GOB, they will resign prior to accepting one of these positions.

which bilingual education will be introduced into other geographic areas.

(ii) Educator/Linguist. The GOB will fund the position for five years in Cochabamba to coordinate bilingual education activities with other components of the Project especially within the DEDC hierarchy.

(iii) Bilingual Education Technician. The technician will work with the Bilingual Education Materials Team in Cochabamba and the Bilingual Education Specialist in La Paz to develop and adopt new techniques in bilingual education. The position will be funded for five years - three years from USAID funds, two years from GOB funds.

(iv) Curriculum and Materials Technician. The technician will help develop new materials for the Rural Education System in the DEDC in Cochabamba. The position will be funded for five years.

(v) Non-Formal Education Technician Coordinator. The coordinator will work for five years in Cochabamba with the non-formal education group. He will be responsible for coordinating non-formal education activities between the non-formal education group and the DEDC. He also will work with the Rural Education Planning Advisor and the short-term Non-Formal Education Consultant on the non-formal education portion of the baseline data survey and other activities.

(vi) Rural Normal School Technician. The technician will be assigned to the Rural Normal School at Vacas for five years. He will be responsible for working with the Rural Normal School Advisor and Rural Normal School Director in teacher and staff training and curriculum reform activities.

e. Engineering and Construction Support

Project funds will be used to hire a Project Engineer for three years beginning in 1976. He will work with NCDS to develop the self-help construction component of the Project and will have overall supervisory and management responsibilities for construction activities.

2. Construction

Engineering and construction activities include: the renovation and construction of dormitories, dining and kitchen facilities, classrooms, laboratories and skills-training shops at central schools and repairs to 160 sectional schools.

Also to be constructed are modest living quarters for teachers and their families at the rural normal school.

All schools will be provided with a cement slab toilet facility, simply and hygienically constructed.

a. Central and Sectional Schools

The engineering and construction inputs are designed to improve existing facilities to the maximum extent possible, in support of other Project objectives. The overall strategy for the Central and Sectional schools is fourfold:

- (i) to provide adequate facilities for teaching;
- (ii) to improve the learning and teaching environment; and
- (iii) to introduce and/or improve minimum health and hygiene measures;

All construction at these schools will be performed on a community self-help basis under the supervision of the National Community Development Service (NCDS).

The overwhelming inadequacy of rural sectional classrooms, from any point of view (dirt floors, inadequate light and air, no paint on the dirt walls, poor and often insufficient seating, pitted chalkboards, and an almost total lack of teaching materials) make this an essential part of the construction and remodeling activity of Rural Education I.

b. Rural Normal School of Vacas

At the Rural Normal School of Vacas, new construction will be undertaken to meet the planned needs of the Project. The objectives of the construction are: (i) to provide adequate teaching/learning and living facilities for students and teachers;

(ii) to provide additional housing for in-service training of primary teachers beginning in the third summer of the Project; and (iii) to extend the activities of the Rural Normal School into the field of technical and non-formal education. Existing facilities at the Rural Normal School at Vacas include a well maintained and useable director's office, teacher's conference room, and auditorium. The three classrooms and five teachers' housing units are in good condition. Sanitary facilities are totally inadequate. More housing is needed for teachers and their families. In order that teacher education be changed from years of intellectual boredom and physical deprivation to experiential learning and decent living, the Project anticipates construction of needed facilities and classrooms for both students and teachers.

c. Other

Some additional construction may be performed, e.g. improvement of teacher housing for central and sectional schools (to test this as a rural teacher retention incentive); and construction of workshops at selected central schools (to support MEC initiatives in non-formal education). Teacher housing improvements may be financed with funds allocated for that purpose under this project. PL480 generations and/or Counterpart A funds may be used to support non-formal education initiatives.

3. Capital Assistance

The capital assistance provided through this Project includes funds for school equipment, construction and educational materials. These inputs are described in several sections of the Project Paper and detailed in the Logical Framework.

PART II : SECTION I - PROJECT BACKGROUND

A . History and Development of the Proposal

In late 1973 the Mission prepared a Development Assistance Plan (DAP) placing primary program emphasis on rural development. In education it was proposed to continue work on administrative reform of the public educational system at the primary and secondary levels and to undertake a program of assistance to rural education. This general strategy was further elaborated in the second part of the DAP planning exercise which resulted in the Preliminary Sector Assessment submitted to Washington in May 1974.^{1/} This Assessment analyzed the current human resource development situation in Bolivia, and recommended in Chapter II that priority be given to assistance to rural education.

"It is obvious that on grounds of equity very substantially increased attention should be paid to the education of the rural populace. It also seems convincing that, given the overwhelming predominance of the rural sector in the population and its rather poor performance in economic terms, increases in national productivity will be dependent to a significant extent on increases in the productivity of the rural sector. That conclusion, too, calls for more attention to the education of the rural population."^{2/}

The Sector Assessment also suggested that special attention be paid to the problems of bilingual and non-formal education.

Based on the results of the AID/W review of the Preliminary Sector Assessment the Mission proceeded to prepare a Project Review Paper in rural education which was presented to AID/Washington on December 16, 1974.^{3/} The Washington review of the PRP requested that the Mission prepare a general paper on its strategy for assisting rural education in Bolivia. This complementary paper was presented to Washington on January 29, 1975.^{4/} This paper described a proposed three step strategy which is described in Part I, Section I, Sector Program. State cable 046261 of March 1, 1975 authorized the Mission

^{1/} Education in Bolivia: A Preliminary Sector Assessment, the U.S. AID Mission to Bolivia, May 1974, Multilith.

^{2/} Ibid. Page VII 3.

^{3/} LA/DR - DAEC/P - 74/26 Memorandum for the LA Bureau Development Assistance Executive Committee from USAID/Bolivia. "Rural Education Project I".

^{4/} Memorandum for the LA Bureau Development Assistance Executive Committee from USAID/Bolivia "Education Sector Strategy"

to proceed with the preparation of the present Project Paper. The proposal was included in the 1976 Field Budget Submission and 1976 Congressional presentation. The documents explained that the Education Management and Rural Development PROP would be revised to reflect expenditures under this Project. 5/

A Ministry of Education working group was formed to design the present Project and to prepare plans for its implementation. This group is headed by the National Director of Rural Education. The members are the Advisor on Rural Education; the National Director of Rural Community Education; representatives of the Ministry of Education's Administrative Reform Council, Planning Office and Adult Education Office; and a representative of the Ministry of Coordination and Planning. This group has received suggestions from representatives of the Ministries of Agriculture and Health, and from private organizations active in the proposed project area.

After extensive study, the working group decided to locate the Project in the Cochabamba Department, to focus on twenty selected nuclear school systems, to use the Vacas Normal School as the basis for creating a model rural teacher training institution, and to give special emphasis to the bilingual, primary level reform as well as to expand the community (non-formal) educational activities.

B. Prior U.S. Assistance in Rural Education

1. Servicio Cooperativo Interamericano de Educación

The principal U.S. assistance to Bolivian rural education took place during the 1944-1963 period during which the Servicio Cooperativo Interamericano de Educación (SCIDE) was in operation. 6/

The Servicio had two basic objectives: to strengthen rural education and industrial or vocational education, including vocational agriculture. During the 19 years of its operations, the Servicio contracted for 60 American advisors who worked on the program for an average of two years each and 272 Bolivians who worked in both technical and administrative positions for varying lengths of time. The total U.S. contribution to the Servicio during its 19 years of operations was \$ 2,291,500.

The initial emphasis of the Servicio was in urban industrial arts education and rural education. The Servicio worked with the Department of Rural Education of the Ministry of Education until

5/ It subsequently was decided to include grant funds in this PP rather than revise the PROP.

6/ S.C.I.D.E.: 19 Anos de Labor Cooperativa en la Educacion Boliciana USAID/Bolivia, La Paz, 1970. 73 p. typescript by Professor Alberto Toranzos and Ing. Julio Dalence is an excellent history of the Servicio.

1950 when a new counterpart organization was established within the newly created Ministry of Campesino Affairs, the General Directorate of Fundamental Education.

In 1949 the Servicio was given responsibility for the technical and administrative operation of two rural normal (teacher training) schools, Wariseta and Vacas, and eleven rural nuclear schools. At a later date the Servicio was also assigned responsibility for four additional normal schools. By 1951 the Servicio was operating with 47 of the 59 rural nuclear schools in the country. In 1961 the Servicio stopped its work with individual rural normal and nuclear schools, and concentrated on the solution of specific problems including:

- In-service training of non-title and rural teachers
- Repair, remodeling and construction of rural schools
- Publication of textbooks

In evaluating the accomplishments of the Servicio, the authors referred to earlier^{7/} focused on three areas of activity: Teacher training, improvement of instructional methods, and improvement of equipment and facilities.

a. Teacher training. Special emphasis was given to the preparation of rural teachers in health and agriculture subjects. In-country seminars, foreign training and short courses were given in these subjects to a total of about 1,500 teachers. Thus about 25% of all Bolivian rural teachers were reached with in-service training at one time or another. These training activities sought to prepare the teacher to help the campesino become a better farmer, to improve livestock and to form good nutritional and health habits. Seventeen rural teachers were given a special six month course on school administration. Sixty rural school supervisors, and 17 rural school directors received special training. 275 rural teachers were given professionalization training which enabled them to become titled teachers. A majority of these teachers, supervisors and directors who received training continue to work with the MEC today.

b. Improvement of instructional methods. The Servicio placed much emphasis on the reform of teaching to move it away from rote memory methods and toward the teacher as guide to a more active learning process. Stress was placed on the use of the blackboard and other audio-visual methods. School gardens, hen houses and rabbit hutches were introduced. Farm-school clubs were established which developed into 4-H clubs. Hot school lunches were initiated; school washrooms and latrines were built. Small school workshops in weaving,

^{7/} Ibid. pp 13.

ceramics or carpentry were installed. Sewing classes were incorporated in the school program.

In the rural normal schools, the programs were oriented toward rural development. Teacher-campesino relationships were analyzed and the concept of an integrated-community approach to education was stressed. Servicio technicians stayed in each normal school for at least a month at a time to demonstrate improved teaching methods and systems to the normal teachers and to the normal school students. Improved teaching and library materials were also introduced in this way. Rural sociology and social investigation were introduced into the normal school curriculum. Demonstration schools that continue to function today were organized in association with each normal school for practice teaching and for experimentation with new teaching-learning methods.

c. Improvement of equipment and facilities. Major investments in facilities were made in the rural normal schools of Warisata, Vacas, Portachuelo, Paracaya, Canasmoro, Caiza "D", Riberalta, Charagua, Llica, and Santiago de Huata. Nuclear schools were built or remodeled in Tari, Kalque, Mineros, Ucureña, Sella, Batallas, Chimasi, and Chulumani. In addition, over 100 rural sectional schools were constructed with equipment for 30 students, living quarters for the teacher, a well and a latrine.

Seventeen nuclear schools were provided with agricultural tools and seeds as well as simple health and shop equipment. Eight normal schools received similar equipment. Four normal schools received tractors, and eighteen vehicles were provided to rural school inspectors, normal schools and selected nuclear schools. Twelve nuclear schools received radio receivers. Each of the 875 rural teachers who completed the professionalization course received a kit including health, agriculture, carpentry, sewing equipment and instructional materials.

d. Textbooks and instructional materials. Twenty-three titles of primers, basic textbooks and teachers guides were published. A total of over 1,000,000 volumes were prepared and distributed to rural schools throughout the country.

e. Results. Considering the extensive nature of the Servicio's program in rural education, it is surprising to see so little evidence of its work twelve years after the close of the program. Teachers and administrators still refer fondly to the "Servicio days" primarily because resources were then available for improving the quality of the system. But why did not more of the innovation stick? Although the reasons cannot be determined by hindsight, the current Project emphasizes mechanisms which will immediately evaluate its innovations and their impact. This will enable the Project to adjust its operations before the small problems snowball into generalized failures as they did in the Servicio. Professor Toranzos and Ing. Dalence in their evaluation 8/ point out the problems 9/ which limited the success of

8/ Ibid. pp 40-42

9/ These problems have received special attention during the design of the Project and are reflected in Part II, Section IV Covenants and Conditions Precedent.

the Servicio during its operation. 10/

In general, the failures are related to poor personnel training and a lack of cooperation and understanding of the Servicio's objectives by campesino communities. Personnel were not trained in field work techniques. Technicians had a good theoretical knowledge of community needs but did not communicate well with the campesino. Materials were not presented in the campesino language and no attempt was made to understand his culture. This created an atmosphere of distrust in the community which eventually lead to the withdrawal of the Servicio from the community.

2. Post "Servicio"

Since 1963, when the Servicio was closed, the U.S. has contributed \$2.2 million in grant funds in support of educational development programs in teacher training, curriculum and textbook development, a human resource survey, and assistance for the Ministry of Education's administrative reform program. The curriculum and textbook program has developed a staff for curriculum reform and textbook preparation. A nation-wide primary curriculum guide has been prepared and three basic primary texts have been published. The current Educational Management program will improve and expand this program. Another \$3.7 million of loan, grant, and counterpart funds have been used to support school construction and repair. Although not directed specifically at rural education, all have had an indirect impact on improving the quality of rural education in Bolivia.

School construction through the Community Development program has been especially oriented toward rural communities. These communities typically place first priority on the construction of a school for their children.

3. Education Management Reform

The current Educational Management project seeks to improve the overall administrative efficiency of the Ministry. Its emphasis on decentralization is creating stronger district offices in support of rural education. Similarly, the areas of planning, bilingual education, materials of instruction, school finance and facilities will support the strengthening of systems which will be responsive to rural as well as urban school needs.

Special attention will be given to rural education planning and bilingual education research in the Educational Management project.

10/ It is interesting to note that bilingual education techniques were not used, nor were they considered a reason for the Servicio's limited success.

These efforts will be directly supportive of the presently proposed Project in Rural Education. Community and non-formal education are also receiving attention in a form which will provide the basis for follow-on activities in the rural education area.

The District Educational Development Center in Cochabamba, the administering agency for this Project, is and will continue to receive priority assistance in the Educational Management Project. The District Administrative Development Service (SIDA) is already operational in Cochabamba on a pilot basis.

C . Other Donor Assistance

1. UNICEF

UNICEF is working with various GOB agencies, including the MEC, in the Departments of Chuquisaca and Tarija in support of a Regional Development Plan. The project scale is more limited than the one proposed for A.I.D. assistance. It includes fifteen nuclear schools that will be equipped over a three-year period beginning in FY-76 at a total cost of \$240,000.

Following three years of planning and preparation, the Chuquisaca-Tarija development program is moving into the execution stage. Nine GOB, private and international agencies have achieved a remarkably high level of coordination in the initial stages of execution. However, according to the UNICEF representative in Tarija, this coordination is not due so much to administrative design as to the fortunate combination of individuals who hold administrative responsibility in the participating agencies.

The following are the main elements of the UNICEF assisted program:

a. Target sites have been selected on the basis of need and potential as determined by the Departmental Development Corporation.

b. Activity is initiated in a community only if there is a commitment to organize a local development committee and a willingness to provide at least 50% of the cost of buildings called for in the program.

c. ACLO, a private church-related community development organization, is responsible for community promotion and coop education once a community has made the initial commitment to the program.

d. FOMO, the Ministry of Labor's skills training program, will be responsible for development of construction skills among local workers.

e. SNIC, the National Community Development Service, is the channel through which building materials and technical supervision are provided to the local community for construction projects.

f. Training of health personnel and salary support for health workers at the newly created posts are provided by the Ministry of Health.

g. Planning of agricultural projects at the nuclear schools is guided by the agricultural extension agent. These programs are calculated to provide income for the schools and health materials as well as learning experiences for students and parents.

h. Ongoing supervision of the community projects is the combined responsibility of the nucleo directors, the area health workers, and the agricultural extension agents.

i. Taped technical information will be developed at the University recording studios in Tarija. This material will be distributed to local groups who will in turn provide recorded feedback which will be made available to communities with similar learning needs and community development goals.

j. Coordination is provided by the Departmental Development Corporation.

2. Spanish Government

Under a bilateral agreement, eight Spanish advisers in adult technical education are engaged with FOMC in adapting the Spanish programmed learning series for technical training to the needs of urban and rural Bolivian workers. The technical team from FOMC is responsible for development of content and the training of monitors who will oversee the skill-development process. Monitors are selected from those persons who already possess the particular technical skill, and their training is related to guidance of the educational process. In the case of the Chuquisaca-Tarija regional development program, courses are designed in coordination with the UNICEF effort to prepare local workers to carry out construction projects. Estimated cost of the project is \$ 250,000. It got underway in 1972 and is currently scheduled to continue for two more years.

3. The World Bank (IBRD)

The World Bank has a four-man UNESCO-IBRD team analyzing Bolivian education development needs. This team carried out its field work in Bolivia in June 1975 and will make recommendations to the Government and to the Bank on investment strategies for the

future. The team was fully briefed on current and proposed USAID programs in the sector.

It is anticipated that the report will emphasize technical-vocational educational development. Approximately thirty secondary vocational and secondary schools would be assisted throughout the country with physical plant expansion and shop equipment. At least ten of these schools would tentatively have programs in vocational agriculture and industrial arts oriented toward rural areas. Since the World Bank is studying the possibility of developing a secondary education project, the Project Committee decided to wait until results of this study are available before recommending any Mission participation in secondary-vocational education.

4. The Interamerican Development Bank (IDB)

The IDB is funding a manpower study which will bring up-to-date and expand the supply and demand data for basic skills prepared in 1967 by the Ohio State survey. This study will serve as the basis, tentatively, for IDB funding of follow-up activities to expand vocational training to meet projected skills needs related to the growth of the economy.

5. German Government

In 1973 the German Government carried out a diagnostic study of rural education in the valley areas of Bolivia which identified rural teacher training as a key need. Accordingly a three-year project is being prepared in this area in cooperation with UNESCO. The project, if finally approved, would loan or grant fund three long-term advisors to work with the Ministry of Education on the reform of rural teacher training. One long-term advisor would work tentatively with the Rural Normal School of Paracaya; the other two would work with the National Directorate of Rural Education. In addition, short-term advisors would work in specific areas of rural teacher training development. 108/man/months of long-term advisory assistance and 30 months of short-term assistance are currently being programmed. The project would also fund 120/man/months of foreign training for Bolivians, and off-set printing press for the Ministry and Materials for the Paracaya Normal School. It is anticipated that the project will begin in late 1975, and will cost approximately \$ 1 million dollars.

The Minister of Education and key Ministry officials have assured the Mission that the German contribution which would involve German financial support to a UNESCO project would be coordinated with the proposed long-term USAID assistance program in rural education. Mission has held several meetings with German officials on the subject of coordination.

D. Host Country Activities in Rural Education^{11/} Related to Project Components

Background

Rural education in Bolivia has been closely related to the changing history of the social and economic situation of the Aymara, Quechua and other native speaking campesinos. Until 1930 there had been no tradition of systematic education for the campesino, neither during times of the colony nor of the Republic. Only after 1930 was an experimental integrated rural nuclear school system undertaken.

The Public Education Law of 1930 established education for the rural and Indian population as a function of the Ministry of Education. In 1931 the first serious rural schools were established: Warisata and Caquiaviri in the Altiplano and Caiza in the central valley area. In 1935 the number of nuclear schools were increased to sixteen, all of which were to have boarding facilities for students, workshops, agricultural and health studies, vehicles and radio receivers.

In 1936 an Organic Law of Indian Education was decreed which included the following goals:

1. Each nuclear school should serve as a community health post.
2. Each nuclear school should have communication with its dependent sectoral schools by road and by telephone, telegraph or radio.
3. Rural school construction should receive assistance from the Public Works Ministry.
4. The Agriculture Ministry should collaborate with the schools in technical orientation on crops and livestock. Agricultural experiment stations should be established and should support rural school activities.
5. Each nuclear school should include a kindergarten, elementary, vocational and professional program. The school should serve as a catalytical agent to promote appropriate home industries and to

^{11/} A thorough discussion of the history of rural education is available in the following works: Ministerio de Asuntos Campesinos, Dirección General de Educación Fundamental. Plan Nacional de Educación Rural, Parte I, 1963 mimeo. See also U.S. Army Area Handbook for Bolivia, Chapter 8, "Education", 1971 edition.

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organize a rural property register for the area. The nuclear school should provide orientation for agricultural development, through introducing improved seeds, fertilizers, tools and techniques.

6. The school should create a type of citizen characterized by efficiency, honesty, energy and truthfulness.

The Chaco War of the 1930's created a renewed dedication to the goal educating campesinos and improving their social and economic situation - a dedication evidenced by the Decree described above. However, up until the 1952 Revolution education was limited to urban children. One of the basic elements of the Revolution was its concern for improving the lot of the rural, Indian population. Accordingly, under its 1955 Code of Education, the GOB charged the Ministry of Campesino Affairs with the responsibility for the development of a rural education system. Responsibility for urban education remained with the Ministry of Education and Culture. Whereas this separation of systems served initially to place increased emphasis on the expansion of educational opportunities in rural areas, in later years it proved to be a cause of a major distortion of resources and wasteful duplication of functions. Furthermore, the urban system continued to receive over seventy percent of the total education budget even though it served less than thirty percent of Bolivia's population.

In April 1970 these two systems were brought together under the authority of the Minister of Education. Even with this organizational unification, however, the two systems have persisted with separate administrative units within one Ministry. This duplication of organization and labor has remained in the field as well. Furthermore, as illustrated in Annex V, Exhibit 5, the urban system continues to receive a lion's share of the MEC budget resources. Moreover, approximately forty-four percent of the urban students complete primary school as compared to less than five percent of rural students; while approximately ninety-five percent of the urban youth population attends primary school as compared to fifty-one percent in rural areas.

The Ministry supports the goal of integrating the two systems of rural and urban education. At the national level it proposes full integration. However the separation of the technical-pedagogical aspects of the system continue at the Department level under the District Directors of Rural Education to assure attention to the special curriculum, teacher training, non-formal and other program needs of rural schools.

Current Bolivian Activities

a. Curriculum and textbook publication:

The Ministry of Education has under study a comprehensive review of its curriculum and textbook publications procedures. This study is responsive to the priority attention established in the Educational Management project for this area. A plan of action is to be completed by September, 1975.

b. Bilingual education

The Ministry of Education has funds to contract with a social science group to carry out a socio-linguistic study of the implications of bilingual education in Bolivia. This study will provide a broader basis for the development and utilization for bilingual materials and teaching methods in this Project. (See Annex V, Exhibit 3 for more details.) The study will be financed with a combination of resources from the GOB and the AID Educational Management Project and the proposed Rural Education I Project.

c. Non-formal education

The Ministry has contracted with another group, the Superior Institute of Public Administration (ISAP), to carry out an inventory and preliminary evaluation of non-formal educational programs for public and private organizations. This study, to be completed in late 1975, will provide additional program guidance to the Ministry in expanding non-formal programs included in this rural education Project. The study will be financed with a combination of resources from the GOB and the AID Educational Management Project.

d. Rural education reform

In cooperation with the Ministry of Coordination and UNICEF the Ministry of Education is collaborating in a rural education reform program in 15 nuclear school systems in the Departments of Chuquisaca and Tarija. The experience in preparing that project has been utilized in preparing this Project, and there will be continued interchange between the two projects during their implementation phases through the office of the Sub-Secretary for Rural Education.

e. Rural normal school reform

In cooperation with the German Government, the Ministry of Education is planning to begin a rural normal school reform in the Rural Normal School of Paracaya in the Department of Cochabamba. (See Part II, Section IC, for additional information).

f. Rural technical vocational education

The Ministry of Education is seeking World Bank assistance for a comprehensive expansion of secondary, technical vocational schools throughout the country, including selected rural vocational schools. This will enable the Ministry to convert the excess rural normal schools into new rural secondary vocational schools. (See Part II, Section IC, for additional information).

g. Agricultural development

The Ministry of Agriculture, with USAID assistance, is undertaking an ambitious long term expansion of agricultural research and extension activities in the central valleys and nearby lowland resettlement areas. The Cochabamba area will share in this program and will provide the basis for useful professional interchange between those agricultural development efforts and rural education activities proposed in this Project. This interchange will include consultation on rural curriculum and non-formal education programs as well as the in-service training of agricultural teachers (financed under the Agricultural Project).

E. Studies of the Sector

1. Diagnostico Integral de la Educación

The principal study of the education sector in recent years is the "Diagnostico Integral de la Educación" carried out in 1972-73 by the Ministry of Education. Published in 16 volumes, it is a comprehensive analysis of the quantitative and qualitative aspects of Bolivian primary and secondary education. It formed the principal basis of the Mission's Education Sector Assessment.

As a result of the "Diagnostico", the Ministry published in October, 1974, its first draft of an educational development plan.^{12/} This plan summarizes the studies of the educational sector made in the diagnosis and sets general educational priorities. The plan is now being revised with a view to strengthening its operational aspects.

2. Supplemental Studies

In the area of bilingual education a diagnosis and experimental study program will be carried out by a prominent Bolivian social

^{12/} República de Bolivia, Ministerio de Educación y Cultura, Dirección Nacional de Planificación Educativa, Anteproyecto del Plan Boliviano de Desarrollo Educativo IV Tomos, La Paz, Bolivia, Octubre de 1974.

science research group over the coming years. In non-formal education an inventory and preliminary evaluation of existing non-formal programs is being carried out by ISAP, an in-service government training institution which has a competent research group. A detailed study of the equity and efficiency aspects of Bolivian education was carried out in late 1974 by Andre Daniere and Francisco Swett of the Berkley 211D study group on Educational Finance. This study confirmed the Mission's preliminary sector assessment's conclusions on the unfavorable situation of rural education in Bolivia and the opportunities that exist for making systems improvements.

3. Education and Rural Development

A leading Bolivian anthropologist and Director of the National Cultural Institute, Julia Elena Fortún, has published a monograph on rural education in Bolivia. ^{13/} Her thesis which is used in the Rural Education I Project design, is that education is the crucial factor in improving the condition of rural Bolivians. She urges that the rural nuclear school become a basic instrument for rural development.

To reform the rural school system she would begin by converting the rural normal schools into "technical rural normal schools with emphasis on education, health and work". These schools should prepare:

- a. Teachers able to work with community schools in non-formal adult programs.
- b. Agricultural technicians to work with rural nuclear school students as well as to work with specific programs of the Ministry of Agriculture.
- c. Health technicians to teach and to be village health workers.
- d. Handicraft technicians to teach in the nuclear schools and to organize craft cooperatives.
- e. Development promoters to coordinate and administer the above community programs.

F. Views of the Country Team

The Country Team supports the Project.

^{13/} Julia Elena Fortún, Educación y Desarrollo Rural, México, Instituto Indigenista Interamericano, 1973, 105 p. The monograph also emphasizes the author's deep commitment to understanding the cultural basis to rural uniqueness, particularly in bilingual situations and the need to incorporate the indigenous culture as a component in formal and non-formal education.

G. Opinion of the Donors

The IERD on February 13, 1975, the Export-Import Bank on February 18, 1975, and the IDB on February 25, 1975 indicated no interest in the Project by letter to AID/W.

PART II: SECTION II - PROJECT ANALYSIS

A. Economic Analysis

The economic justification for applying resources of the magnitude contemplated in the present and other programmed Projects to rural education has been developed within the Mission's Preliminary Sector Assessment and in planning documents of the GOB.^{1/} The specification of the Rural Education I Project, however, has benefited from two additional exercises in economic analysis:

A cost-benefit comparison of alternative approaches to rural-education reform.

- A more careful and documented projection of the costs and returns expected under the proposed Project.

1. Cost-Benefit Comparison of Alternative Approaches to Rural Education Reform

The Sector Goal of increasing both the amount and the usefulness of learning imparted by the education system in rural areas responds to more general social and economic goals of the GOB: The raising of agricultural productivity and incomes, the development of a richer community life in rural areas, the inducement of more rational migration patterns in the rural population, and the better integration of rural families into the life of the nation. It is in terms of these larger goals that the benefits from increased and more "relevant" learning are to be evaluated. On the other hand, the performance of programs toward achievement of the Sector's Goal can be measured best in terms of their impact on the attainment of three intermediate objectives: (a) increased participation of target populations in education activities; (b) increased rate of learning of participants; and (c) increased relevance of learning to the future roles of participants in social and economic development.

One possible option is to concentrate efforts on objective (a) on the assumption that, however poor the educational offering, increased exposure of a larger number of individuals to school activities must result in a broadened acquisition of essential skills. Until recently, this has been the mainstay of education policy in Bolivia at least within the formal education system. The results have been documented

^{1/} Ministerio de Educación y Cultura, Dirección Nacional de Planificación Educativa: (1) Diagnóstico Integral de la Educación, La Paz 1973-74
(2) Anteproyecto del Plan Boliviano de Desarrollo Educativo, La Paz 1974

in the Sector Assessment: Because the school offering in rural areas held little attraction to potential pupils, the latter have failed to respond in full to the GOE's policy of opening schools within reach of a majority of the children.^{2/} The record strongly suggests that efforts to increase participation through better access to education facilities will largely fail unless education programs hold a promise of substantial benefits to participants.

The preferred set of options, therefore, places the emphasis on the achievement of objectives b and c, increased participation in education activities and increased relevance of learning. These two objectives mainly deal with the conditions and outcomes of learning. The following alternatives were considered within this general framework:

a. Nature and extent of complementary activities toward the achievement of objective a .

The means available for extending access to education among the rural population fall into three broad categories:

- Construction of additional schools, preferably under a nuclear organization, and improved pupil transportation.
- Reduction of parental and pupil costs incurred as a result of school attendance.
- Development of non-formal education programs.

1. Improved Access to Facilities. This first approach, excluding the transportation component, has been that selected by the GOB over the last decade. There is no clear evidence that the school density and nucleous arrangement achieved by the GOB at this time are anything but efficient, at least within the geographic areas covered by this Project.

Options do remain, however, in the quantity of resources allocated to each school. If, as expected, improved learning in the

^{2/} While a rapid increase has been registered in the percentages of each rural age cohort entering first grade (from 66% in 1965 to 88% in 1974), the ability of the system to retain and "graduate" pupils has not improved substantially. For instance, the percentage completing the fifth grade has only gone from 14% for the 1965 cohort to 21% for the 1975 cohort (predicted). At this rate, it would take until the year 2030 for the rural system to achieve recent graduation rates of the urban system.

classroom results in a much higher demand for school places (reduced propensity to drop out), a failure of the system to respond with increased supplies of school equipment and teaching materials would effectively deprive many children of access to education or force back the quality of learning to an unsatisfactory level. One important commitment sought from the GOB under the Project, therefore, is a prompt response of Ministry authorities to observed or expected resource shortages arising from actions taken on the learning front.

ii. Reduction of parental costs. This second approach has been neglected by the GOB, in part out of inertia and in part out of concern for its financial implications. As documented in the Sector Assessment, parental expenses in urban public school systems reach at least 40% of the recurring school expenditure per pupil. Assuming that the same proportion holds in rural areas, the taking over of these expenses by the Ministry without compensatory reductions elsewhere would raise its annual ordinary budget by 40%, or up to 42% of the GOB's annual budget.^{3/} No steps have been taken either to compensate for, or reduce, the additional costs incurred by rural families through loss of the work of children away at school.

Reforms of the system toward alleviation of family burdens have been under active consideration by the Mission, and an important step in this direction was taken under the FY 74 Educational Management and Instructional Development Loan Agreement with the GOB: specifically, a commitment of the Government to increase the proportion of its recurrent budget allocated to non-personnel expenditures. Such a shift in the budgetary structure was shown in the Sector Assessment to be internally efficient, and one of its impacts will be the reduction of expenses now incurred by families to provide children with necessary school materials. The present Project contemplates the provision of full sets of materials to children in the target area at a cost of \$2.50 per child in attendance. While these are to be loan financed, the 6% of recurrent expenditures which they represent falls well within the percentage (10%) which the GOB is committed to assign to non-personnel items.

Reductions in the loss of "alternative earnings" of children could be accomplished through a more flexible scheduling of school activities over the year and within the day.^{4/} While the Mission has encouraged this type of initiative on the part of the

3/ Percentage calculated on the assumption that the measures extend to both the urban and the rural systems.

4/ Daniere and Swett: Continuing Sector Assessment: Equity and Intensive Efficiency of Bolivian Primary Education.

Ministry, the GOB's new awareness of the pitfalls of excessive centralization has not yet gone far enough to overcome its commitment to uniform scheduling across the nation.

Irrespective of GOB's attitudes in this area, the exclusion of scheduling reform from consideration at this time makes sense in the long-run perspective. The various programatic elements discussed in this Section are complementary to one another, in the sense that each generates more benefits in association with others than if implemented alone, but this complementarity is less strong between scheduling and teaching programs than among elements of the teaching process itself. The simultaneous implementation of both reforms in an institutional context that is essentially rigid and traditional would so overtax the system as to prevent the realization of expected benefits. Even as it stands, it is doubtful that the full set of projected programs could be carried out in the absence of the decentralized administrative structure put in place by the GOB during the course of the present year.

iii. Development of non-formal education. Major emphasis is placed in the Project on this third approach, even though the outcomes - and the benefits - of non-formal education programs are difficult to predict in the present state of our information. This is especially true in Bolivia where such programs have not been extensive in the past and where the performance of existing programs is not well documented.

Accordingly, the investment proposed in the area of non-formal education is more an investment in knowledge than in realized education benefits - that is to say, the experimental aspect of the Project is much more evident in the case of non-formal education programs than it is with other components. Assuming that no more than one quarter of the rural population of Bolivia is reached by non-formal education over the next decade, a saving of only one dollar per participant realized as a result of the Cochabamba experience would represent a benefit of \$ 1.7 million compared to a Project investment of \$ 1,060,000. 5/

b. Nature and extent of activities toward objective b, increased rate of learning of participants.

Increases in the rate of learning by pupils in school attendance and by participants in non-formal education are, again, achievable through a variety of means.

5/ See Section F, Page 83.

The sharpest differences between process alternatives are observed in non-formal education. Since, however, the approach to non-formal education under this Project is essentially experimental, the Project Committee believes that program options in this area need to be considered only from one standpoint: the extent to which a sufficient range of the alternatives will be effectively tested in the experiment. One of the criteria used under the Project by members of the Non-Formal Education Working Group in supporting local non-formal education initiatives is precisely the degree to which such initiatives will "enrich" the available sample.

At the school level, four main approaches to improving the rate of learning have been identified:

- curriculum reform
- development of bilingual education
- re-design of training and retraining of teachers
- increase of teacher benefits

It is clear that little pay-off can be expected from the first two activities unless the third is also carried out, at least to the extent of training teachers in the use of the new curriculum and in the practice of bilingual education. There is, unfortunately, little that can be said concerning the comparative costs and benefits of curriculum reform and bilingual education. The costs are known (being incurred primarily in the development and increased production of school materials, and, indirectly, in the re-design and expansion of teacher training), but the statistical evidence is inadequate to estimate the level of associated increases in learning rate. The same can be said of the impact of improved material conditions for teachers in rural areas.

Thus, the relative allocation of resources between learning-improvement programs under this Project reflects only the professional judgment of consulted educators. The same kind of judgment, rooted in professional experience, serves as a basis for estimating the minimum expected impact of the whole set of projected programs in the Costs and Social Returns of the Project., A 2 below.

C. Nature and extent of activities toward objective.c, increased relevance of learning to the future roles of participants in social and economic development

Relevance of learning to the future roles of pupils is to be achieved through appropriate curriculum changes and their corollary of materials development and re-designed teacher training.

To the extent that the curriculum is to be modified in response to the objective b, all benefits of curriculum relevance can be generated without additional cost: Not only can relevance be incorporated without reducing learning effectiveness, but relevance to future roles is itself an essential characteristic of the curriculum from the standpoint of improving the learning response of pupils. As noted below, the roles toward which education is provided need not correspond to the aspirations of pupils (or of their parents for them), i. e. education is used as much to determine the range of future roles available to pupils as it is to fulfill role expectations. What counts from the standpoint of learning responses, however, is awareness on the part of families that the child will be substantially better off with, than without, the education he receives - whether or not his future ^{6/} course exactly fits his preferences.

The main options in this area concern the projection of "future roles" and the specification of curricula that do prepare individuals for their expected roles:

1. The projection of future roles is a matter of external efficiency, i. e. it follows from the specification of national objectives in the social and economic spheres. Thus, the roles assigned under national planning - and the educations offered in accordance with them - may conflict with individual aspirations. For instance, the preference of the GOB is for primary education that will enhance the effectiveness of rural pupils in agriculture and related activities, even though many rural families move to the urban labor market or aspire to higher levels of formal education.

However, the GOB's approach - and that proposed under this Project - is a cautious one: The objective is not to "vocalionalize" primary education in rural schools but to provide the fundamental skills sought nationally for all Bolivian children in a manner that will sensitize students to rural opportunities and enhance their capability to function as rural workers. Thus, the proposed curriculum will not "condemn" rural pupils to life within the agricultural sector, but substantially increase the probability that they will select rural occupations and bring those to a high level of productivity.

ii. The specification of appropriate curricula is a technical question which educators in the Project Committee have sought to answer in the light of their professional experiences and perceptions. A discussion of technical processes is contained in Part II, Section II, together with a description of the principles of curriculum revision adopted under this Project.

^{6/} The Project focuses on the process of modernization which creates an uncertain future for the child and his family as opposed to the traditional process where the child follows the secure path in his father's footsteps.

d. Design of reform strategy

A fundamental choice in the Project design has been that between support of a nation-wide program of rural education reform and support of a quasi-experimental program limited to selected school-systems in one of the Bolivian Departamentos.

Irrespective of the costs and benefits of a nation-wide program incorporating all elements of the projected reform, it is apparent that the financing of such a program over a three-year period would have exceeded the capabilities of the GOB and required an abnormal level of loan/grant support on the part of the Agency. Based on projected costs under the reduced program, and taking account of economies of scale achievable in the design of curricula, new materials, and teacher training activities, extension of the reforms to all Departamentos would cost an estimated \$300 million over three years, of which \$195 million would be loan/grant supported.^{7/} The annualized GOB portion is about equal to the total one half of annual Ministry of Education budget, and the loan/grant support amounts to 250% of all transfers projected for Bolivian by USAID over the three-year period.

The actual choice, therefore, is between a complete reform package applied to a limited geographic area and the implementation of some of the reform components at the national level with progressive introduction of the remaining components in later years. The problem with the second approach is that (1) the complementarity of the various components is of such a high order that the level of benefits generated in the early phase of the process would be unacceptably low, and (2) both the cost of inefficiencies incorporated in the initial design and the cost of correcting such inefficiencies would be high to the extent that costs are incurred nation-wide.

By contrast, the application of initial resources to a limited geographic area promises that the full benefits of complementarity between program elements will be realized, and it provides an experimental base for the identification of desirable program modifications in advance of nation-wide implementation. Even if, in the following phase, the extension of the reform beyond Cochabamba proceeds on a national basis rather than through progressive incorporation of different Departamentos, the experience and knowledge acquired in the Cochabamba region will reduce considerable the cost of developing instruments and programs for the remainder of rural Bolivia.

^{7/} \$195 million is estimated on the basis of current requirements affecting the level of GOB contribution to loan/grant projects.

In the case of non-formal education, the proposed approach is strictly experimental, in the sense that the performance of the program will be used to evaluate a large variety of alternative non-formal education formats, rather than to identify desirable adjustments in an initially well-specified activity. Thus, the benefits expected in this area are primarily in the form of new information, and whatever benefits occur to non-formal education participants in the course of the experiment must be viewed as a by-product of the Project.

2. Costs and Social Returns of the Project

a. Alternative evaluations

To the extent that Rural Education I is part of an integrated program of assistance which includes further Projects at the national level, several comparisons of costs and returns must be made, each relevant to a particular decision situation:

i. Costs and returns of Rural Education I, on the assumption that no further complementary project is carried out.

ii. Additional costs and returns of Rural Education II and III, on the assumption that Rural Education I has not been carried out as projected.

iii. Costs and return of the integrated program of Rural Education Projects I, II and III.

In addition, the costs and returns of an alternative program incorporating the same annual development costs as the proposed integrated program, but by-passing the experimental phase in Cochabamba, are calculated to support the cost-benefit comparison of reform strategies outlined in Section A I.

Because of the special nature of the non-formal education component, no attempt is made to evaluate the costs and returns of non-formal education program beyond the simple calculation presented on page 49. The foregoing analysis refers only to Project components dealing with the primary education system.

b. General Methodology

All steps of the projections are carried out under five different program alternatives:

- Rural Bolivia:
- A. No-Project.
 - B. Project sequence consisting of Rural Education I, II and III.
 - C. Alternate project sequence by-passing Rural Education I.

D. No Project

Cochabamba

School Systems:

E. Program sequence consisting of Rural Education I only.

The outcomes, costs and returns of education are calculated under each program alternative. The specific cost of a project sequence consists of the Projects' development costs plus the difference between education costs under the sequence and education costs in the absence of the Projects. The specific returns of a project sequence are the difference between education returns under the sequence and education returns under the "no-project" alternative.

The information is developed in three successive steps: In the first step, direct educational outcomes are projected over an extended period under each assistance -program alternative. One set of outcomes relates to the Sector Goal: It consists of measures of the distribution of learning among successive cohorts of children. The other set of outcomes simply consists of annual enrollment figures. (See Annex V, Exhibit 4, Tables 4 and 5). The outcomes indicate that annual enrollments for grades 1 to 8 are expected to increase by about 9% between 1976 and 1980 under Rural Education I. The number of children completing grades 3 and 5 in 1980 will be 15%, and 7% respectively of those who enter first grade.

In the second step, costs are projected in two parts:

- (a) Development costs scheduled under relevant Projects, and
- (b) Annual costs directly related to the size of enrollments (second set of direct outcomes) and to the per-pupil cost of input combinations over the entire projection period.

In the third step, social returns are projected based on the first set of direct outcomes (level and relevance of learning in successive cohorts) and on information relating such outcomes to national performance in terms of major social and economic objectives.

The general effect of the Projects beyond their development period is to raise both the school attainment of children and the size of enrollments 8/. Thus, both the level of social returns and the level of costs are increased in the period following development. For the projects to show a positive net return, the social benefits they contribute must overtake not only their development costs but also the additional costs they generate over the years.

8/ Table 4 E indicates that the number of students completing 8th grade in the Project area will increase by more than 9 times between 1975 and 1990.

The review of projected steps carried out under c, d, e below is intended as cursory. The detail of sources, methodology and computations is presented in Annex V, Exhibit 4.

c. Projection of Educational outcomes

The only educational outcomes retained for the purpose of estimating the costs and returns of education under program alternatives are:

- The number of children in successive cohorts of the target population leaving school with, respectively, 3rd grade attainment, 5th grade attainment and 8th grade attainment.

- The number of children from the same cohorts enrolled each year in the primary grades.

i. Attainment outcomes

Predicted attainments are eventually translated into predictions of social returns. While predicted attainments refer only to levels of learning and do not incorporate indices of "relevance", they remain best suited to the prediction of social returns for at least three reasons:

- They are easily measured.

- Available empirical relationships linking social-goal performance to education outcomes are in terms of grade attainment (see 2 d below).

- As pointed out in c, a strong relation appears to exist between grade attainment of pupils and relevance of their learning to future roles.

For reasons described in d below, attainment projections are produced for all children in school in 1975 and for all cohorts reaching school age between 1976 and 1990. Projections in the no-project alternatives are based on the observed performance of school age cohorts in the existing system. Attainment projections under the Project sequence reflect the professional expectations of educators who advised the Project Committee and professional educators: from the MEC. Estimated enrollment outcomes in the Project area will increase from 2,700 to 3,200 students in grades 1-5. By the year 1990 enrollment in the 20 Project communities will increase from 19,300 to 24,700 for grades 1-5 because of innovations proposed under Rural Education I. (See Annex V, Exhibit 4, Table 4D and 4E).

ii. Enrollment Outcomes

Projected enrollments will eventually be translated into projected costs, based on planned input utilization per enrolled pupil and predicted input prices.

Under each program alternative, the projection of enrollments is based on a flow analysis of the selected cohorts, incorporating the projection of attainment distributions generated in (i) and parallel projections of other flow characteristics.

d. Projection of education costs

Annual education costs are calculated at 1974 prices for the school age cohorts identified in c, i.e. all pupils in school in 1975 and all cohorts entering the system between 1976 and 1990. Education costs are divided into two major categories:

- Costs of service inputs (recurrent costs).
- Costs of capacity creation.

(1) Costs of service inputs

Under each alternative, the cost is based on the enrollment projection generated in 1c, and it consists of two major components: teacher salaries (including benefits) and "other expenditures"^{9/}

^{9/} The projected enrollment in year x is multiplied by the projected teacher/pupil ratio in the same year to obtain the number of teachers, and the latter is multiplied by a fixed average teacher salary (including value of benefits) to give teacher costs in year x.

- The projected teacher cost is multiplied by a variable percentage of "other expenditures" to obtain these expenditures.
- Factors in the computation affected by education reform include only projected enrollments and teacher salaries. The sources of utilized data are as follows: enrollment projections are estimated in c.i, pupil-teacher ratios are determined in part by previous GOB commitments (Education Plan) and in part by expected constraints on the number of new Normal School graduates to be employed in each of the projection years; teacher salaries are those paid in 1974; the percentage of "other expenditures" per pupils is that projected under previous GOB commitments (FY-74 loan agreement).

ii. Costs of capacity creation

Such costs derive from a "vegetative" response to the growth of enrollment. They include a cost of construction and a cost of equipment 10/ calculated in 1974 prices.

e. Projection of Social Returns

The returns of education under each program alternative are expressed in terms of units of achievement of the four social and economic goals identified in i: increase in agricultural productivity and incomes; development of a richer community life in rural areas; inducement of more rational migration patterns in the rural population; and integration of the rural population in the national life.

The quantitative measures developed in accordance with the Mission's perception of the GOB's specific interests are as follows:

- Agricultural productivity: Addition to GDP in 1974 prices
- Agricultural incomes : Decrease in percentage of rural families with annual income under \$b2,000 per capita.
- Migration patterns : Increase in rate of rural-rural migration per 1000 of population in high-density areas (Altiplano and Valles)
- Quality of rural community life :
 - a) Increase in number of functioning formal and informal community organizations per 1000 of rural population.
 - b) Increase in information level of rural families in the areas of health and family planning.

10/ - Costs of movable equipment in year x are estimated as the product of enrollment increase in year x+1 by a fixed cost of equipment per pupil.

- Costs of construction (and fixed equipment) in years x are estimated as the product of "increase in teacher need" in year X+1 by a fixed cost of construction per school room.

The fixed coefficients in each case are those observed for rural schools in 1974.

- Integration of the rural population :
- a) Increase in generation of employment.
 - b) Ease of access of credit
 - c) Improved marketing channels.

The gains achieved along each of the social dimensions listed above are measured separately, i.e. no attempt is made to define a general index of social returns (what economists call a social objective function) through weighted aggregation of each component. Furthermore, the absence of appropriate data prevents the development of quantitative predictions with respect to all but the "productivity" and "income" criteria. Finally, the calculation of "rates of return" is restricted to economic returns (productivity) alone, since these represent the only benefit measured in the same unit as costs, i.e. value of resources in 1974 pesos.

Predictions of gains along each specified dimension are based directly on predictions of direct educational outcomes obtained in c: number of pupils leaving school with, respectively, a third grade, fifth grade and eight grade educational attainment.

With respect to agricultural productivity and incomes, the minimum annual increase in future productivity per "graduate" is calculated from two separate sources:

- (a) an Ecuadorian sample survey showing the impact of different lengths of primary education on the utilization of fertilizers by farmers, for different sizes of farm holding; and
- (b) an estimate of the USAID Agriculture Division according to which small-farm net productivity per worker will increase by a minimum of 50% when the farm manager responds fully to new production/marketing opportunities created by planned GOB programs in agriculture (a response for which fertilizer utilization is taken as a valid index). The net productivity per worker used as a base is the most recent one for which data are available (1974). The effect of education on annual productivity is assumed to be operative from the time school leavers reach age 18 up to an average age of 50. A "demonstration effect" is also estimated, according to which "modernizers" with a 5th or 8th grade education generate similar responses among a fixed average number of less educated neighbors.

f. Comparison of Costs and Returns

(1) Economic returns and costs

The minimum economic returns projected in Annex V, Exhibit 4, after discounting them at 10% to the year 1974 and expressing them in 1974 prices, are as follows for each project sequence

(million pesos)	<u>Sequence E</u> (Rural Ed. I)	<u>Sequence B</u> (Rural Ed. I, II, III)	<u>Sequence C</u> (alternate)
Discounted economic returns	22.945	635.78	456.22

The corresponding costs, also in 1974 prices and discounted at 10% to 1974 are:

(million pesos)	<u>Sequence E</u> (Rural Ed. I)	<u>Sequence B</u> (Rural Ed. I, II, III)	<u>Sequence C</u> (alternate)
Discounted cost	115.880	576.918	521.651

Note that the major portion of the cost of a project sequence consists of project development costs. As indicated in Annex V, the cost of additional enrollments under the project sequences will be small, because the Net Total Effect of the teaching force in the coming years will be determined primarily by the transition from present low teacher/pupil ratios to the higher ones planned by the GOB.

The comparison of discounted costs and returns under each sequence indicates that the proposed sequence of Rural Education I, II, III is the one appearing with a positive net benefit. Put another way, it is the only sequence with an internal rate of return in excess of 10%. The alternate sequence C does substantially less well, and the sequence E (Rural I only) does as poorly as could be expected given its intended role as an experimental component within the sequence of three projects.

The beneficiality of the Rural I Project can be illustrated in two ways:

(a) If it is bypassed in favor of a program with the same development costs as the sequence of Rural Education I, II, III, but operating directly at the national level (i.e. sequence C), the net benefit obtained under sequence B turns into a substantial net cost.

(b) Once Rural Education I has been implemented, the costs and returns of implementing Rural Education II and III are, respectively \$436.84 million and 635.78 million. This extremely high rate of return is caused in large part by the initial investment in Rural Education I, since it can be expected that the implementation of Rural Education II and III alone would generate a discounted return inferior even to that of sequence C.

(2) Shifts in income distribution

It is estimated in Annex V, Exhibit 4, with the help of Project sequence B, the vast majority of rural families in Bolivia will benefit within the next 25 years from a substantial increase in income (averaging as a minimum \$b 2000 per family). In the absence of such a program, some 30% of the families fail to make this transition.

As in the case of economic returns, the performance of alternate sequence C with respect to incomes is inferior to that of the proposed sequence.

B. Technical Analysis

Summary

The Project is technically feasible as a prototype activity in the Department of Cochabamba. In each Project component, attention is given to provide a level of technology which is appropriate to the rural educational system and the needs in that area at this time. The Ministry of Education and the Cochabamba District Education office also are capable and desirous of introducing these techniques and innovations. Emphasis has been given to the design of a Project which can be replicated by the Ministry in other areas in the future.

1. Rural Primary Curriculum Reform

The curriculum reform approach used in this Project is to establish a Curriculum Reform Commission at the Department (field) level. This Commission, made up of experienced teachers, will develop a skeletal rural primary curriculum. The National Curriculum Department and a long term grant funded technical advisor will provide the Committee with advisory assistance. This curriculum will allow the rural teacher to select teaching means and media for specific subject matter that are appropriate for community learning needs.

The skeletal curriculum for the primary school will look like this:

Basic Primary

Use of vernacular language:	Grades 1 - 3
Use of Spanish language:	Grades 4 - 5

Tool Subjects:	Reading
	Writing
	Mathematics
	Language

General knowledge:

Social Science - home and family relationships, community, and community members' activities; the classroom community-responsibilities and rights of each member; community reference points; the market, water sources, and means of communication.

Natural Science - the world immediately around the child; flora and fauna; natural phenomena - soils, minerals, rivers, mountains, sun, moon and stars; community production, and experimentation with new agricultural production.

The materials developed for the curriculum will be related to rural Bolivia. Although the concepts to be taught are general, their application will be in terms of the Cochabamba communities where children live. The emphasis in method will be on the discovery of facts, not merely their memorization.

Intermediate Primary

Grades 6 - 8

Tool subjects:

- Language (Spanish)
- Mathematics
- Reading
- Writing

General knowledge:

(two tracks)

Rural General Education

Rural Vocational Education

Health Education

Agricultural Education

1. Personal hygiene
2. First aid-physical-mental
3. Prevention of infectious/contagious diseases
4. Typical illnesses

1. Types and uses of soils
2. Crops-annual and perennial
3. Seed selection, fertilizers, crop rotation, contour plowing
4. Planning orchards and vegetable gardens. (Variety, health, etc.)

Home life education

1. The home
2. Nutrition
3. Child care

5. Industry and manufacture of products
6. Irrigation
7. Animal husbandry and veterinary techniques
8. Preparation of animal products

Rural Environment

Rural Crafts

1. Use, exploitation and conservation of resources
2. Socio-political and geog. aspects: social and community organization; the significance of history and its consequences; land description and its influence on human life and activity
3. The economy; sources of production; market values; and other possible production

1. Weaving
2. Ceramics
3. Carving
4. Basketry
5. Modeling

Carpentry

1. Use and care of tools
2. Making wooden toys, furniture and simple windows and doors

Regional Culture

1. Knowledge about and appreciation for regional cultural values
2. Folklore, art, customs, traditions, contributions to society, etc.
3. Medicine

Mechanics and Metalwork

1. Use and care of tools
2. Repairing artifacts, making utensils and tools
3. Sheet metalworking, plumbing, welding, etc.

Recreational Activities

Bolivia; the continent;
the world; people, production and growth

The two tracks of the intermediate cycle, grades 6-8, are designed for adolescents who will study at the central schools.^{1/} The school and community together will work out the orientation for vocational training with relation to the natural, social and economic needs characteristic of the area. Graduates will have a needed skill and be able to enter the community's semiqualfified work force.

The skeletal curriculum noted above should give a good indication of how the teacher can interpret the materials in social sciences, considering the physical, social and economic make-up of the community. This also is true in the natural sciences, where differences in rainfall, altitude and terrain influence both the materials that are available and the way an idea should be presented in the classroom. The materials prepared for the primary grades do include other than the locally known; however the whole emphasis on the Cochabamba written materials is their local flavor - particularly for the first three grades.

2. Rural Primary Teacher Training

The teacher training techniques introduced in this Project will emphasize the teacher's responsibility to relate all teaching to the rural child's needs and environmental conditions. Teachers are expected to identify these needs together with the learner. The success of this strategy depends upon its acceptance and support by Rural Nuclear School Directors. The in-service training component will be guided by these Directors after they have received intensive training in the techniques at the Rural Normal School during Staff Training Seminars. The entire content of curriculum reform explained in previous paragraphs is specific content (See BI above) and method for teacher training.

^{1/} Sectional Schools do not have grades 6-8.

The strategy contrasts with current approaches in which teachers are taught to use standard techniques in teaching all students, paying little attention to individual differences. Teachers are now taught the needs of rural learners only in a general way and most in-service training of rural teachers consists of how-to courses not related to the rural learning scene.

3. Materials Production

The team selected to develop materials for rural primary school children will be charged with the responsibility of shifting the emphasis and forms away from the urban related environment toward rural events and scenes. Materials will be developed by materials production experts and rural school teachers working together. Since there is some evidence that children who do not speak the official language when entering school learn faster if they begin reading and writing in the vernacular while Spanish is introduced with second language teaching techniques, materials will be prepared in the vernacular for beginning classes and will slowly be replaced by materials in the Spanish language by the end of the third year.

Using principles of good textbooks design, the early grade materials must relate directly to the child's social and physical environment. All text materials go from the known to the unknown so that relationships between the two form a bridge to comprehension. This proposed approach differs from the current Bolivian practice where all materials are developed centrally and no distinction is made between the urban and rural setting. Moreover, most primary school materials are produced exclusively by professional writers in Spanish - Teachers often explain these materials using random translations in the vernacular but the lack of supporting materials in Quechua or Aymara handicap the teacher's ability to reinforce the concepts being taught and therefore the entire learning process.

4. Rural Normal School Reform

The curriculum of the Rural Normal School will be revised to conform to the new rural primary curriculum outlined above. The Normal School staff and the Rural Normal School Advisor will develop their program to relate it more closely to the rural situation and to development needs.^{2/}

The Project proposes that rural normal students carry out community surveys to become more familiar with community learning needs. In addition they will have two six week practice teaching

^{2/} For detail see Annex V , Exhibit 3 , Curriculum Reform, Teacher Training, Bilingual Education and Non-formal Education: strategy, methodology and implementation.

experiences in the Project's central or sectional schools.

5. Non-formal Education

Through this Project, the Cochabamba Rural Education Division of the MEC will organize a Non-Formal Education Working Group charged with establishing liaison with other programs of non-formal education, department level agencies and with communities. The community resource group will include local residents and program leaders who will be in charge of the day-to-day non-formal education activities. Members of the Community Resource Groups and local leaders will form Community Councils to undertake joint Project planning with other communities; institutionalize the exchange of information; raise funds for the community activities and negotiate the type of technical services that will be provided to the activity by either the Non-Formal Education Working Group or other technical group.

Emphasis will be given to the identification of specific community development problems and the organization of learning/problem solving experiences related to these problems. Short courses, demonstration activities, technical materials in Quechua, films and radio will be used to provide knowledge and skills related to such basic learning areas as agricultural production and marketing, health, handicraft and construction skills.

6. Application of these Techniques

From its inception, the Project endeavors to stay close to the target group, consulting with them, respecting their contributions, encouraging their participation and urging their cooperation. The training of all the people in this Project is predicated on the assumption that educators will clearly understand the concept of the learner's need and ability to participate in the planning for his own learning. Empirical evidence indicates that people are interested in almost any activity when they participate in the planning for that activity.

This Project will use the "chain of training technique." Those concerned directly with the target group receive the most training, both the school teachers and the non-formal education technical people. The community leaders receive a little less training, 3/ and successively, less and less, the nuclear system directors, the normal school teachers, the district supervisors, the departmental supervisors and directors, and last, the Ministry of Education Officials at the national level. The chain neglects no link, but emphasizes those nearest the target group.

3/ Nuclear system directors, district supervisors, departmental supervisors and directors receive substantial training in administrative techniques under the Educational Management and Instructional Development Loan (511-V-051).

C. Social, Cultural and Political Aspects of the Project

1. Traditional Community Norms

There are many social, cultural and political factors inextricably involved in the kind of rural education and non-formal education change contemplated in this Program. In the rural Cochabamba communities, for example, monolingualism is the rule and the vernacular language is part of the cultural heritage. Spanish is the recognized vehicle for social and economic mobility. As indicated in the Analysis of Rural Learning Needs, it is one of the main reasons why the campesino sends his sons and daughters to school. He wants the school to teach his children to read, write and speak Spanish.

The Curriculum Reform component of this Project places major emphasis on using bilingual education to enable the rural student to compete successfully in Bolivian society. The Project will use rural teachers to explain the advantages of bilingual education to parents, children and the community. Major emphasis is placed on explaining that an understanding of reading, writing and mathematical concepts in the vernacular language facilitates the learning of more complicated concepts in later years in Spanish. It is not expected that parents will readily accept this approach, rather they will wait to see what materials are used in the classroom and their sons' and daughters' reactions to the new strategy. The first noticeable result of the bilingual education strategy is expected to be the students improved ability to handle mathematical concepts. The education consultants on the Project Development Team believe that the parents will support the bilingual education concept when they perceive that their children understand and handle mathematical concepts better under this strategy.

In-service training for rural primary teachers and rural normal teachers will develop a new problem solving attitude on the part of the teacher. Part of the training will focus on the communities needs; how the teacher and the community can do something to help meet the needs; and how to obtain information and materials from sources outside of the community.

This emphasis on increased dialogue between the teacher and campesino is expected to have a noticeable impact on the traditional role of women in the community. The campesino and the teacher will exchange ideas and suggestions. By establishing a realistic dialogue between the teacher and campesino, the role of the female student can be explored and perhaps the campesino will begin to understand and accept the need for more formal and non-formal education for their daughters.

2. Education Norms

The many reasons for Bolivia's failure to provide a complete primary education (grades 1-8) to rural youth are explained in Part II, Section I

of this Project Paper. The reasons are mainly socio-cultural and economic. The changes which this Project will seek in Bolivian rural education relate to making the system more responsive to rural learning needs and thereby to enable it to contribute more effectively to rural development. Since the socio-cultural and economic constraints are so integrally related the Project proposes to attack them jointly: poorly trained teachers will be re-trained; Normal School students will be provided with a new orientation through a new curriculum. Quechua speaking children will learn their 3 R's in Quechua; an urban oriented curriculum will be replaced by a practical, rural oriented curriculum; grades 6, 7 and 8 will be split into two tracks, General Secondary and Technical-Vocational Secondary.

The non-formal education activity focuses on out-of-school youth and adults. Non-formal education where community groups plan and implement community projects is new to the Bolivian Education System. Previous non-formal education activities consisted of literacy courses for the same age groups with minimal results. A Non-Formal Education Group working out of the DEDC will encourage, stimulate and support the community to implement the project they select. ^{1/} This will lead to a pattern of community level self-improvement and should help provide a basis for improved socio-economic development. The DEDC will coordinate the non-formal education activities of the Ministry of Agriculture, Health and the National Community Development Service through the Multi-Sector Group (See Part I, Section II). This type of cooperation and coordination is new to Cochabamba and should enable all of the entities that work at the community level to improve their operations.

3. The Problem of Introducing New Concepts

The Project Committee has made every effort deliberately to design a rural education program which takes into account the obstacles of traditional community norms and education norms. The difficulties of introducing new concepts in curriculum has been discussed with supervisors and teachers in Cochabamba, and many more in-service training programs are planned to discuss this and other subjects during the implementation of the Project. Visits have been made to the Rural Normal School at Vacas, and the Committee has spent a considerable amount of time exploring the proposed changes in Normal School curriculum with Rural Normal School teachers and students. As indicated in Part I, Section I, the committee feels that the sensitivity, relationship and attitude of the students and faculty toward rural schools and rural communities makes the Rural Normal School at Vacas the proper vehicle to introduce change into rural schools and rural communities.

^{1/} For instance, if the community decides it needs to develop construction skills among local residents, it will contact (through the working group) the Ministry of Labor's skills training unit, FOMO, to provide the services.

In conclusion, it is believed that the impact of existing social, cultural, economic, organizational, and political patterns on Project implementation has been taken into consideration during formulation of the program. The changes in formal education and new initiatives in non-formal education have been functionally designed to support and improve the existing Bolivian teaching/learning process and create a new attitude in rural areas toward the role of education in the life of the rural Bolivian.

4. The Role of Women

The Project should have a strong positive impact on women as individuals, teachers, supervisors, learners, mothers, and direct contributors to the economic welfare of the rural community. Many rural teachers are now women; however, their access to supervisory positions is limited. In this Project and in the Educational Management and Instructional Development Loan Project (511-V-051) we are exploring ways to improve their access to teaching and administrative responsibilities. Under the Educational Management and Instructional Development Loan we will be placing emphasis on training capable supervisory personnel. Under this Project we will attempt to identify rural learning needs of women ^{2/} and to meet them in the design of formal and non-formal education materials in the training of Bolivian personnel and the hiring of national and US personnel sensitive to and capable of integrating women's needs into the overall program. Particular attention is being paid to the problem of high drop-out rates among girl students. ^{3/} Non-formal courses in Health, Agriculture and Home-Economics will be designed in response to community requests to include out-of-school girls and women. The Project emphasizes the need to determine the impact of curriculum changes, new teaching methods and non-formal programs on the female students as it gains a better understanding of the female self-concept in their community and projects the role they can play to improve their community.

5. Some Political Aspects ^{4/}

a. The Selection of Cochabamba as the Initial Project Area

The decision to specify a geographic area for initial Project focus is a well established pattern in Bolivian development. As mentioned in Part II, Section I, UNICEF has selected the Tarija and Chuquisaca.

^{2/} Annex V , Exhibit 1 , Tables 1-4 and 11-15, describe the rural learning needs of rural girls and women.

^{3/} See Preliminary Education Sector Assessment, Page IV-12 for data comparing drop-out rates.

^{4/} Mission prepared a separate cable, La Paz TOAID-234 which describes in detail the political/education environment. It also explains the current situation of the teacher's unions and their relationship to the proposed rural education activities.

Departments for their rural development project. Polos de Desarrollo are an accepted concept in Bolivia. The President of Bolivia has expressed to the Ambassador the GOB's interest in our having active programs in the Cochabamba area.

The geographic scope of the Project has been thoroughly reviewed and discussed with the Minister of Education and interested Mission personnel to determine if any adverse political reaction to the concentration of Project resources in one geographic area can be anticipated. All interested parties have indicated that, since this is the first step of a proposed nation-wide rural education program which will eventually benefit all of Bolivia's nine departments and that this first step will be preparing materials and developing new strategies that are transferable to other geographic areas, the proposed geographic area provides an acceptable location for the initial effort.

b. Selection of Rural Normal School Students

Few rural normal school students come from the major cities in Bolivia. Many, however, come from the smaller towns. They enter the Rural Normal Schools to obtain a teaching certificate often with the hope of eventually moving to the city as an urban teacher. The important factor for rural education development, however, is to obtain students with a commitment to contributing to rural development as a career, and not just as a stepping stone to becoming an urban teacher. The solution will probably have to lie in creating an educational alternative ^{5/} to enroll in rural normal schools for the "semi-urban" and urban oriented student.

The transition for both urban, semi-urban and rural students will be gradual for the following reason: until the rural education system can supply qualified secondary school applicants for Rural Normal Schools the rural system will have to rely upon urban students to fill rural teaching positions.

c. Community Political Structure

Project design takes into account the current community political structure in which formal and non-formal education will work. The possibility of estranging community leaders has been minimized. In-service training for the community leaders is a key to the success of the program... Normal school programs will emphasize the need for teachers to interact with the community to explain new teaching/learning concepts and to gain community support for new ideas and initiatives.

^{5/} The creation of secondary Vocational/technical schools, currently under study by the MEC and HID. (See Part II, Section I) should help create educational alternatives to the Rural Normal School for all students.

The Project attempts to minimize interministerial rivalries at the community level and their paternalistic attitude toward campesinos by encouraging community and departmental level cooperation. An inter-ministerial level coordinating group will be created to review community non-formal education proposals and select the Ministry or organization which will work with the community to implement the proposal. At the community level, the community council will benefit from the authority to negotiate the agreement through which departmental level cooperation is to be obtained.

The work plan for the advisors who work with this Project will include specific suggestions as to how each advisor will work to insure that departmental level personnel are responsive to community level needs and proposals. In addition the intersectorial cooperating agreements describing each Ministry's participation in community level activities will contain language instructing personnel that needs as expressed by the community form the basis for the non-formal education activity.

d. The Problem of Linkages with other Geographic Areas.

The MEC currently holds periodic meetings with DEDC, provincial, and rural school level personnel. These meetings will be used by Rural Education I personnel to keep department level personnel in the remaining eight departments informed of the Project's progress and prepare the groundwork for future curriculum changes, new bilingual education techniques, teacher training activities, and non-formal education activities in those areas.

The Rural Education Planning Advisor and the Bilingual Education Specialist will begin to work in September, 1975 with MEC and DEDC personnel in all nine departments under the Education Management Program. In early 1977 they will move to the Department of Cochabamba, but will continue to maintain linkages with the national level and the eight remaining departments through meetings and travel to other departments.

Once this Project has begun, funds will be provided for visits to Cochabamba by personnel from other departments. It is also anticipated that personnel working with Rural Education II and III will make several visits to Cochabamba during the design and implementation of these Projects.

D. Policy

1. General Considerations

a. The role of Rural vs. Urban education

Urban education in Bolivia has always received a lion's share of the resources available for public education in Bolivia. This has been

true for a number of reasons including the relatively greater political voice of urban people and the cultural factors which favor Spanish speaking urban dwellers over largely non-Spanish speaking upland and valley rural people. As a result, although approximately 70% of Bolivia's population lives in rural areas, it receives considerably less than one-half of the resources spent on public education. Certain programs, such as adult education and secondary education, (other than rural normal schools) have been virtually excluded from rural areas.

A further factor has been the dominance of an urban orientation in the school program in both urban and rural areas. Although in the past lip service has been given to the need to adapt learning programs to rural needs, in fact most rural schooling follows an essentially urban oriented curriculum with stress on the 3R's and with little if any curriculum emphasis on rural vocational or living skills. During the Servicio period (1944-63) major emphasis was placed on developing a quality rural curriculum for both primary and teacher training institutions. However, the overwhelming influence of urban oriented educational values served in a few short years to overturn the advances in rural education introduced by the Servicio. Today, because of the increased understanding of the MEC concerning its task in rural education, the climate appears favorable to planning and continuing a major emphasis on rural education.

- b. The role of the Rural Normal School in education and development process.

The rural normal school is a key institution in rural education in Bolivia. These 15 institutions train the teachers going into the rural system. These teachers teach their rural students in the same way they were taught, which all too often is an academic, rote memory with little attention to developing problem solving or vocational skills related to rural living in Bolivia.

On the other hand, for those rural children who finish primary school (less than 5% of those who enter) and complete two years of secondary school the rural normal school virtually is the only opportunity to continue their education. There are two other major incentives for him to seek admission: one, if he is admitted and successfully completes the first year he is given a scholarship^{1/} for the following three years which pays his room and board, and two, if he graduates from the rural normal school he is assured a job as a rural teacher. For the upwardly mobile rural youth these are powerful attractions and encourage him to apply for admission to the rural normal schools.

^{1/} Scholarships amount to US\$8.00 per month.

One of the problems faced by the MEC at this time is the over-production of rural teachers. The entrance requirements for the Rural Normal Schools have been raised to require the successful completion of four years of general or vocational secondary school. An exception has been made for the sons and daughters of campesinos who, after completing two years of secondary school, may take a special one year make-up course at the Normal School, then enter the regular three year Rural Normal School program to become Basic Cycle (Grades 1-5) rural teachers. Even with the higher entrance requirements, the demand for Rural Normal School education is too great. This is due to the MEC being obligated by law to hire all graduates as teachers for rural schools.

The Ministry of Education has a long term goal of reducing the number of Rural Normal Schools to 8 and the conversion of the remaining 7 to rural technical vocational schools. 2/ Only through their conversion and promotion as skills training centers will the change be politically feasible in the face of the present demand for admission to the rural normal schools. If the conversion to skills training high schools is done with reference to and in conformity with the types of employment opportunities in the region, no one will be adversely affected. Middle level manpower is in demand.

c. The question of "fees"

One of the most serious and regressive elements of primary education in Bolivia is the unwritten requirement that parents help finance the purchase of school supplies, equipment and school upkeep. Students and families contribute approximately 11% ^{3/} of the total primary expenditures. Since the rural primary education sector is heavily underfinanced, the necessity for these parents' contribution is even greater. In Bolivia, however, rural parents are also the poorest class, thus, the burden of financing education falls heaviest on this group.

The GOB established a line item in its 1975 operating budget to begin to alleviate the financial burden imposed by education fees. This contribution is covered by a covenant in the Educational Management and Instructional Development Loan (511-V-051). In 1976, the GOB has agreed to increase the special fund to an amount equivalent to the cost of one new textbook per student per year. The fund can be used to finance the publication and distribution of instructional materials for formal and non-formal educational activities. For the 20 sites in this Project, the fund will provide \$20,000 per year for formal and non-formal education activities.

2/ BID is now studying the need for financing a rural technical vocational schools program.

3/ Students and parents contribute approximately 40% of total education system expenditures, primary through university.

d. Bilingual Education

Bolivia has been a multilingual culture for hundreds of years. Today the population is more or less evenly divided between those who speak Spanish, Quechua and Aymara. The formal school system, however, has been virtually monopolized by the Spanish culture. It has been imported that in other Andean countries persons speaking indigenous languages will learn Spanish more effectively if they first become literate in their own language and then move into Spanish in their second and third year of schooling. However, the parents of Quechua and Aymara speaking children often insist that they send their children to school to learn Spanish, not Quechua or Aymara. Thus, the negative attitudes of the parents as well as the resistance of the teachers to new methods could be major obstacles to overcome in the introduction of bilingual education.

On the other hand, non-formal learning systems, especially educational radio in Bolivia, have long used Quechua and Aymara for instructional purposes. The Catholic Church, since colonial times, has recognized the importance of communicating with rural peoples in their own language. Other religious groups have had success in using bilingual materials among the Quechua speakers of the Cochabamba area. Finally, the Ministry of Education through Ministerial Resolution Number 758 has indicated its willingness to experiment with bilingual education.

e. The Question of Increasing Resource Flow to the Rural Sector.

Under the Educational Management and Instructional Development Loan (511-V-051) the GOB covenanted to increase the allocation of resources to rural education in order more accurately to reflect the distribution of population between rural and urban areas. The GOB is following the strategy of increasing the share of rural education to 34% in 1975, 36% in 1976, and 38% in 1977. The percentage of the MEC budget allocated to rural education is to be 40% of the total MEC budget by 1980. The GOB will provide a detailed analysis of the allocation of resources between the urban and rural systems as a covenant to the Loan Agreement. This would mean a real increase of budgetary resources to the rural sector of 18% by 1980.

2. GOB Attitudes and Policies with respect to non-formal education

The GOB has recognized the need to initiate non-formal education policies. The commitments made, however, are on a rhetorical plane. The Educational Development Plan, which is the most recent statement of Bolivia educational objectives, talks about the need to "conserve authentic values" and the role that the community must play in "structuring

diverse forms of education to achieve its development." The Plan goes on to ascribe the following characteristics to non-formal education: 4/

"Flexibility which permits communities to structure their own levels of educational promotion.

Integration of human forces with resources in the community, in permanent and dynamic action.

Correlation with formal education to achieve joint action in line with national socio-economic development.

Globalization, understood as a process, generated by the community, which attends to the whole population by means of unconventional educational approaches."

On the operational plane, however, non-formal education strategies are only now beginning to be talked about in specific terms. However, it should be noted that these strategies are everywhere experimental and tentative and that the gap between theory and practice in the design of non-formal education strategies is still large. The formal system of education, and its attendant ways in contrast, are obviously entrenched. Any strategy that seeks to change the established structure may be subject to initial, or sustained, opposition; and possibly buried in the bureaucracy.

Thus, although the Project's structure is in line with the Plan's philosophy, its implementation will have to contend with the MEC's traditional tendency to organize "systems" with elaborate bureaucracies which employ conventional educators trained to teach formal courses in a classroom. A field visit to Cochabamba revealed that the members of the MEC's Rural Education Department do not want to allow much trespassing on their turf. However, defensive ways slowly are diminishing with the signing of intersectorial cooperation agreements 5/ such as the one convened in December 1973 between the MEC's Department of Adult Education and a group of agencies operating in non-formal education.

The autonomous-agency-within-MEC approach detailed in the Part I, Section II, begins to soften the structure rigidities while providing

4/ MEC Anteproyecto del Plan Nacional de Desarrollo Educativo, La Paz October, 1974, p. 59.

5/ MEC, "Documento de Trabajo de Coordinación Interinstitucional en Educación de Adultos." La Paz, Dec. 1973. The document spells out the functions and roles to be played by the Department of Adult Education, the Bolivian Army's Civic Action Program, the Community Development Service, the Ministry of Agriculture's Extension Service, ERBOL, ALFALIT (a private, church related, literacy outfit), the Foster Parents Plan, CIPCA (the Center for Campesino Promotion) and the Popular Cultural Promotion Center of Tiahuanacu.

the non-formal education unit with the resources for its own and community uses. This flexibility also is the key to the successful use of field technicians who must develop close contacts with the communities to establish and maintain cooperation with programs and projects that will be involved in non-formal education activities.

The non-formal education design of this Project emphasizes educational experimentation. It develops a model for permanent education which promotes the opportunity for each community to participate in the process through the financing, selection and implementation of specific activities. This should have a broad impact on the existing system. The activities will be broad enough in scope yet generally applicable so that they can be evaluated. 6/

6/ The activities will not require excessive funding, manpower or facilities.

E. Engineering Analysis

1. General Description

The engineering and construction components of this Project include three separate school categories, each with distinct types of construction and repair.

a. One Rural Normal School: General repairs and additions to the facilities of the Rural Normal School at Vacas will be made with Project funds. This center trains rural teachers for the Department of Cochabamba. The five existing teachers' housing units and three classrooms will continue to be used. Repairs will be made to the dining room, kitchen, community center and administrative office space. Repairs also will be made to the school's water, sewage and electrical systems. Four classrooms, dormitories for 350 students, 20 teachers' housing units, four workshops and a demonstration school, with eight classrooms and administrative space will be built.

b. Twenty Central Schools and two hundred Sectional Schools:

1) Central Schools. The typical nucleo consists of a central school with four or five classrooms and teacher housing. The existing schools are usable, but lack shop space, adequate teacher housing and sanitary facilities.

2) Sectional Schools. These schools are isolated and poorly equipped in the 20 Project sites. They are located in or near small populations clusters of about 200 people. They have one or two teachers and classrooms, and some sort of teacher housing facility. The sectional schools' facilities and physical conditions are considered inadequate for classroom learning. Most are constructed with adobe brick and makeshift roofing, including straw and dried grass. Many have earth flooring and poor ventilation and lighting. Sanitary facilities, where they exist, consist of primitive out buildings. Teacher housing, where it exists, is very inadequate, lacks water and sanitary facilities. Most families share one small room with up to six persons.

The engineering and construction inputs are designed to improve the existing facilities in support of the Project objectives. The overall strategy would be: 1) to provide adequate facilities for teaching; 2) to improve the learning and teaching environment through

proper lighting, ventilation and flooring; 3) to introduce or improve minimum health and hygienic measures; and 4) to improve teacher housing facilities as an incentive to higher quality teachers to accept positions in isolated communities.

Engineering/architectural design concepts will be fairly unsophisticated and will attempt to introduce additions that would be in harmony with existing buildings. Local materials will be utilized to the maximum extent possible and the type of construction (adobe, concrete, etc.) will follow what now exists as much as possible. Preliminary surveys and MEC supplied information has been used to determine the work and expense estimates necessary to bring the Nucleos and Sectional School facilities to minimum standards.

At each Nucleo, loan funds will be used to provide materials for new construction. Adequate teacher housing - an average of four units per nucleo - will be provided as well as vocational workshop rooms 1/ - and sanitary latrines.

All labor is to be provided through community self-help by the local community and students. Loan funds will be used to procure materials, other than local materials. Labor is estimated to be about 25% - 30% of the construction cost.

Forty of the two hundred sectional schools require complete reconstruction or rebuilding. A sanitary latrine will be built at each school and living quarters for one teacher at 100 sectional schools. One hundred sixty schools will be repaired to provide a minimal but adequate teaching and learning atmosphere.

Most of these schools' roofs will be replaced with galvanized, corrugated metal sheets, and school room floors will be replaced with concrete or wood, as needed, depending upon weather conditions in the area.

As in the case of the Nucleos, all labor for the improvement and reconstruction of the sectional schools will be provided by the local population through self-help. Loan funds will be used to purchase all material except local material.

2. Engineering and Construction Implementation Plan

a. Normal School:

The Consejo Nacional de Edificaciones Escolares (CONES), the MEC unit responsible for the design and construction of educational

1/ These rooms will be used by the school and the community.

facilities will prepare the Vacas Rural Normal School design. Construction will be done by contract, following Bolivian and AID requirements. Due to the relatively small size of the contract, advertising in the U.S. is not anticipated. CONES also will be responsible for the supervision and inspection of construction. Typical layouts for the Vacas school are included in Annex V, Exhibit 5 to this Paper.

b. Central and Sectional Schools:

This activity does not lend itself to traditional engineering and construction implementation measures. This is due to the unsophisticated nature of the work, its dispersion throughout Cochabamba rural areas and the high cost that would result if private sector engineering and construction services were to be contracted.

Consequently, several other alternatives were considered, and the plan outlined herein appears to be the most feasible. Under this plan the departmental representatives of the National Community Development Service (NCDS) and the Project Engineer will work with each community to determine the community's construction needs and establish self-help requirements in terms of local labor and materials. Other construction materials and engineering design and construction supervision will be funded under the loan. In order to carry out this service to the different school communities, it will be necessary to create an engineering and construction service organization. This organization would have four elements as follows:

a. Project Engineer:

He would be hired directly by the Ministry of Education subject to AID approval, and will have complete responsibility for the Project's engineering and construction activity. The Project Engineer would have to be a qualified, experienced engineer or architect with a long history of experience in Project management. He will work with the NCDS to develop the self-help construction component under the terms of the intersectoral agreement to be signed between NCDS and the MEC as a condition precedent to initial disbursements.

b. Planning and Design:

This element would be done by CONES under the supervision of the Project Engineer, utilizing its architects, and NCDS engineers and draftsmen. Its function would be the complete planning and

design of all facilities, preparation of plans, preparation of material lists and manpower requirements for each school. Visits will be made to each Nucleo; a site plan will be prepared; and renovations and additions will be made on the basis of this plan.

c. Construction:

This element would consist of one highly qualified and experienced Project construction superintendent under the supervision of the Project Engineer. He will be responsible for the overall construction activity under the Project, will negotiate with the community through the Community Council for the required number of laborers, and will provide necessary supervision and management expertise for all construction activities. It is estimated that construction would be undertaken on various nucleos and sectional schools simultaneously wherever the concentration of these schools so warrants.

d. Materials:

This element would consist of the local procurement, storage, issue and control of construction materials not available within the community. These materials are expected to include cement, reinforcing steel, lumber, glass, sanitary fittings, hardware and fixtures. Warehouse facilities are located in Cochabamba and operated by the District Education Development Center (DEDC). The warehouse will probably be expanded under the Management Reform Project. This will serve as a central receiving/distribution point for materials to be used in Project implementation. Warehousemen and stock control personnel will be provided by the DEDC, but Project materials usage will be the responsibility of the Project Engineer.

It is expected that the Project Engineer and Construction Superintendent will be recruited and hired locally. It is doubtful that U.S. Consultants would entertain an invitation to submit proposals for this type of work due to the simplicity of design and the relatively difficult access to some areas. Bolivia has ample qualified and capable engineers and architects that should be able to undertake this type and magnitude of work. Notices will be published in the U.S. in accordance with the Capital Projects guidelines.

3. Suitability of Fixes Amount Reimbursement Method (FAR):

In conformity with AID circular A-513 dated 7/16/74 the FAR method will be used in the following manner:

a. The Normal School at Vacas will be completed under a construction contract to be awarded as a result of public bidding. Initially a three month revolving fund will be established (with loan funding) from which monthly progress payments will be made by the Borrower in accordance with AID approved construction contract

payment terms. Replenishment to this fund will be based on vouchers submitted by the Borrower supporting such payments.

b. Repairs, remodeling and new construction at the Central and Sectional Schools will be performed by community self-help labor and community provided local construction materials, principally sand and gravel. Loan funding will finance other construction materials such as roofing doors, windows, walls and cement. The materials will be purchased in bulk in one or two tranches to take advantage of price reductions in quantity purchases. They will be provided to the community for each unit from a central warehouse pool as each community unit is authorized and community-borrower implementation agreements are approved for construction.

4. Time Provisions:

It is estimated that loan funded Project activities, including non-construction components, will be implemented within a three year period from the date initial conditions precedent are met. Following is a preliminary time-frame for the engineering and construction activity, beginning with the loan agreement date:

a) Vacas Normal School:

1. Design	6 months
2. Preparation of BID documents	3 months
3. Advertise and Award of Contract	4 months
4. Construction	<u>8 months</u>
	21 months

b) Central and Sectional Schools:

1. Select Project Engineer	4 months
2. Contract other staff and arrange coordination with MEC and Participating Agencies	3 months
3. Preliminary evaluation of construction needs	2 months

- | | |
|------------------------------------|------------------|
| 4. Order and delivery of materials | 2 months |
| 5. Engineering and Construction | <u>24 months</u> |
| | 35 months |

5. Technical Feasibility:

The Engineering and construction activity is technically feasible, and there appear to be no constraints.

6. Estimate of Cost:

The engineering and construction cost estimates were developed from the latest available data on materials and labor prices in the Department of Cochabamba. It includes an escalation allowance of 20% to compensate for expected increases in these two components' costs over the next year.

Also included is a 10% contingency item which is considered mandatory due to the preliminary nature of this estimate and the nature of the work itself.

This estimate is tied to all major engineering and construction expenditures taking place by July, 1976; any major deviation from this target date could render the estimates obsolete. The estimate of cost for the engineering and construction staff, materials and vehicles are presented in Annex V, Exhibit 6.

7. Engineering Conclusions:

This appears to be a feasible and sound Project from an engineering and construction standpoint. The estimated cost of engineering and construction has been carefully developed and are considered reasonably firm. The work itself poses no major technical challenge, and materials and services are readily available in Bolivia. Vehicles will be obtained in the United States. Time provisions are realistic. It is the judgement of the Project Committee that the requirements of Section 611 (a) (1) of the Foreign Assistance Act of 1961, as Amended, have been met.

F. Financial Analysis

The estimated cost of activities financed under this Project is \$9.8 million. The AID loan will provide approximately \$5.1 million and grant funds will provide approximately \$1.6 million. The GOB will repay the loan from general government revenues.

Financial components for this proposed Project have separate disbursement periods: loan disbursements cover a three year period and grant disbursements cover a five year period. This strategy recognizes the need to use loan funds during the first three years of the Project for training and initial purchases of goods and services while grant funds will be used to finance long-term technical assistance to meet advisory requirements during the Project's last two years.

The \$3.2 million GOB contribution represents a reallocation of current GOB budget expenditures plus an increase in allocations for personnel and logistic support to the Education Sector. This amount includes \$530,000 for teachers' salaries and benefits, \$500,000 to support the curriculum reform program, \$1.2 million to support teacher training activities and \$400,000 in support of non-formal education activities.

The GOB contribution is about 4% of the MEC operating budget. Ongoing annual GOB support for the Project after completion of AID Project disbursements totals \$122,000 per year. This includes expenditures for fringe benefits, incentive pay and maintenance. The contribution is separate and distinct from the GOB's \$3.5 million contribution under the Educational Management and Instructional Development Loan (511-V-051). It is within the magnitude of budget support by the GOB which was judged feasible in the Mission's Education Sector Assessment.

1. Summary Financial Plan

The total cost of the overall Project and the proposed sources of financing are presented below:

<u>Utilization of Project Funds</u>	<u>S O U R C E</u>		
	<u>(US\$ million)</u>		
	<u>AID Loan</u>	<u>AID Grant</u>	<u>GOB Contribution</u>
1. Curriculum expansion & Learning Materials	.750	.599	.502
2. Teacher Training	2.604	.675	1.689
3. Non-Formal Education	.241	.314	.510
4. Remodeling & Construction	1.329	-	.294

Of the total project amount of \$9.5 million, \$2.20 million will be used at the Rural Normal School at Vacas for teacher training, new materials and curriculum, while \$7.60 million will be used to finance formal and non-formal Project activities at the 20 selected Project sites.

2. Analysis of Foreign and Local Currency Components

The following table presents the estimated cost breakdown between US Dollar and local currency utilization of the Project funds:

(US\$ millions)

<u>AID Loan</u>	<u>L O A N</u>		<u>G R A N T</u>		<u>G O B</u>
	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>LC</u>
Curriculum & Materials	.064	.686	.599	-	.502
Teacher Training	1.490	1.114	.675	-	1.689
Non-formal Education	.103	.138	.314	-	.510
Remodeling & Construction	.050	1.279	-	-	.294
T O T A L	1.707	3.217	1.589		2.995

The anticipated direct foreign currency costs under this Project will be \$1.7 million for the purchase of foreign technical assistance, and the expenditure of \$1.49 million for the purchase of vehicles,^{1/} equipment and materials, and construction materials and supplies for the Rural Normal School of Vacas and at the Nuclear Schools.

The community contribution to the Project is \$155,000. It will be used primarily for the purchase of local labor to construct buildings and latrines at central and sectional schools.

^{1/} This includes two vehicles for the Rural Normal School of Vacas, three vehicles for the Central and Sectional Schools and four vehicles for the Non-Formal Education Working Groups.

4. Project Disbursements by operational year

Sources and timing of the projected fund commitment is presented in the next table

(\$ 000)

<u>Source</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>TOTAL</u>
1. AID						
a. Loan	2,432	1,731	766	-	-	4,929
b. Grant	300	422	304	300	262	1,588
2. Local Contribution						
a. GOB	808	863	425	439	310	2,837
b. Community	75	60	15	-	-	155
TOTAL	3,615	3,073	1,510	739	572	9,507

5. Financial Status of Bolivia and MEC

Bolivian governments have traditionally allocated to the education budget approximately 25% of total Central Government budget expenditures.

In our opinion it is not unreasonable to expect that the education budget will maintain its present relative position in the overall GOB budget. However, to be conservative, the Mission's projection has assumed a decline to 20% for the Ministry of Education's relative share of total expenditures. Assuming this 20% relative share, the education budget will grow at a compound rate of about 12% per year in real terms, which we believe would be adequate to cover the real cost requirement of the rural education program. In addition, we expect the resource increment also will cover anticipated normal needs of growth of about 7% and a shift toward rural education emphasis in the budget will take about 8% of the increment.

The following table shows the anticipated increases in rural terms (1972 base) of the Treasury budget and a relative share of 20% which the Mission believes will be the minimum maintained by the GOB.

TREASURY BUDGET PROJECTIONS
(In millions of pesos)

<u>In 1972 Constant Terms</u>				<u>% of Education Expenditures to total Expenditures</u>
<u>Year</u>	<u>Revenues</u>	<u>Expenditures</u>	<u>Education Expenditures</u>	
1968	1,042	1,190	393	33%
1969	1,071	1,466	409	28%
1970	1,240	1,489	446	30%
1971	1,193	1,635	495	30%
1972	1,324	1,841	479	26%
1973	1,844	2,258	526	23%
1974	2,397	2,890	665	21%
1975	2,709	3,324	698	20%
1976	3,061	3,823	765	20%
1977	3,850*	4,396	879	20%
1978	4,800	5,055	1,011	20%
1979	5,424	5,813	1,163	20%
1980	6,129	6,685	1,337	20%

* Estimated coming onstream of Y.P.F.B. Lubricant Facilities and new Production

\$1.00 = \$20.38 pesos

The average compound growth for total expenditures of 13% is above the average of 10% registered between 1967 and 1973 in real terms. Assuming the GOB takes steps to improve the tax system this rate of growth is not unrealistic. Education expenditures will increase by about 13% from approximately \$66 million to an estimated \$74 million between 1974 and 1975.

The increase in education budget resources will be approximately US\$ 33 million over the next six years. The Mission has estimated that the following added requirements will have to be met between 1975-1980 out of this increment to assure success of the program consisting of curriculum reform, rural teacher training, non-formal education and management reform.

1. Instructional Material-book fund	5,000,000
2. 50 New Technical personnel, planning, research, finance, evaluation	1,000,000
3. Salary incentives	-
4. Training in-country	150,000
5. Construction (new)	2,000,000
6. Higher operating costs	700,000
7. Maintenance of new buildings	250,000
8. Salaries to cover 900 personnel-new graduates	5,700,000
9. Equipment-vehicles maintenance	150,000
10. Education equipment	1,000,000

The education experts believe these activities will not exceed US\$16 million, thus implying that approximately 48% of the expected incremental resource availability will be needed to meet Mission and GOB objectives of increasing rural participation in the Education Ministry Budget and covering the above mentioned GOB budget requirements.

6. Justification for use of AID Loan Terms

As an exporter of metals, petroleum and gas, Bolivia's foreign exchange earnings increased substantially in 1974. This situation, however, does not mean that Bolivia's need for concessional assistance is less, especially for socially targeted programs requiring foreign technology for implementation. If the expected foreign exchange gains were distributed equally throughout the population, per capita income, which was about \$188 per year in 1973, would be increased by about \$10 and would still be the lowest in South America. Moreover, the increased foreign exchange earnings of 1974 will be needed to pay higher prices for imports and make income producing investments in the mining and petroleum sectors. Indeed, the Mission projects a probable return to a current account deficit position in 1975.

Given the probable exceptional nature of Bolivia's current level of foreign exchange earnings, it would not be in the country's development interest to finance a substantial part of its investment requirement during the financial planning period by extensive foreign borrowing on medium or short terms, nor should the international financial institutions restrict Bolivian access to more concessional terms and hence push the country toward an excessive debt burden counter-productive to development. Furthermore, the Project in question is primarily of social and long-term development concern. It is of undoubted economic benefit, but not immediately productive of a government return and hence fully appropriate for concessional international financing at the terms indicated.

7. Analysis of GOB Contribution

In order to clarify the separation of the GOB contribution between the Educational Management Loan (O51) and this Rural Education Loan we submit the following:

a. Salaries

1) The major contribution to the Educational Management Project is the salaries of the management personnel during and after their training period calculated at current salary levels. These employees will be in purely managerial positions such as district administrators, school directors, field supervisors, etc. The total of their salaries included as a GOB contribution to the Educational Management Loan is \$2,813,000. The following chart indicates types of employees and their salaries included under the GOB contribution:

<u>Position Classification</u>	<u>Number of Employees</u>	<u>(US\$) Salaries</u>
General Directorate	65	\$ 532,350
District Directors	18	52,650
District Center Staff	100	317,000
Field Supervisors	220	1,001,000
School Directors	1,750	<u>910,000</u>
		\$2,813,000

2) The salary component of the GOB contribution to the Rural Education I Project includes salaries of teachers involved in the Project full time both during and after their training and calculated at current salary levels. These employees will be in purely pedagogical positions such as normal school instructors, nuclear school teachers and sectional school teachers. The salary component does not represent

any new teachers. The following chart indicates types of employees and the salaries included in the GOB contribution:

<u>Position</u>	<u>Number of Employees</u>	<u>(US\$) Salaries</u>
Teachers (Vacas)	20	30,000
Teachers (in-service)	500	500,000

b. Equipment and Commodities

1) The equipment and other purchases under the Educational Management Project are in direct support of the nine District Centers planned for construction.

2) Under the Rural Education Project the only commodities planned as local contributions are the materials to be donated by the communities in support of their non-formal education activities.

c. Land

1) There is an amount of \$792,000 planned to be contributed by the GOB for land for the District Centers under the Educational Management Loan. This land will be used solely for the administrative centers.

2) The land contributed by the GOB for the value of \$14,000 will be used for construction and expansion of the Rural Normal School of Vacas and for remodeling and construction of the Nuclear System. This construction will be separate and distinct from the District Centers.

d. Duplication

In the remaining GOB contributions under the two Projects there do not occur any duplications or even similar categories.

e. Rural Education II and III

Two additional Projects are projected for the Rural Education Sector during the Interim Quarter 1976 and Fourth Quarter 1977. Rural Education II, Rural Teacher Training, will cost approximately US\$14.6 million. Rural Education III, the extension of Rural Education I into other geographic areas is estimated to cost US\$13.5 million. The Rural Education III estimate is tentative. Future estimates will depend upon cost incurred in Rural Education I and the geographic scope of the Project.

Rural Education II Project funds will be utilized to improve the quality of rural teacher training provided by selected rural normal schools and to strengthen the leadership role in teacher training and development of the Superior Institute of Rural Education (ISER). Some construction or remodeling of Rural Normal Schools will be included in the Project.

f. On-going expenditures

The following chart represents the on-going annual GOB support for the Rural Education I Project after completion of AID and GOB Project disbursements:

	(In million dollars) Per year US\$ increment in GOB budget for Cochabamba after loan Disbursement
1. Preparation of materials	0.027
2. Maintenance of increased facilities	0.020
3. Non-Formal Education, Materials and Supplies	0.006
4. Non-Formal Education, Research and Operations	0.003
5. Budget support for salaries	0.063
6. In-service Training courses	<u>0.003</u>
Total continuing Annual GOB support	<u>\$ 0.122</u>

The \$122,000 indicated as the continuing annual GOB support of the Project is incremental to the present budget allocation for Education. It includes 3% for inflation and a 10% contingency factor. There will occur some savings to the budget allocation from increased efficiency resulting from the Project which we have not quantified (i. e. efficiencies resulting from the use of modern equipment and technology, reduced need in number of teachers for increased student enrollment, etc.). We view the above mentioned increase as the maximum effect to the GOB budget after completion of Project activities.

The following chart outlines the total fiscal implication of all current USAID financed education programs over the years 1975-1979 (FY).

	GOB Current Budget Re- allocations & New funding	GOB in-Kind Contri- butions	TOTAL (\$000)
FY-1974 Educational Manage- ment and Instructional De- velopment Loan and Rural Education I Loan	\$ 6,386	\$ 2,023	\$ 8,409

g. Replicability and Transferability of Project Component

The Project has been designed to be replicated in other parts of Bolivia. Depending upon the learning needs of these areas, Departments and communities can select those components to be replicated in response to identified weaknesses in this rural education system. The following chart reflects the per unit cost per year of various components in Rural Education I.

(In US\$)

	<u>Primary School Student</u>	<u>Normal School Student</u>	<u>Participating Communities</u>
1. Curriculum Reform and Materials Preparation	34	252	-
2. Teacher Training	37	483	-
3. Non-Formal Education	2	2	2
4. Construction:	-	238	1
Primary Schools			
Grades 1 - 5	20		
Grades 6 - 8	19		

Cost figures are estimated on a per year basis for five years.

Summary Opinion

The Financial Plan attempts to include all costs. Inputs have been analyzed with GOB officials and Mission Education technicians. Prices have been verified with manufacturers catalogues and local market suppliers. The capability of GOB budget support and the community contribution has been measured. Inflationary and contingency factors have been estimated and included on cost tables.

TABLE I
Rural Education I
Costing of Project Outputs/Inputs
 (US\$ 000)

<u>Project Inputs</u>	<u>Project Outputs</u>				<u>Total</u>
	<u>Curriculum Expansion & Learn. Mat.</u>	<u>Teacher Training</u>	<u>Non-Formal Education</u>	<u>Schools Constr. & remodeling</u>	
I. <u>A.I.D.</u>					
a. <u>Loan</u>	(2084)	(1,246)	(241)	(1,323)	(4,924)
1. Land and Construction				1,323	1,323
2. Equipment and Materials	1581		38		1,629
3. Vehicles					
4. Training	53	509	110		672
5. Technical Assistance	56	162	72		290
6. Publications	160		4		164
7. Research	140	605	21		766
8. Project Administration & Implementation	87				87
b. <u>Grant</u>	(599)	(675)	(314)		(1,558)
1. Equipment and Materials			2		2
2. Technical Assistance	599	675	300		1,574
3. Research			12		12
4. Project Administration & Implementation					
II. <u>Host Country</u>	(502)	(1,689)	(451)	(294)	(2,995)
1. Land and Construction				294	294
2. Equipment and Materials	2	300	24		326
3. Training	300		329		629
4. Research			7		7
5. Project Administration & Implementation	200	1,389	150		1,739
	<u>3,185</u>	<u>3,604</u>	<u>1,065</u>	<u>1,617</u>	<u>9,507</u>

TABLE II
Rural Education I
Summary Budget Data Breakdown in FX and LC, Source and Timing
(US\$ 000)

<u>Source</u>	<u>1976</u>		<u>1977</u>		<u>1978</u>		<u>1979</u>		<u>1980</u>		<u>Total</u>
	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	
1. <u>A. I. D.</u>											
a. Loan	765	1,667	545	1,196	338	403	-	-	-	-	4,924
b. Grant	300	-	422	-	304	-	300	-	262	-	1,588
2. <u>Local Contribution</u>		(883)		(923)		(440)		(439)		(310)	
a. GOB	-	808	-	873	-	420	-	439	-	310	2,995
b. Community	-	75	-	60	-	20	-	-	-	-	-
	1,065	2,550	967	2,119	642	843	300	439	262	310	9,507

G. Organization/Administrative Analysis

1. The Executing Agency

The GOB Executing Agency for Project activities is the Ministry of Education and Culture (MEC). Certain routine communications and coordination with the Minister of Finance will be required as in all AID loans. Inter-sectoral cooperation for non-formal education activities with the Ministries of Health and Agriculture and the National Community Development Service also is an important part of Project implementation.

The organizational structure of the MEC, which is illustrated in Annex II Exhibit 2 is described and discussed in Chapter III of the Sector Assessment. The organizational and administrative problems of the Ministry and the ways they are being addressed by the FY-1974 Educational Management and Instructional Development Loan (511-V-051) and the Educational Management and Rural Development Grant (511-11-690-950) are described in that Project's CAP and PROP.

The units within the Ministry having direct responsibility for Project implementation are the Office of the Rural Education in La Paz, the Cochabamba Rural Education Division and the Cochabamba Integrated Administration Service (SIDA) within the INDC system. Of these three units most of the implementation responsibilities in the administrative and financial areas is assigned to the SIDA. ^{1/} office. Its structure and operations are analyzed in detail below. The general supervision and coordination of the Project has been assigned by the Under-Secretary of Rural Education to the Cochabamba Rural Education Division.

In addition to the Project implementation units, the Minister of Education has during the early stages of loan development a high level intra-ministerial working group in La Paz to coordinate and design all components of the Project. This committee represents all major organs of the Rural Education Division as well as other interested offices from the Ministry. It includes the Planning Office, Administrative Reform Council (CRA), and Adult Education Directorate. The committee's main function is to facilitate the Rural Education Division's ability to introduce and administer the new initiatives proposed in Rural Education I. It deals directly with the Sub-Secretary for Rural Education and with the Minister on matters of utmost concern. Otherwise it makes all basic decisions regarding the Project.

^{1/} The SIDA was formed as part of the Education Management Reform Program. It has been in operation since November, 1974

2. The Project Implementation Unit

The Director and 11 Supervisors from the Office of Rural Education in Cochabamba ^{2/} were involved in meetings with national Rural Education Division personnel and USAID personnel in Cochabamba and La Paz. These groups, along with Departmental level representatives from the Agriculture Department and the Prefectura, participated in the selection of the 20 Project sites. In being chosen as the implementor of the Project, technical and organizational continuity is provided, assuring smooth operations.

During the Project Paper Review the Mission's Financial Analysis and Review Office (FARS) conducted an analysis of the Rural Education Division's management capability to carry out Project implementation responsibilities. Conclusions of this analysis are found in Annex II Exhibit 1. In summary the FARS reviewed the following:

- a. The Administrative Capabilities of SIDA and the Vacas Normal School

The Organization Chart of the Cochabamba SIDA is presented in Annex II, E. 4. The SIDA chief is responsible for the operation of the following three departments: Financial, Personnel and General Services. The Financial Department will be most concerned with the Project implementation activities of this Project. A more detailed description of activities and responsibilities of the SIDA is described in Section II.B in the CAP of the Educational Management and Instructional Development Loan (511-V-051).

The SIDA's main function is to provide administrative support to the Education Directorates - Urban and Rural - of the Cochabamba District. In relation of the Rural Education I Project, SIDA will have the following additional responsibilities: (a) loan, grant and GOB funds management at the department level, (b) administration of the funds, and (c) coordination with other implementing units responsible for carrying out Project activities at the Vacas Rural Normal School and the Rural Schools.

Except for the following positions the SIDA organization chart (See Annex II, E. 4) has been fully implemented: The Personnel Department is in the process of organization and has not completed files on individual employees. The Procurement Office is not yet operational, although the SIDA has made some purchase transactions. The Technical Department under the Personnel Office and the Student Service Office under the General Services Department are in the process of being organized.

^{2/} As specified in the Administrative Reform Program, personnel currently assigned to the Rural Education Division have been assigned to the District Education Development Center (DEDC).

In general the personnel appointed to management level positions in SIDA have solid pedagogical backgrounds but minimal administrative experience or background. The head of SIDA has extensive experience in the teaching profession but minimal administrative background. The head of the Financial Section was formerly in charge of preparing payrolls but has no professional or administrative experience as a Section Chief. Although the Supervisor of the Accounting Section is not an accountant, the existing personnel in that department have sufficient experience to be able to perform their duties effectively. It is in the process of implementing the new books and records established by the SIDA Organization Manual. The Project Committee and the MEC are reviewing personnel requirements for the management positions with the objective of upgrading the level of managerial and administrative expertise.

The Rural Normal School at Vacas will receive approximately \$2.12 million in Project funds for construction activities, in-service teacher training, and student training. At present it does not have necessary office space, equipment or administrative personnel.

b. Other Participating Agencies

In the course of designing the non-formal education component of the Project, it became obvious to the National Rural Education Division, the Cochabamba Rural Education Division and Mission that the non-formal education activity would have to enlist the services of other Ministries, in particular those of Health and Agriculture and the National Community Development Service. Thus, the Ministry of Coordination created a sub-secretarial working group composed of Education, Health, Agriculture and the National Community Development Service. In coordination with these groups the National Rural Education Division and the Cochabamba Rural Education Division are preparing agreements between the various agencies describing the duties, personnel requirements and financial arrangements for each participant. As a Condition Precedent to initial disbursements, all entities involved in the implementation phase of this Project will sign a detailed agreement outlining funding sources, scope of responsibilities, and personnel involved in the Project. FARS will review these plans and work with the participants to make necessary corrections.

In order to strengthen the SIDA and the Vacas Rural Normal School FARS recommended that MEC be required to select qualified and capable personnel for the key positions. The organization and operations of the SIDA are under the direct supervision of the MEC's Consejo de Racionalización Administrativa (CRA). This unit is in charge of implementing the organization and operations projected for the SIDA.

The Cochabamba Rural Education Division has the responsibility of providing the Vacas Rural Normal School with guidance, personnel and office facilities for Project implementation. It will be necessary for CRA to review staff and facilities requirements prior to implementation and to remove deficiencies.

The above organizational arrangements are included as one of the initial conditions precedent to loan disbursements. In addition, Implementation Letter Number 1 will specify that the GOB plan for filling these positions according to the SIDA Organization Manual addresses the following problems:

- 1) The transfer or replacement of unqualified technical personnel.
- 2) The re-training of technically weak personnel.
- 3) The recruitment of capable technical personnel for vacant positions.

3. Administrative Unit

The Cochabamba Rural School Director has designated a team of four people to coordinate formal and non-formal education activities in the DEDC. Initially this group will provide logistical services for the Curriculum Reform Committee and later will provide the same services to the Materials Preparation Groups. It also will be responsible for coordinating all of the formal and non-formal activities between the DEDC, the Rural Normal School, the nuclear school systems, and the non-formal education entities at departmental level and local communities. Mission and MEC personnel have made several trips to Cochabamba during which it has been possible to observe the capability of this unit. It is the opinion of the Project Committee that this unit will be able to coordinate Project activities.

4. Unit Responsibility

The following table identifies the major functions of the Project and the units that have primary responsibility for carrying out the functions as well as the resources available to meet these responsibilities.

TABLE 1
(US\$000)

MAJOR FUNCTION	RESPONSIBLE UNIT/ ENTITY	RESOURCES ✓
I. Curriculum Reform and Preparation of Learning Materials:	Director of Rural Education working through the DEDC.	- long term advisors; - short term advisors; - GOB technicians; - participant training; and - materials
A. Rural Primary School:		
1. Orientation Seminar including baseline data survey	DEDC/Rural Normal School Director and Staff	Curriculum and Instructional Materials Specialist; Bilingual Education Specialist; Rural Education Planning Advisor; 4 GOB funded Education Technicians; Loan funds \$ <u>-0-</u> Grant funds \$ <u>30,000</u> GOB funds \$ <u>6,800</u>
2. Curriculum Reform Commission: write the new rural primary curriculum	MEC/DEDC Director of Rural Education and Staff	1 Curriculum & Instructional Materials Specialist; 1 Curriculum & Materials Technician; 10 Directors of Nuclear School System; 3 Rural Normal School Professors; 1 Rural Education Official-Cochabamba; 1 Rural Education Official-La Paz; 1 National Education Office Employee; 1 Curriculum Development Office Employee Loan funds \$ <u>3,000</u> Grant funds \$ <u>30,000</u> GOB funds \$ <u>391,200</u>
3. Bilingual Education Team: - develop curriculum & teaching materials for bilingual education	DEDC/Director of Rural Education & Office of Bilingual Education	1 Bilingual Education Specialist; 1 Educational Materials Consultant (short term); 1 Educator/linguist; 1 Bilingual/Education technician; 6 teachers; Loan funds \$ <u>120,000</u> Grant funds \$ <u>85,000</u> GOB funds \$ <u>45,700</u>

✓ In many areas, the long term advisors' functions overlap; this chart reflects funds allocated to major responsibility areas.

TABLE 1 (Cont.)

2

MAJOR FUNCTION	RESPONSIBLE UNIT/ ENTITY	RESOURCES
4. Upper Grade Teaching Materials Team: prepare materials for grades 4-8	DEDC Director of Rural Education	1 Curriculum and Instructional Materials Specialist; 1 Industrial Arts Specialist; 1 Education Materials Consultant (short term); 1 Curriculum and Materials Technician; 6 Members from the Curriculum Reform Commission Loan funds \$ <u>47,000</u> Grant funds \$ <u>120,000</u> GOB funds \$ <u>115,200</u>
5. Socio-linguistic Research:	MEC/Rural Education Directorate La Paz; DEDC Rural Education Director Cochabamba; and Bilingual Education offices	Socio-linguistic Research Organization 1 Bilingual Education Specialist; Loan funds \$ <u>140,000</u> Grant funds \$ <u>-0-</u> GOB funds \$ <u>3,000</u>
B. Normal School Curriculum:		
1. Framework for Rural Normal School Education: The teachers role	Director of Rural Normal School: DEDC Staff and Supervisor of Rural Normal Schools	1 Rural Normal School Advisor; 1 Industrial Arts Specialist; 1 Normal School Consultant (short term) 1 Rural Normal School Technician; Output from Curriculum Reform Commission, the Bilingual materials team and Upper Grades Materials Teams. Loan funds \$ <u>25,000</u> Grant funds \$ <u>115,000</u> GOB funds \$ <u>6,000</u>
2. New Curriculum Development:	MEC/DEDC and Rural Normal School	1 Rural Normal School Advisor; 1 Industrial Arts Specialist; 1 Rural Normal School Technician; 1 Education Radio Specialist Loan funds \$ <u>6,000</u> Grant funds \$ <u>115,000</u> GOB funds \$ <u>6,000</u>

TABLE 1 (Cont.)

MAJOR FUNCTION	RESPONSIBLE UNIT/ ENTITY	RESOURCES
II. Teacher Training	Director of Rural Education	<ul style="list-style-type: none"> - long term advisors; - short term advisors; - GOB technicians; - participant training; and - materials
A. Primary School Teacher:		
1. Staff training course	DEDC/Director of Rural Education	<ul style="list-style-type: none"> 1 Curriculum and Instructional Materials Specialist; 1 Bilingual Education Specialist; 1 Rural Normal School Advisor; 1 Curriculum and Materials Technician <p>Loan funds \$ -0-</p> <p>Grant funds \$60,000</p> <p>GOB contribution \$ 1,800</p>
2. In-service Training: 500 rural primary teachers	DEDC/Director of Rural Education; Director of Rural Normal School at Vacas plus Curriculum Reform Commission Staff; Bilingual Education Team; Upper Grade Materials Team	<ul style="list-style-type: none"> 1 Rural Normal School Advisor; 1 Curriculum and Instructional Materials Specialist; 1 Bilingual Education Specialist; 1 Rural Nuclear School Consultant (short term) 1 Curriculum and Materials Technician; <p>Loan funds \$52,500</p> <p>Grant funds \$85,000</p> <p>GOB contribution \$ 9,300</p>
3. Group of 65, 6th., 7th. and 8th. grade teachers	Materials Development Team and DEDC Staff	<ul style="list-style-type: none"> 1 Curriculum and Instructional Materials Specialist; 1 Curriculum and Materials Technician; 1 Rural Normal School Advisor; 1 Industrial Arts Specialist <p>Loan funds \$ -0-</p> <p>Grant funds \$55,000</p> <p>GOB contribution \$ 3,700</p>

TABLE 1 (Cont.)

MAJOR FUNCTION	RESPONSIBLE UNIT/ ENTITY	RESOURCES
4. Orientation Seminar:	(See Curriculum Reform and Preparation of Rural Learning Materials, I.A.1)	Curriculum and Instructional Materials Specialist; Bilingual Education Specialist; Rural Education Planning Advisor; 4 GOB funded Education Technicians; Loan funds \$ -0- Grant funds \$30,000 GOB funds \$ 6,800
B. Third Country Observation Training:	MEC	1 Bilingual Education Specialist; Loan funds \$7,500 Grant funds \$-0- GOB funds \$2,400
C. Normal School Student Body:	Rural Normal School Director and Staff	1 Rural Normal School Advisor; 1 Industrial Arts Specialist, Education Radio Advisor; 1 Rural Normal School Technician; 1 Normal School Consultant (short term) Loan funds \$ 30,000 Grant funds \$105,000 GOB funds \$ 24,000
D. Rural Normal School Teachers	(See Curriculum Reform and Preparation of Rural Learning Materials I, B.)	1 Rural Normal School Advisor; 1 Industrial Arts Specialist; 1 Normal School Consultant (short term) 1 Rural Normal School Technician; Output from Curriculum Reform Commission, the Bilingual materials team and Upper Grades Materials Teams Loan funds \$ 36,000 Grant funds \$115,000 GOB funds \$ 6,000

TABLE 1 (Cont.)

MAJOR FUNCTION	RESPONSIBLE UNIT/ ENTITY	RESOURCES
III. Non-formal Education:		
A. Non-formal Education Working Group:	DEDC and 10 technicians including consultation with the Ministries of Health, Agriculture, and Campesino Affairs	1 Rural Education Planning Advisor; 1 Non-Formal Education Consultant (short term) 1 Non-formal Education Technical Coordinator; Loan funds <u>\$107,200</u> Grant funds <u>\$ 60,000</u> GOB funds <u>\$103,000</u>
B. Multisector Group	DEDC/Director of Rural Education Ministries of Agriculture and Health and Campesino Affairs	1 Non-formal Education Technical Coordinator; 1 Rural Education Planning Advisor Loan funds <u>\$18,000</u> Grant funds <u>\$60,000</u> GOB funds <u>\$92,000</u>
C. Community Resource Groups	NFE Working Group: National Community Development Service Agricultural Extension Service	1 Rural Education Planning Advisor; 1 Industrial Arts Specialist; Educational Radio Specialist, Technical Teachers (at Central Schools); 1 Non-formal Education Technical Coordinator Loan funds <u>\$ 12,000</u> Grant funds <u>\$150,000</u> GOB funds <u>\$110,000</u>
D. Community Council	NFE Working Group	Technical Teachers (at Central School) Community Leaders; Non-formal Education Technical Coordinator; Loan funds <u>\$ 8,000</u> Grant funds <u>\$ -0-</u> GOB funds <u>\$110,000</u>

TABLE 1 (Cont.)

MAJOR FUNCTION	RESPONSIBLE UNIT/ ENTITY	RESOURCES
Construction		
Rural Normal School	DEDC Engineer selected to supervise project	Engineer Contractor Local Students - paint building, etc, Loan funds <u>\$680,000</u> Grant funds \$ -0- GOB funds <u>\$ 53,000</u>
Central School	NCDS	NCDS Supervisor Community Self Help Loan funds <u>\$120,000</u> Grant funds \$ -0- GOB funds <u>\$158,000</u>
Sectional Schools	NCDS	NCDS Supervisor Community Self Help Loan funds <u>\$523,000</u> Grant funds \$ -0- GOB funds <u>\$178,000</u>
E. Non-formal Education Working Group - Training	MEC and cooperating agencies, local and foreign institutions	Loan funds <u>\$19,500</u> Grant funds \$ -0- GOB funds <u>\$ 6,630</u>
F. Community Training	Non-formal Education Working Group	Team members of Non-formal Education Working Group Loan funds <u>\$51,200</u> Grant funds \$ -0- GOB funds <u>\$17,408</u>
G. Regional Departmental and Provincial Seminars	Community Councils Community Resource Group	Individual Communities Loan funds <u>\$40,000</u> Grant funds \$ -0- GOB funds <u>\$20,600</u>

Note: The following personnel do not appear on this table.

1. Two Educational Consultants - They will work with the MEC to develop a strategy for the transfer of activities to other parts of Bolivia.
2. The GOB Bilingual Education Specialist-not the foreign advisor-will work with the La Paz Bilingual Education Office.

SECTION III - PROJECT IMPLEMENTATION

A. Implementation Plan

1. Execution of the Loan Agreement

Substantial discussions and negotiations have taken place between the MEC and USAID during the Review of this Loan proposal, and it is believed that all major problems and questions have been resolved to the satisfaction of the parties. The general GOB Commitments listed in Section IV have been discussed with the Minister of Education and his coordinating committee for the Loan, and they have been reviewed by the Minister of Finance. No difficulties are anticipated in bringing current discussions of the specific expression of those commitments to an acceptable conclusion. Therefore, no delays are foreseen in drafting and negotiating a loan agreement within four months following loan authorization.

2. Conditions Precedent

The Project Committee anticipates that all conditions precedent to initial disbursement of the Loan will be satisfied within four months following Loan signing. Given the work of the Committee and TDY assistance during preparation of the PRP and during development of this Project Paper much of the basic work required for a thorough implementation and evaluation plan is ready or near completion. The Minister has confirmed his willingness (See Letter of Application, Annex I ; Exhibit 2 .) to establish the nonformal education working group and develop inter-sectorial participation in the Project and to support bilingual education and curriculum reform proposals. He also has agreed to establish non-formal education and bilingual education offices to work with these two important Project activities.

The remaining conditions precedent to initial disbursement are those routinely required of all A.I.D. Loans, and should be met in an expeditious manner.

3. Target Dates

The following plan indicates the sequence of actions which must occur in order to meet initial conditions precedent and other covenants of the loan and proceed with the implementation of the Project in a timely manner.

<u>ACTION</u>	<u>TARGET DATE</u>
a) Loan Authorization	September 1975
b) USAID/GOB Loan negotiations	October 1975
c) Sign Loan Agreement and Issue Implementation Letter N°1	December 1975
d) Planning and Organizational Activities Related to Meeting Initial Set of Conditions Precedent (including issuance of new directives, final site selection, establishing non-formal education unit selecting bilingual education staff, and completion of detailed implementation plan).	December 1975 January 1976
e) Conditions Precedent Met	January or February 1976 (A)
f) First Disbursement	(A) + 1 month
g) Annual Evaluation	(A) + 12, 24 and 36 months
h) Final Disbursement	(A) + 36 months

B. Disbursement Procedures

No deviation from A.I.D. established disbursement procedures is anticipated.

1. Foreign Currency Disbursements

Materials and equipment purchased in the U.S. and other A.I.D. Code 941 countries, and foreign exchange costs of construction contracts will be paid through either A.I.D. Letters of Commitment procedures, commercial Letters of Credit or direct disbursement procedures. Requests to open Letters of Commitment will contain appropriate certification that the items listed are eligible for financing under the loan. Costs of foreign training and technical assistance will be paid through the A.I.D. established PIO/P and PIO/T procedures.

2. Local Currency Disbursements

Disbursements for approved local currency costs will be made through a revolving advance account with the Ministry of Education or through direct disbursement procedures. All funds will be initially disbursed from the RDO Account maintained in the Central Bank. Disbursement requests will be reviewed by the MEC, the loan administration unit and by the USAID/B Controller's Office.

3. FAR

The FAR method for reimbursement is not proposed for reasons explained in Part II Section E, Engineering Analysis.

C. Procurement Procedures

All of A.I.D.'s procurement policies will be followed. Direct procurement of equipment from abroad will have its source and origin in a Geographic Code 941 country. Any shipping financed under the Loan will be subject to the 50/50 shipping regulations, including the requirements that 50% of liner revenues generated under the loan must be paid for US ships. Appropriate reports will be required from the MEC concerning procurement requirements including source and origin and 50/50 shipping. These reports and requirements will be monitored by the Office of Capital Development and the Controller's Office through review of vouchers submitted in substantiation of reimbursement requirements.

USAID has developed standard bid documents which will be used for all direct procurement from abroad. Specifications will be prepared by the MEC and reviewed by USAID engineers. When appropriate, AID/W assistance with specifications and procurement will be requested.

D. USAID Monitoring Responsibilities

Monitoring will be exercised by a Mission Project Committee under the direction of the Project Manager who will be the Human Resources Development Officer, Education. The Committee will have the following responsibilities:

1. Negotiation of the Loan Agreement and writing the first Implementation Letter will be the responsibility of the Capital Development Office. Responsibility will then shift to the Human Resources Development Division.

2. The Engineering and Transportation Division (ETD) will review all procurement lists, plans and specifications, and will periodically inspect construction progress.

3. The Controller will review disbursement/reimbursement requests for conformity with A.I.D. regulations and will ensure that adequate financial control methods are followed.

4. Program and Evaluation Office will assist the Project Committee in the annual evaluation exercise.

5. The Office of Capital Development will have responsibility for ensuring that provisions of the A.I.D. Loan Agreement and Implementation Letters and of the Project Agreement are met.

E. Joint MEC/Mission Monitoring

Weekly sessions with personnel from the MEC, the technical advisors and the Mission will be held to discuss the Project progress, problems and goals. Frequent field trips will be made to discuss the Project with Cochabamba personnel. The meetings will be attended by the Project Manager and other Implementation Committee members, the MEC-La Paz Coordinator for the Project and Cochabamba-level Project Director along with education personnel from various branches of the Ministry who work on the Project. It is anticipated that the meeting will be represented by Cochabamba level officials at least once a month in La Paz and that the monitoring committee will schedule one meeting per month in Cochabamba. It will not be necessary to station Mission personnel in Cochabamba to monitor this Project. Mission and MEC personnel have frequent contact with DEDC officials at meetings in La Paz and Cochabamba and will be able to handle problems during these meetings on a timely basis.

F. Reporting Requirements

The Rural School Director of the DEDC in Cochabamba will be responsible for forwarding all reports to the Mission. (He will be responsible for the proper presentation and review of all reports whether or not prepared by his office). The following is a list of reports which will be required under the Loan.

1. Financial Reports

a) Annual Audit of Loan Financing

The annual audit may be performed by either a private accounting firm approved by USAID/B or by the Office of the Controller General of Bolivia.

b) Annual Financial Statements of MEC Implementation Organization in La Paz and Cochabamba

The MEC will submit annually full statements of all funds administered by them in support of this Project at the La Paz and Cochabamba level. The statements will be prepared by the Rural Education Division of the DEDC.

- c) Quarterly Statements of Loan Transactions that MEC will submit quarterly to USAID/B

Statements of all transactions administered under the Loan will be prepared by the Rural Education Division of the DEDC.

- d) Quarterly Shipping Reports

The Rural Education Division of the DEDC will prepare quarterly shipping reports of all materials and equipment purchased under the Letter of Commitment procedures.

2. Quarterly Progress Reports, on the total Project will be prepared by the District Rural Education Director for the Project.
3. Monthly Progress Reports will be required from the technical assistance advisors and from the MEC's engineering office.
4. Other Reports, which may be required as appropriate and which will be specified in implementation letters.

G. Evaluation Plan

The evaluation plan for Rural Education I includes the following:

1. The GOB is required in a Condition Precedent (CP) to develop and present an implementation and evaluation plan for the Rural Education Project. To satisfy this CP USAID expects the Project to be evaluated annually beginning approximately one year from the date all conditions precedent have been met. The assistance of AID/W or outside evaluators to assist with certain special facets of the evaluation plan will be required.
2. In the first and second evaluations, progress will be measured against the input and output indicators as outlined in the Logical Framework and Part I, Section II of the CAP. In the second and succeeding years it is expected that tests of the premises on which the Project was based will be made in addition to measures against the indicators at all other levels of the basic design. During this process it is further expected that baseline data will be developed and refined and indicators added or deleted as appropriate. Indicators for the Project are shown in the Logical Framework, Annex IV, Exhibit 5.
3. In addition to the standard yearly evaluations required to attend the essential management interests of the GOB and USAID, several special requirements must be met through the evaluation process, some of which may result in separate studies and separate reports. These include:

(1) a study at the end of the first full year of the Project of the teacher training techniques employed in the third country training, in-service teacher training for non-formal education and bilingual education components of the Project. The purpose of this study is to assure that the lessons learned in producing the teacher training outputs will be fed into the design of the Rural Education II (Teacher Training); (2) a joint program evaluation of the Educational Management and Rural Development and Rural Education I to assure that both the normative and substantive lessons learned from these Projects will be used in the master design of the nationwide Rural Education III Project. The hypotheses to be tested in this study will be elaborated by short term consultants used during the first year of the Rural Education I Project and tested in the third year by a joint AID/W or contractor team working in conjunction with USAID/MEC and the DEDC.

4. Moreover, USAID intends to be especially sensitive to indicators of the impact on (1) the revised curricula on retention rates and (2) the role of women, both as participants in the formal and non-formal education components as well as in the role of identifying and evaluating the effectiveness of the curricula at the local and state levels.

5. The evaluation plan will be designed with emphasis on determining the feasibility of nation-wide replication of the various project components. Particular attention will be given to GOB capacity to extend, and successfully carry on the rural education prototype developed under this project. Specifically, evaluation will examine ability of the MEC to finance improved curriculum and instruction, non-formal education programs, further school renovation and improvements, and increased incentives for rural teachers; and extent to which community financial support and participation may realistically be counted upon.

Based upon the foregoing and until receipt of the GOB's Implementation and Evaluation Plan, the Mission expects evaluations to be conducted in appropriate accordance with the following schedule:

<u>Dates</u>	<u>Nature</u>	<u>Resources Required</u> <u>1/</u>
January 1977	Inputs/Outputs/Teacher Training Techniques/Baseline Data	DEDC/USAID/2 Consultants
January 1978	Inputs/Outputs/Condition Ex-pected Ed Mgt-Bilingual Components	MEC/DEDC/USAID AID/W or Contractor
January 1979	Annual Evaluation and Special Study role of women	DEDC/USAID DEDC/USAID
Final Evaluation	All Goal Indicators/EOPS	MEC/DEDC/USAID

1/ Budgeted or to be budgeted under Technical Support.

Part II. SECTION IV - CONDITIONS PRECEDENT AND COVENANTS

A. Prior to the first disbursement or the issuance of any commitment documents under the Loan, Borrower shall submit to A.I.D., inform and substance satisfactory to A.I.D.:

1. a). Evidence of a time phased Implementation and Evaluation Plan for the Project which will include, inter alia a description of the manner in which Ministry of Education (MEC) offices will be affected by the Project: a budgetary plan for the Project including the Borrower's contribution to the Project during the disbursement period of the Loan; a description of how each Project element will be implemented as well as how the District Education Development Center (DEDC) will function; all legal documentation required for the orderly accomplishment of the purposes of the Project; a description of the design, execution and use of a bilingual education program and materials for the first three grades of the schools participating in the Project which also provides for the distribution and use of instructional materials in the curriculum at the Rural Normal School of Vacas; and a design for the expansion and staffing of bilingual education offices in the remaining eight departments;

b). Within one year from signature of the Loan Agreement, evidence of a plan, in form and substance satisfactory to AID, testing alternative incentives for retention of qualified rural teachers, with funds made available for that purpose under this project.

2. Evidence of the design and establishment of an adequate administrative and accounting system within the MEC to be employed to administer the Project funds;

3. Evidence of the appointment of qualified personnel to the Rural Normal School at Vacas;

4. a). Evidence that the MEC has established and staff the position of Supervisor of Rural Normal Schools in the Department of Cochabamba and developed a schedule to establish similar positions in each of the eight remaining Departments in accord with the schedule under which the DEDC's in each Department are to be established.

b). Evidence of an approved, time-phased plan and appropriate MEC budget allocations for the assignment of acceptable personnel to the DEDC in Cochabamba, in accordance with the organizational structure set for in the Project Paper. This plan will include a description of functions assigned to District Education Support Services offices; working relationships and procedures to be used within and between these offices, DEDC senior management, and counterpart MEC offices; and a description of procedures and responsibilities to be exercised by these offices in supervising, monitoring, participating in, and evaluating the work of the respective resource, inter-Ministerial, and community groups involved in implementation of the project;

5. Evidence that the MEC has delegated the authority to assign teachers to rural schools in the Department of Cochabamba to the Director of Rural Schools in Cochabamba;

6. Evidence of the agreements among the various Bolivian Ministries and Institutions that will participate in carrying out the Project;
 7. Evidence that the MEC will establish Curriculum Reform and Material Development Teams; and
 8. A PERT chart or similar projection showing the critical components of Rural Education I and the relation of these components to the Educational Management and Instructional Development Loan (511-V-051) and the proposed Rural Education II and III Projects.
- B. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment document under the Loan for any individual new construction project, Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D.:
- a). Evidence that the MEC has free and clear title to the land upon which construction is to take place;
 - b). Final plans, specifications, and a detailed construction schedule; and
 - c). A maintenance plan for the facility to be constructed.
- C. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or issuance of any commitment documents under the Loan after March 31 of each year for any purpose except to pay salaries under existing contracts being financed by the Loan and to make payments due under outstanding irrevocable Letters of Credit, the Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D., evidence that the budgetary allocations necessary for implementation of the Project have been made to the MEC.

Covenants

Except as A.I.D. may otherwise agree, the Borrowers shall covenant:

1. To incorporate the proposed in-service and other teacher training programs included in this Project into the MEC's existing professional training program and provide salary increases for successful completion of training programs by rural teachers in Bolivia;
2. To staff and maintain the Curriculum Reform and Materials Development Teams;
3. To provide USAID with a detailed analysis of the MEC budget, within 6 months of the initial disbursement of the A.I.D. Loan, which

should reflect a budgetary increase in resources to the MEC from 30% to 40% by 1980. The MEC and Ministry of Finance (MOF) agree to allocate 36% of the MEC budget in 1976 to rural education, 38% in 1977, 39% in 1978, and 40% in 1980;

4. To provide funds for Bolivian technical assistance from outside of the MEC to include the following positions: Bilingual Education Specialist; Educator (linguist); Bilingual Education Technician; Curriculum and Materials Technicians; Non-formal Education Technical Coordinator, Rural Normal School Technician;

5. To provide community groups with legal and executive powers require to negotiate and sign contracts for the services of the various agencies to perform technical assistance on specific community projects;

6. To establish and maintain at the departmental level a Project Implementation Team which will include a district level coordinator and qualified specialists in teacher education, curriculum reform, bilingual education, in-service teacher training and non-formal education;

7. To establish a rural normal school scholarship program designed to facilitate the attendance of students from indigenous rural populations in the Rural Normal School at Vacas;

8. To revise as necessary normal school admission and faculty appointment policies in the normal school at Vacas to further the purposes of the Project;

9. To develop a practical, vocational training curriculum and provide appropriate instructional materials for grades one through eight;

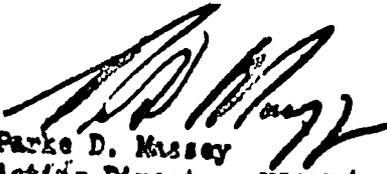
10. To build additional rural nuclear and sectional schools as needed in response to increasing enrollments; and

11. To establish an accounting system based on the new MOE accounting manual.

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CERTIFICATION PURSUANT TO SECTION 611 (e) OF THE
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, Parke D. Massey, the principal officer of the Agency for International Development in Bolivia, having taken into account among other factors the maintenance and utilization of projects in Bolivia previously financed or assisted by the United States, do hereby certify that in my judgement Bolivia has both the financial capability and human resources capability effectively to maintain and utilize the capital assistance project: RURAL EDUCATION I.


Parke D. Massey
Acting Director, USAID/Bolivia

2.-

actualización del personal que intervenga en el proyecto. Los mecanismos técnicos del servicio de educación tendrán a su cargo la coordinación y dirección del trabajo.

Para respaldar el proyecto, el Gobierno de Bolivia, desea iniciar las siguientes acciones en el área del proyecto:

1. Modificar el currículum actualmente aplicado en las escuelas normales y la educación primaria rural, por medio de una investigación y experimentación, planificada a fin de lograr el material educativo de acuerdo a las necesidades de la juventud y comunidad rurales.
2. Elaborar y experimentar, previa investigación, métodos y material de enseñanza bilingüe. Evaluados los resultados de trabajo y verificadas las bondades de la enseñanza bilingüe, formalizar y sistematizar el empleo de la lengua materna en los dos primeros grados del ciclo básico, en un futuro próximo, iniciando simultáneamente la enseñanza del español.
3. Establecer criterios de selección y un sistema de becas - que favorezcan a los hijos de familias campesinas de la región, para su incorporación a las escuelas normales rurales.
4. Proporcionar mayores facilidades de infraestructura con dotaciones físicas y equipamiento, a los estudiantes y maestros en las escuelas normales rurales.
5. Adoptar sistemas y beneficios colaterales, dentro del nivel del magisterio rural, que permita mejorar el proceso enseñanza-aprendizaje, utilizando métodos y material educativos adecuados.
6. Espesar el proceso de transformación de algunas escuelas normales rurales, en politécnicos agro-industriales.
7. El Ministerio de Educación y Cultura, a través de convenios anticipadamente establecidos con instituciones relacionadas con el proyecto: Ministerio de Salud, de Asuntos Campesinos y Agropecuarios, de Trabajo y por intermedio de la Dirección Nacional de Educación Rural, dirigirá, coordinará y ejecutará el proyecto, estableciendo con prioridad comisiones a nivel nacional y departamental.
8. Los organismos técnicos del Ministerio de Educación y Cultura, elaborarán los lineamientos generales de ejecución del proyecto, con la colaboración de USAID/E a través de un Coordinador Nacional del proyecto, y en el plano departamental con un Director y Técnicos en currículum, educación bilingüe, capacitación de maestros y educación de la comunidad.



MINISTERIO DE EDUCACION Y CULTURA
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3.-

9. Como estaba acordado en el "Convenio de Préstamo AID No 511-V-51 Gobierno de Bolivia", se incrementará la eficiente asignación de recursos, en términos reales y de porcentajes para la Educación Rural. Esta medida permitirá, en términos precisos, incrementar la calidad del sistema en función del servicio.
10. En base a este proyecto, se extenderán los beneficios del mismo, a todos los distritos del país, en los años venideros.

Los principales insumos del proyecto que requieren financiamiento en esta primera etapa, se relacionan con equipos, renovación del edificio, capacitación de maestros, preparación de materiales de enseñanza, asistencia técnica y elaboración del modelo que permita su generalización a nivel nacional. Se calcula que el costo total de este proyecto será estimativamente de \$Us. 9.176.500 a cinco años plazo, 1976-1980.

Por medio de la presente nota, solicitamos - un Préstamo de la Agencia para el Desarrollo Internacional de \$Us. 4.723.500.- y una donación de \$Us. 1.456.000.- para esta primera etapa del proyecto.

El Gobierno proporcionará (el equivalente en pesos bolivianos) la cantidad de \$Us. 475.000, en sueldos de personal y gastos nuevos, relacionados con el proyecto. En fondos ya presupuestados para la zona, la cantidad de \$Us. 2.083.000. Además, el Supremo Gobierno, conforme se amplió el radio de acción del proyecto, en forma progresiva y proporcional a los fondos requeridos, realizará nuevos aportes programados. En todo caso, el proyecto debe ser el comienzo de un plan nacional que deberá ser compatibilizado entre USAID/B y el Ministerio de Educación. Las comunidades proporcionarán el equivalente de \$Us. 439.000.- en terrenos y mano de obra para aspectos de construcción y renovación de escuelas.

Con la seguridad de contar con su valiosa colaboración en la concreción del proyecto que ponemos a su consideración, y a la espera de su grata respuesta, reiteramos a usted las seguridades de nuestra consideración más distinguida.

Ant. S. Santibañez
Col. DAEM. VICTOR LASTRU SUAREZ
Ministro de Finanzas

Naldo R. R. P.
Vice Ministro General Paralelo
Ministerio de Educación y Cultura

CHECKLIST OF STATUTORY CRITERIA

In the right-hand margin, for each item, write answer or, as appropriate, a summary of required discussion. As necessary, reference the section(s) of the Capital Assistance Paper, or other clearly identified and available document, in which the matter is further discussed. This form may be made a part of the Capital Assistance Paper.

The following abbreviations are used:

FAA - Foreign Assistance Act of 1961, as amended.

FAA, 1973 - Foreign Assistance Act of 1973.

App. - Foreign Assistance and Related Programs Appropriation Act, 1974.

MSA - Merchant Marine Act of 1936, as amended.

BASIC AUTHORITY

1. FAA § 103; § 104; § 105;
§ 106; § 107. Is loan being made

a. for agriculture, rural development
or nutrition;

b. for population planning or health;

c. for education, public administration,
or human resources development;

e. Education

d. to solve economic and social development problems in fields such as transportation, power, industry, urban development, and export development;

e. in support of the general economy of the recipient country or for development programs conducted by private or international organizations.

COUNTRY PERFORMANCE

Progress Towards Country Goals

2. ZAA P 201 (b) (3), (7) & (8); P 202

A. Describe extent to which country is:

(1) Making appropriate efforts to increase food production and improve means for food storage and distribution.

Bolivia is making appropriate efforts to increase food production, storage, and distribution. It is contributing to those efforts.

(2) Creating a favorable climate for foreign and domestic private enterprise and investment.

The OCE program emphasizes creation of a favorable climate for foreign and domestic private enterprise and investment. It is seeking special exemption within the Andean Council Market for certain investments.

(3) Increasing the public's role in the developmental process.

The OCE continues to take active role in the development process and is expected to increase popular participation.

- 3 -

(4) (a) Allocating available budgetary resources to development.

The GOB appears to be allocating as much as it is able to development.

(b) Diverting such resources for unnecessary military expenditure (See also Item No. 20) and intervention in affairs of other free and independent nations.) (See also Item No. 11).

Refer to answers regarding item numbers 10 and 19.

(5) Making economic, social, and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.

The GOB is making these efforts.

(6) Willing to contribute funds to the project or program.

The GOB is willing to contribute funds to the project (see Financial Plan).

(7) Otherwise responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.

The GOB appears to be doing this in an increasingly effective manner.

B. Are above factors taken into account in the furnishing of the subject assistance?

Yes

Attachment A to M.O. 1242.2 (TL 11:79)

- 4 -

Treatment of U.S. Citizens and Firms.

3. FAA § 620 (c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?

The GOB is not known to be indebted under these circumstances to any U.S. citizen for goods or services furnished or ordered.

4. FAA § 620 (a) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?

The previous government of Bolivia nationalized two United States mining firms. However, the GOB is now adequately compensating the former owners.

5. FAA § 620 (c); Fishermen's Protective Act, § 2. If country has seized, or imposed any penalty or sanction against, any U.S. fishing vessel on account of its fishing activities in international waters,

Not applicable.

a. Has any deduction required by Fishermen's Protective Act been made?

- 3 -

b. has complete denial of assistance
been considered by A.I.D. Administrator?

Relations with U.S. Government and Other
Nations

6. FAA § 620 (a). Does recipient country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba?
- The GOB does not furnish assistance, nor fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba.
7. FAA § 620 (b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the International Communist Movement?
- Bolivia is not controlled by the international Communist Movement according to the Secretary of State.
8. FAA § 620 (d). If assistance is for any productive enterprise which will compete in the United States with United States enterprises, is there an agreement by the recipient country to prevent export to the United States of more than 20% of the enterprise's annual production during the life of the loan?
- Not applicable.
9. FAA § 620 (c). Is recipient country a Communist country?
- No.

10. ZAA § 620 (1). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?
- No. Bolivia does not engage in those activities.
11. ZAA § 620 (1). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?
- The GOB has taken adequate measures to prevent the damage or destruction by mob action of U.S. property whenever possible.
12. ZAA § 620 (1). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the A.I.D. administration within the past year considered denying assistance to such government for this reason?
- The GOB has instituted the investment guarantee program.
13. ZAA § 620 (n). Does recipient country furnish goods to North Viet-Nam or permit ships or aircraft under its flag to carry cargoes to or from North Viet-Nam?
- No, the recipient country does not furnish goods to North Viet-Nam nor permit ships or aircraft under its flag to carry cargoes to or from North Viet-Nam.
14. ZAA § 620 (e). Is the government of the recipient country in default on interest or principal of any A.I.D. loan to the country?
- No.

15. FAA § 620 (t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? No.
16. FAA § 620 (u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? Bolivia is in arrears, but not to such an extent as to disenfranchise it in the General Assembly. The Administrator did take the arrearages into account in determining the OYB.
17. FAA § 431. Has the government of recipient country failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully? The GOB is actively cooperating with the USAID narcotics officer and DEA representatives and other international agencies to take such steps as may be necessary to control drug traffic in Bolivia.
18. FAA, 1973 § 29. If (a) military base is located in recipient country, and was constructed or is being maintained or operated with funds furnished by U.S., and (b) U.S. personnel carry out military operations from such base, has the President determined that the government of recipient country has authorized regular access to U.S. correspondents to such base? Not applicable.

Military Expenditures

19. FAA s 620 (c). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).)

The CY 1974 Budget for Military purposes represented approximately 16% of total budgeted expenditures of the government. Approximately \$1.3 million was budgeted for the purchase of non-sophisticated military equipment.

Conditions of The Loan

General Soundness

20. FAA s 201 (d). Information and conclusion on reasonableness and legality (under laws of country and the United States) of lending and retending terms of the loan.

The loan terms are reasonable and consistent with United States and Bolivian laws.

21. FAA s 201 (b) (2); s 201 (e) Information and conclusion on activity's economic and technical soundness. If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds \$100,000, has country submitted to A.I.D. an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?

The OOB has made an application for loan funded assistance and there have been assurances that the funds will be used in an economically and technically sound manner.

22. FAA s 201 (b) (3). Information and conclusion on capacity of the country to repay the loan, including reasonableness of repayment prospects.

There are reasonable prospects of repayments.

23. FAA s 201 (b) (1). Information and conclusion on availability of financing from other free-world sources, including private sources within the United States.

Financing for this activity is not available from other free-world sources, including private sources within the United States, on reasonable terms.

24. FAA s 611 (a) (1). Prior to signing of loan will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the United States of the assistance?

Preliminary engineering, financial and other plans necessary to carry out the assistance have been prepared. Reasonably firm estimates have been established.

25. FAA s 611 (a) (2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of loan?

Not applicable.

26. FAA s 611 (c). If loan is for Capital Assistance, and all U.S. assistance to project now exceeds \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project?

Yes.

Loan's Relationship to Achievement of Country
and Regional Goals

27. FAA s 207: s 113
Extent to which assistance reflects appropriate emphasis on: (a) encouraging development of democratic, economic, political, and social institutions; (b) self-help in meeting the country's food needs; (c) improving availability of trained manpower in the country; (d) programs designed to meet the country's health needs;

This loan will contribute directly to the objectives reflected in items (a), (c), and (d).

(e) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (f) integrating women into the recipient country's national economy.

28. FAA § 209. Is project susceptible of execution as part of regional project? If so why is project not so executed?
- This project could not be carried out as part of a regional project since it is designed to promote rural educational development wholly within Bolivia.
29. FAA § 201 (b) (4). Information and conclusion on activity's relationship to, and consistency with, other development activities, and its contribution to realizable long-range objectives.
- This activity has broad significance with regard to the long range objectives of integrating the rural areas into national economic, social and political life, and of strengthening the economy.
30. FAA § 201 (b) (9). Information and conclusion on whether or not the activity to be financed will contribute to the achievement of self-sustaining growth.
- This project will contribute to the achievement of self-sustaining growth.
31. FAA § 209:
Information and conclusion whether assistance will encourage regional development programs.
- By strengthening the educational base of the Bolivian population, the capacity of Bolivia to participate in regional activities should be enhanced. However, the project is national in scope and therefore not specifically designed to encourage regional development programs.

32. YAA s 111. Discuss the extent to which the loan will strengthen the participation of urban and rural poor in their country's development, and will assist in the development of cooperatives which will enable and encourage greater numbers of poor people to help themselves toward a better life.
- While cooperatives won't receive direct assistance under the project, the loan will strengthen the participation of the rural poor in Bolivia's development by improving educational opportunities.
33. YAA s 201 (f). If this is a project loan, describe how such project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development.
- The project loan will promote Bolivia's economic development by improving rural educational opportunities.
34. YAA s 281 (a). Describe extent to which the loan will contribute to the objective of assuring maximum participation in the task of economic development on the part of the people of the country, through the encouragement of democratic, private and local governmental institutions.
- The Loan contributes to the objective of assuring maximum participation in the task of economic development by strengthening the educational base of the Bolivian people.
35. YAA s 281 (b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.
- The program directly recognizes and utilizes the needs, desires and capacities of the population and the country's intellectual resources to encourage institutional development and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.

36. YAA § 201 (b) (3). In what ways does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities?

By developing Bolivia's rural educational base, the project will contribute to increased productive capacities of Bolivia's human resources.

37. YAA § 601 (a). Information and conclusions whether loan will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

This loan should directly affect (b).

38. YAA § 619. If assistance is for newly independent country, is it furnished through multilateral organizations or plans to the maximum extent appropriate?

Not applicable.

Loan's Effect on U.S. and A.I.D. Programs

39. YAA § 201 (b) (6). Information and conclusion on possible effects of loan on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities

The loan will have no foreseeable unfavorable effect on the United States economy. Some U.S. products will be imported.

and assistance are furnished in a manner consistent with improving the U.S. balance of payments position.

40. FAA § 202 (a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources.
- The financial plan indicates the amount of loan funds that will go directly to private enterprise for design and construction of activities, as well as for procurement of commodities from private sources. It is not planned to channel resources through intermediate credit institutions.
41. FAA § 601 (b). Information and conclusion on how the loan will encourage U.S. private trade and investment abroad and how it will encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- There will be U.S. private sector participation in this project to the extent that some of the loan proceeds will be used to buy materials from U.S. sources or U.S. professional advisory and possibly construction services.
42. FAA § 601 (c). If a capital project, are engineering and professional services of U.S. firms and their affiliates used to the maximum extent consistent with the national interest?
- Professional advisory services of U.S. firms will be utilized to the maximum extent consistent with the needs of the project.

Attachment A to M.O. 1242.2 (TL 11:79)

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43. FAA § 602. Information and conclusion whether U.S. small business will participate equitably in the furnishing of goods and service financed by the loan.

U.S. small business will be invited to participate when appropriate.

44. FAA § 620 (h). Will the loan promote or assist the foreign aid projects or activities of the Communist-Bloc countries?

No, the loan will not promote or assist the foreign aid projects or activities of Communist -Bloc countries.

45. FAA § 621. If Technical Assistance is financed by the loan, information and conclusion whether such assistance will be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis. If the facilities of other Federal agencies will be utilized, information and conclusion on whether they are particularly suitable, are not competitive with private enterprise, and can be made available without undue interference with domestic programs.

Any Technical assistance and consulting services will most likely be provided by private sector groups.

Loan's Compliance with Specific Requirements

46. FAA § 110 (3); § 208 (c). In what manner has or will the recipient country provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the loan is to be made?

The GOB has provided assurances that it will provide at least 25% of the costs of the project for which the loan is to be made (loan application letter and financial plan).

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47. YAA § 112. Will loan be used to finance police training or related program in recipient country? No.
48. YAA § 114. Will loan be used to pay for performance of abortions or to motivate or coerce persons to practice abortions? No.
49. YAA § 201 (b). Is the country among the 20 countries in which development loan funds may be used to make loans in this fiscal year? Yes.
50. YAA § 201 (d). Is interest rate of loan at least 2% per annum during grace period and at least 3% per annum thereafter? Yes.
51. YAA § 201 (f). If this is a project loan, what provisions have been made for appropriate participation by the recipient country's private enterprise? To assure appropriate participation, Bolivia's private sector will be given the opportunity to bid for the provision of goods and services.
52. YAA § 604 (a). Will all commodity procurement financed under the loan be from the United States except as otherwise determined by the President? Yes. Code 941 and Bolivian sources will be used for procurement.

33. CAA # 604 (b). What provision is made to prevent financing commodity procurement in bulk at prices higher than adjusted U.S. market price?
- Any bulk commodities which may be procured will be subject to the bid procedure.
34. CAA # 604 (d). If the cooperating country discriminates against U.S. marine insurance companies, will loan agreement require that marine insurance be placed in the United States on commodities financed by the loan?
- Y. the unlikely event that Bolivia discriminates against any U.S. marine insurance company, commodities purchased with loan funds will be insured against risks with a U.S. company as required by this section.
35. CAA # 604 (c). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity?
- Not applicable.
36. CAA # 604 (f). If loan finances a commodity import program, will arrangements be made for supplier certification to A.I.D. and A.I.D. approval of commodity as eligible and suitable?
- Not applicable.
37. CAA # 604 (g). Information on measures to be taken to utilize U.S. Government excess surplus property in lieu of the procurement of new items.
- The Mission will ensure that the Borrower is apprised of the availability of excess U.S. Government property and that the Borrower purchases that property which fits its needs.

58. ZAA s 611 (b); App. s 101. If loan finances water or water-related land resource construction project or program, is there a benefit-cost computation made, insofar as practicable, in accordance with the procedures set forth in the Memorandum of the President dated May 15, 1962? Not applicable.
59. ZAA s 611 (c). If contracts for construction are to be financed what provision will be made that they be let on a competitive basis to maximum extent practicable? This requirement will be met by adherence to A.I.D. and Bolivian regulations concerning procurement of contractor services.
60. ZAA s 612 (h); s 616(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the United States are utilized to meet the cost of contractual and other services. No Bolivian pesos owned by the U.S. are available for financing this project. An effort was made during intensive review to ensure that Bolivian sources contributed local currency to the local currency to the maximum extent possible.
61. App. s 113. Will any of loan funds be used to acquire currency of recipient country from non-U.S. Treasury sources when excess currency of that country is on deposit in U.S. Treasury? No.
62. ZAA s 612 (d). Does the United States own excess foreign currency and, if so, what arrangements have been made for its release? The U.S. does not own excess foreign currency in Bolivia.

63. FAA s 620 (E). What provision is there against use of subject assistance to compensate owners for expropriated or nationalized property? Assistance will not be used to compensate owners for expropriated or nationalized property.
64. FAA s 620 (K). If construction of productive enterprise, will aggregate value of assistance to be furnished by the United States exceed \$100 million? Not applicable.
65. FAA s 636 (1). Will any loan funds be used to finance purchase, long-term lease, or exchange of motor vehicle manufactured outside the United States or any guaranty of such transaction? No. Any motor vehicles needed will be imported from the United States, unless other procurement is authorized.
66. APP. s 103. Will any loan funds be used to pay pensions, etc., for military personnel? No loan funds will be used to pay pensions for military personnel.
67. APP. s 105. If loan is for capital project, is there provision for A.I.D. approval of all contractors and contract terms? Yes.
68. APP. s 107. Will any loan funds be used to pay UN assessments? No.

69. APP. § 108. Compliance with regulations on employment of U.S. and local personnel. (A.I.D. Regulation 7). Will comply.
70. APP. § 110. Will any of loan funds be used to carry out provisions of FAA § 209 (d)? No.
71. APP. § 114. Describe how the Committee on Appropriations of the Senate and House have been or will be notified concerning the activity, program, project, country, or other operation to be financed by the Loan.
72. APP. § 601. Will any loan funds be used for publicity or propaganda purposes within the United States not authorized by Congress? No funds will be used for publicity purposes within the U.S.
73. APP. § 90, b; FAA § 640 C.
- (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed with funds made available under this loan shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates.
- (b) Will grant be made to loan recipient to pay all or any portion of such differential as may exist between U.S. and foreign-flag vessel rates? No.

74. Section 30 and 31 of PL 93-189 (FAA of 1973). No.
Will any part of the loan be used to finance directly or indirectly military or paramilitary operations by the U.S. or by foreign forces in or over Laos, Cambodia, North Vietnam, South Vietnam, or Thailand?
75. Section 37 of PL 93-189 (FAA of 1973); App. s. 111. Will any part of this loan be used to aid or assist generally or in the reconstruction of North Vietnam? No.
76. App. s 112. Will any of the funds appropriated or local currencies generated as a result of AID assistance be used for support of police or prison construction and administration in South Vietnam or for support of police training of South Vietnamese? No.
77. App. s 604. Will any of the funds appropriated for this project be used to furnish petroleum fuels produced in the continental United States to Southeast Asia for use by non-U.S. nationals? No.



UNITED STATES COORDINATOR
ALLIANCE FOR PROGRESS

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

DRAFT LOAN AUTHORIZATION

Provided From: FAA Section 105
BOLIVIA: Rural Education I

Pursuant to the authority vested in the Deputy U. S. Coordinator, Alliance for Progress, by the Foreign Assistance Act of 1961, as amended, and the delegations of authority issued thereunder, I hereby authorize the establishment of a loan ("Loan"), pursuant to Section 105 of said Act and in furtherance of the Alliance for Progress to the Government of Bolivia ("Borrower") of not to exceed Five Million United States dollars (US\$5,000,000) to assist in financing the United States dollar and local currency costs of a project to improve the Borrower's system for delivery of education services in rural areas ("Project"). The Loan shall be subject to the following terms and conditions:

I. Interest and Terms of Repayment.

Borrower shall repay the Loan to A.I.D. in United States dollars within forty (40) years from the date of the first disbursement under the Loan, including a grace period of not to exceed ten (10) years. Borrower shall pay to A.I.D. in United States dollars interest at the rate of two percent (2%) per annum during the grace period and three percent (3%) per annum thereafter on the outstanding disbursed balance of the Loan and on unpaid interest.

II. Other Terms and Conditions

A. Goods, services (except for ocean shipping) and marine insurance financed under the Loan shall have their source and origin in Bolivia and countries included in Code 941 of the A.I.D. Geographic Code Book. Marine insurance

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may be financed under the Loan only if it is obtained on a competitive basis and any claims thereunder are payable in freely convertible currencies. Ocean shipping financed under the Loan shall be procured in any country included in A.I.D. Geographic Code 941.

B. United States dollars utilized under the Loan to finance local currency costs shall be made available pursuant to procedures satisfactory to A.I.D.

C. Prior to the first disbursement or the issuance of any commitment documents under the Loan, Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D.:

1. A time-phased Implementation and Evaluation Plan for the Project which will include, inter alia, a description of the manner in which Ministry of Education ("MEC") offices and various other Bolivian ministries and institutions will participate in the Project; a budgetary plan for the Project including the Borrower's contribution to the Project during the disbursement period of the Loan; a description of how each Project element will be implemented as well as how the District Education Development Center ("DEDC") in Cochabamba will function; all legal documentation required for the orderly accomplishment of the purposes of the Project; a description of a bilingual education program; a description of how the MEC will establish and maintain Curriculum Reform and Material Development Teams; and a plan to test alternative incentives to retain qualified rural teachers;

2. Evidence of the design and establishment of an adequate administrative and accounting system within the MEC to be employed to administer Project funds;

3. Evidence that the MEC has delegated to the Director of Rural Schools in Cochabamba the authority to assign teachers to rural schools in the Department of Cochabamba.

D. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment document under the Loan for any individual new construction Project, Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D.:

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1. Evidence that the MEC has free and clear title to the land upon which construction is to take place;

2. A maintenance plan for the facility to be constructed.

E. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment documents under the Loan after March 31 of each year for any purpose other than to pay salaries under existing contracts being financed by the Loan and to make payments due under outstanding irrevocable Letters of Credit, the Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D., evidence that the budgetary allocations necessary for implementation of the Project have been made to the MEC.

F. Except as A.I.D. may otherwise agree, the Borrower shall covenant:

1. To incorporate the in-service and other teaching training programs included in this Project into the MEC's existing professional training programs; and to provide appropriate salary increases for successful completion of training programs by rural teachers in Bolivia;

2. To establish within a reasonable time a rural normal school scholarship program designed to facilitate the attendance of students from indigenous rural populations at the rural normal school at Vacas;

3. To revise as necessary normal school admission and faculty appointment policies in the normal school at Vacas to further the purposes of the Project;

4. To develop a practical vocational training curriculum and provide appropriate instructional materials for grades one through eight.

G. The Loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

Deputy U. S. Coordinator

Date

FARS Review of Managerial and Financial Capabilities of the
Dirección Distrital de Educación Rural and the SIDA Office
and the Vacas Rural Normal School in Cochabamba

I. Background Information

The Dirección Distrital de Educación Rural has managerial and supervisory authority over rural education activities in the Department. It reports to the Under-Secretary for Rural Education in La Paz.

The Servicio Integrado Distrital de Educación (SIDA) has been operating since November, 1974. It was created under the Management Reform Project to provide administrative support to the Urban and Rural Education Divisions.

The Rural Normal School at Vacas was founded in 1937 as a rural teacher training institution.

The SIDA office will have financial and administrative responsibility for the Project. The most important task for SIDA is to fill its management level positions with people who have solid management and administrative background or provide valid training in administration for the present staff. The purpose of this review is to analyze the present organizational structure and financial capabilities of the District Rural Education Office, SIDA and the Rural Normal School with a view toward their administrative role in the proposed AID loan. For this purpose some future administrative changes are recommended below.

II. Scope of the Review

The review of the Rural Education Division included the following:

- A. Description of the activities of the Rural Education Division, including SIDA and the Vacas Rural Normal School.
- B. Interviews with Cochabamba Department management and personnel including the Director of the Rural Education Division, the Director of the Vacas Rural Normal School and SIDA officials.
- C. Review of top and second level management personnel through interviews and by evaluating bio-data files.

- D. Analysis of the Financial Division, including procurement and warehousing documentation flow, adequacy of the accounting system and the lines of responsibility.
- E. Review of the financial and accounting procedures of SIDA.
- F. Review of proposed Project with view toward administrative changes that should be made to insure successful implementation.
- G. Informal discussions with other non-formal education agencies including the National Community Development Service, the Ministry of Agriculture and the CORDECC Community Development Advisor in order to obtain a broad view of the role of intersectoral coordination in the Project.

III. Conclusions and Recommendations

- 1. Since the administrative and managerial responsibility of this Project will be the responsibility of the SIDA, the Rural Education Division and Rural Normal School organizations were not subject to as rigorous an analysis. The District Director has created the position of general assistant with a support staff to provide administrative liaison between the Division and SIDA and to work with Rural Education I.
- 2. The SIDA administrative structure which was designed by CRA under the Management Reform Program has not been fully implemented. The Procurement Office, Technical Office and Student Services Office should be organized to strengthen SIDA's ability to handle administrative and managerial requirements.
- 3. Description of the activities of Rural Education, SIDA and Rural Normal School Management Personnel.
 - a. District Director of Rural Education - The Director, Mr. Crespo is a rural normal school graduate with several years of experience in rural education.
 - b. SIDA personnel
 - 1. Chief of SIDA - The Chief, Mr. Jorge Salinas, has extensive experience in education but is weak in the area of administration. Since this position is mainly administrative, as described in the CRA Organizational Manual, it should be filled by a technical expert in administration and finance.

- ii. Finance and Administration - The Section Chief, Mr. José Luis Crespo, has studied general administration at the Instituto Superior de Administración Pública (ISAP). On the basis of a review of the records, it would appear that his technical level is weak. Also, his previous job, as a payroll clerk at another school, does not imply he has the necessary experience or background for this job.

Since the Chief supervises the Accounting, Program and Budget and Procurement Offices, the occupant should have training and experience as an economist, auditor or administrator.

- iii. Accounting Section - SIDA should hire a professional, well trained accountant to head its accounting section. The present accountant is not performing his duties properly, instead he works as a payroll clerk. Income and expense records never have been balanced and bank statements are often unrecorded. No fixed asset control system exists and annual or semi-annual financial statements have not been prepared. It should be noted that these are some of the problems that will be addressed by technical assistance under the Management Reform Project.
 - iv. Program and Budgeting - This office has been in charge of computerizing salary payments for teachers. It also will perform traditional budget control functions. In our opinion, the section could perform its duties adequately with better supervision.
 - v. Procurement and Control of Fixed Assets Office - SIDA should establish this office as soon as possible as several procurement transactions already are being made. Also a secure warehouse should be located. Stock and inventory control procedures should be used in the warehouse.
 - vi. Financial Reports - No financial reports exist at the present.
- c. Vacas Rural Normal School
- i. Rural Normal School Director - The Director is a Rural Normal School graduate. He is responsible for supervision of technical-pedagogical matters as well as administrative

areas. Since the Director has no academic background in administration he should delegate these functions to the Normal School Administrator.

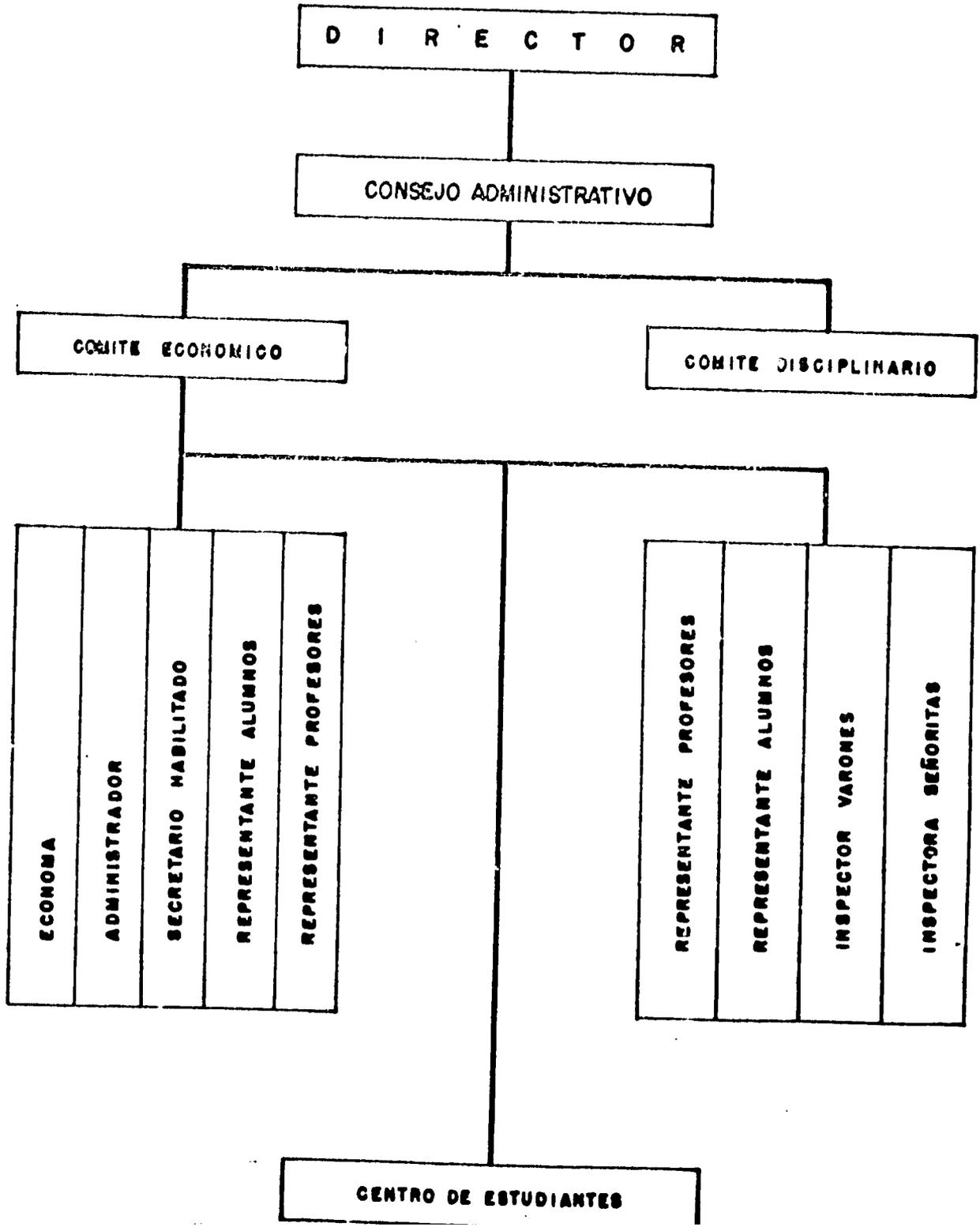
- ii. Normal School Administrator - The administrator is a rural teacher with no accounting or administration background. His main duties are: 1) control Rural Normal School incomes and expenditures; 2) supervise all non-academic activities at school; 3) make purchases for the school.

Given the importance and magnitude of activities at Vacas under Rural Education I, it is our opinion that a more experienced person capable of maintaining accounting records on income and expenses should be appointed to this position.

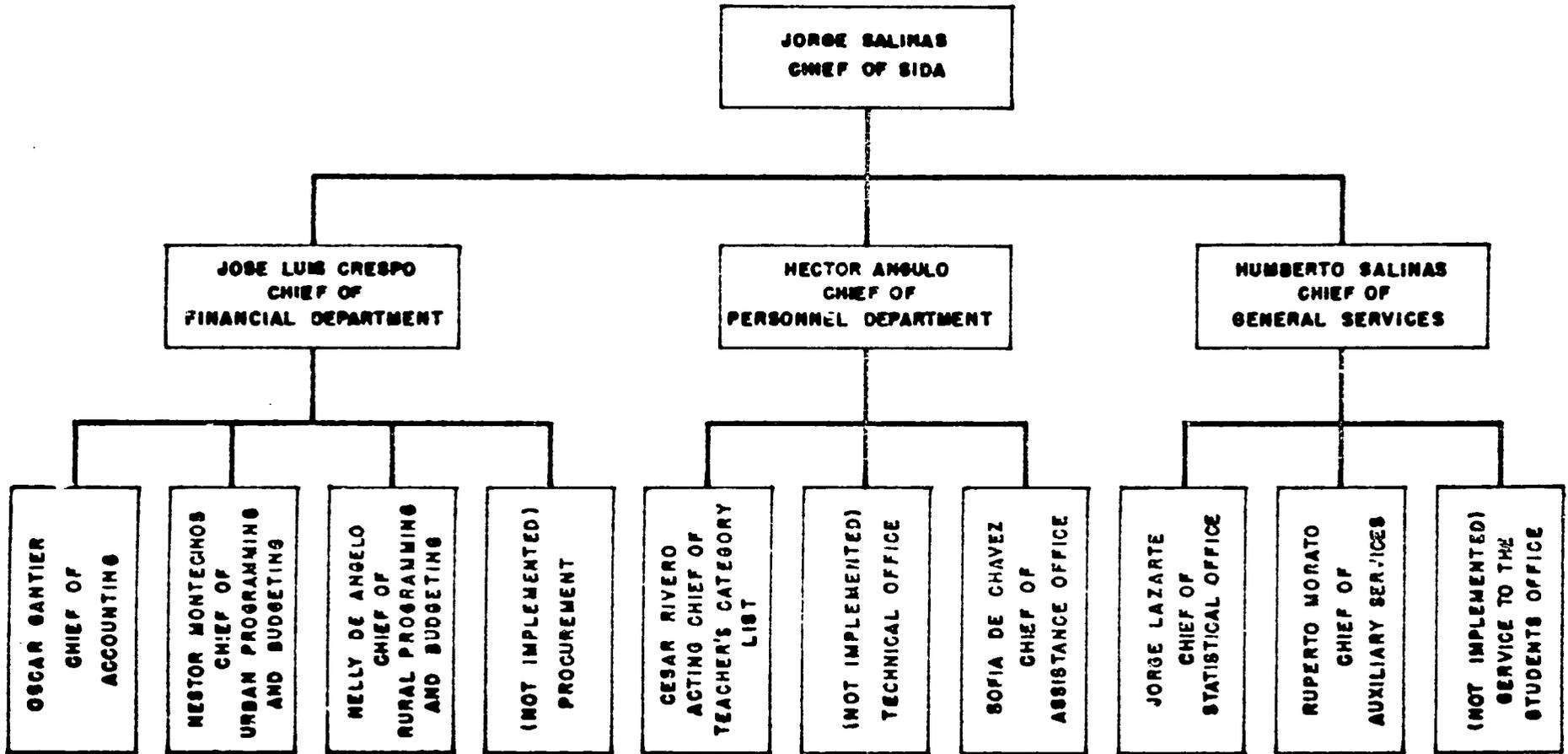
IV. Other Agencies

- a. Ministry of Agriculture (MOA) - An Engineer in the Extension Service informed us that the Service is making plans to work with the Rural Education Division to develop agricultural courses at Central, Sectional and Normal Schools. He indicated that coordination between the Rural Education Division and the MOA Regional Office has always been good.
- b. CORDECO - The OAS Community Development Advisor who works with CORDECO indicated that they are very interested in working with NCDS and the Rural Education Division in the area of non-formal education.
- c. National Community Development Service (NCDS) - The Regional Chief indicated that NCDS would be interested in working with the Rural Education Division in the area of building and repairing rural schools but would need additional staff and equipment to do the job. He indicated that NCDS currently uses community contributions in their projects and that this system is in full operation.

ORGANIGRAMA DE LA NORMAL RURAL DE VACAS

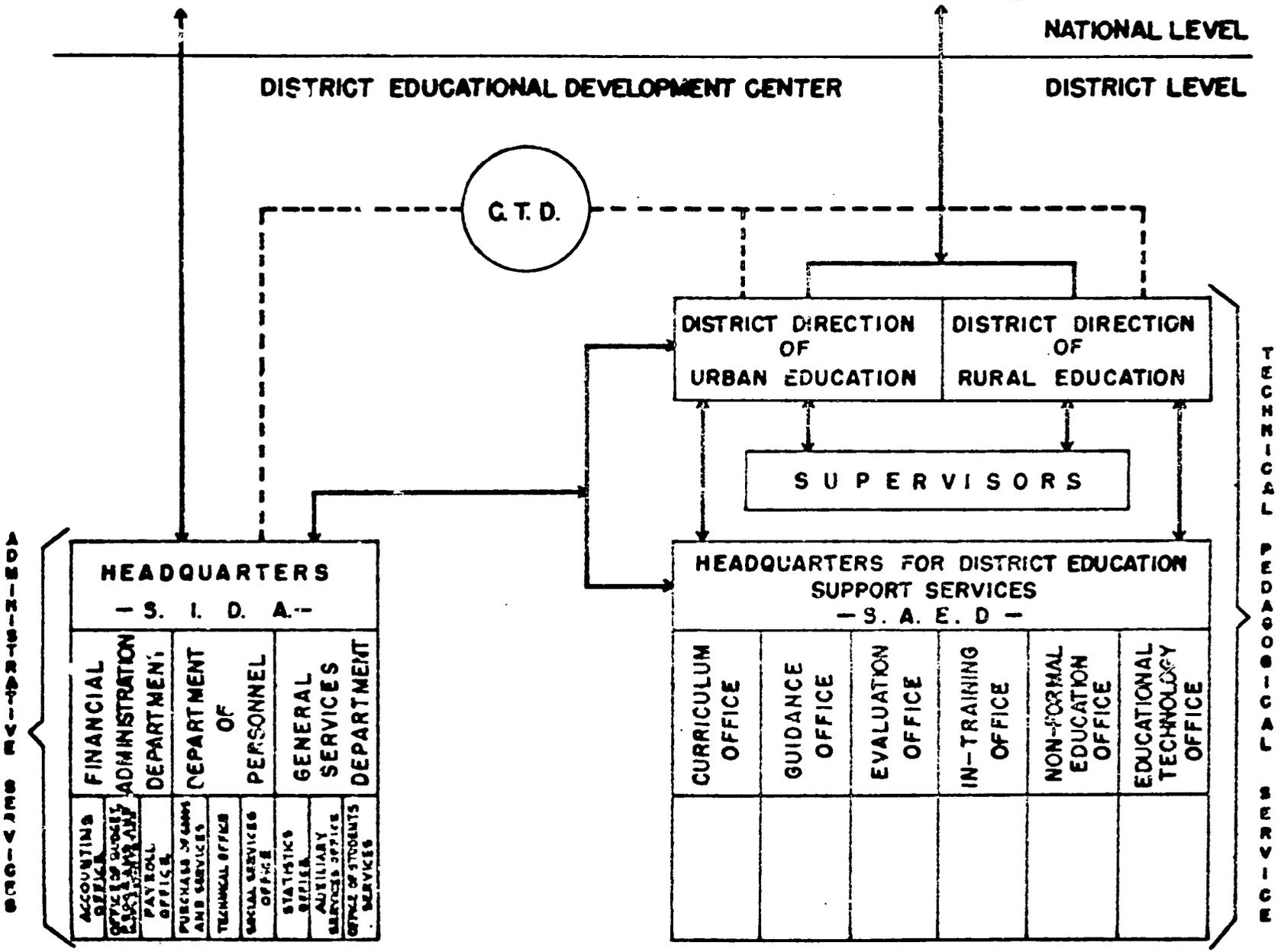


SIDA - COCHABAMBA ORGANIZATION CHART



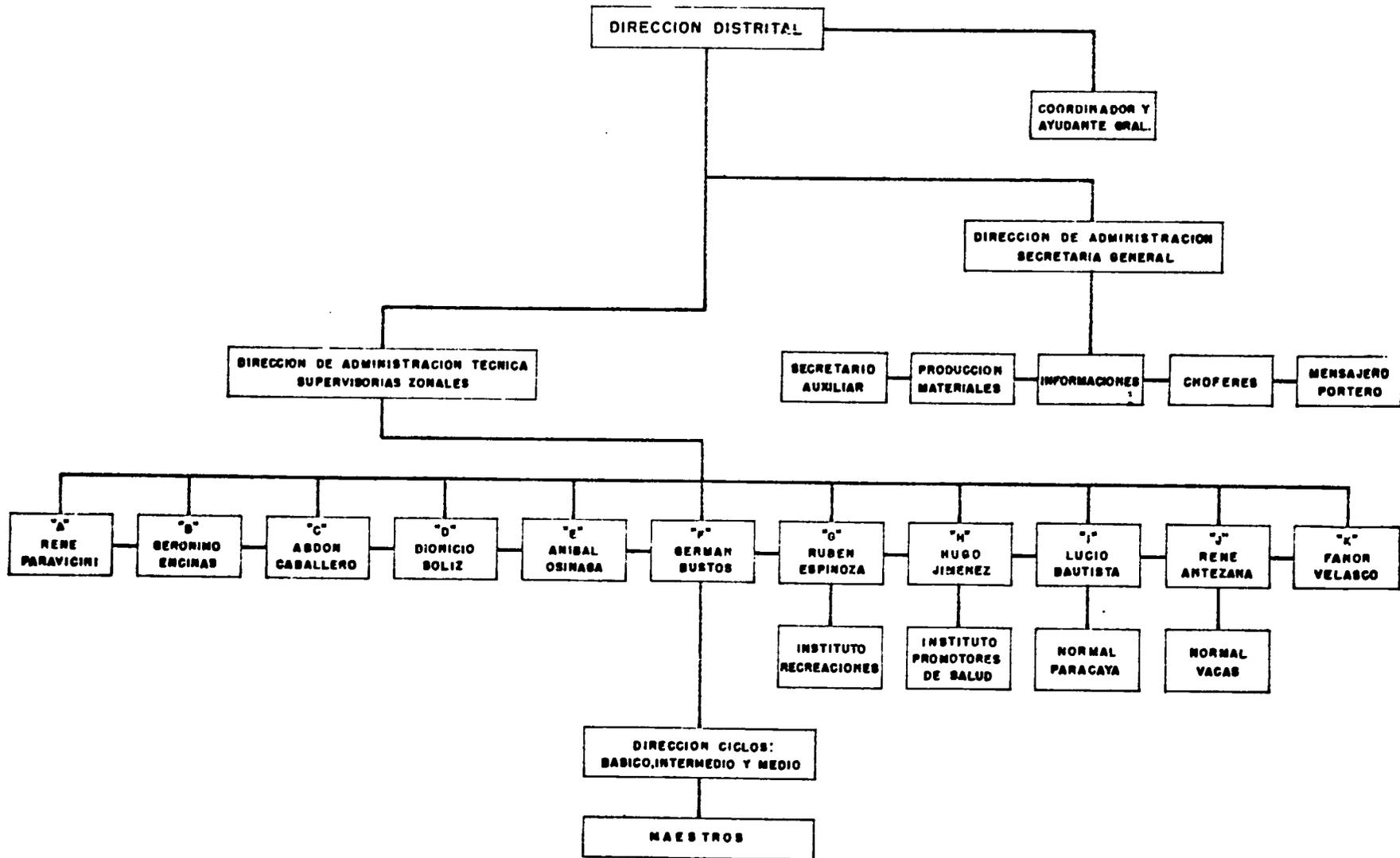
ADMINISTRATIVE DIRECTION

GENERAL DIRECTION OF EDUCATION



ORGANIGRAMA DE LA DIRECCION DISTRITAL DE EDUCACION RURAL DE COCHABAMBA

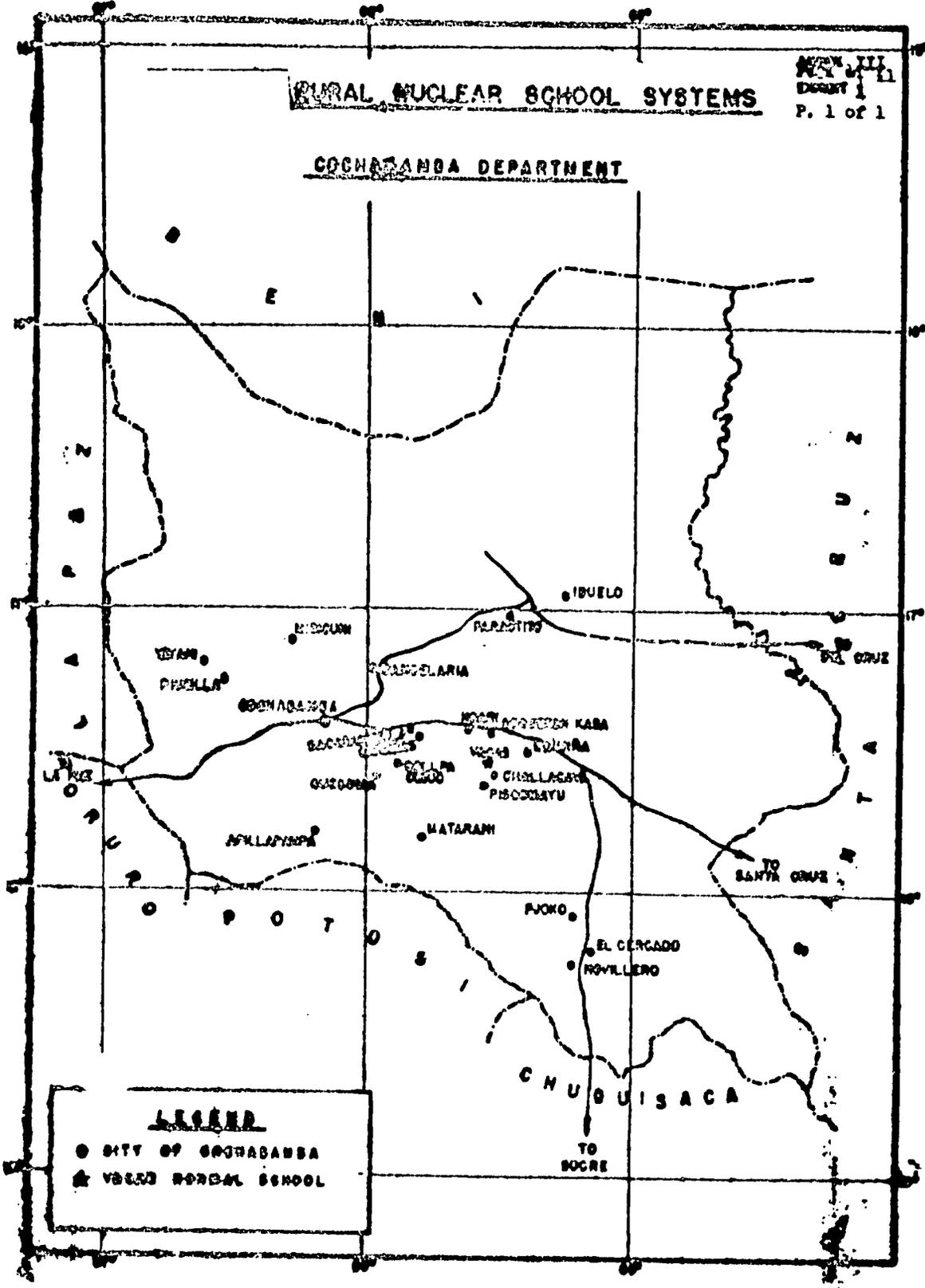
GESTION 1975



RURAL NUCLEAR SCHOOL SYSTEMS

MAP III
SERIES I
P. 1 of 1

COCHABAMBA DEPARTMENT



5. Collpa Ciaco, Arani Province, Zone J
Central school: 12 grades, 302 students,
15 classrooms and
12 hectares of land
Sectional schools: 10 schools, 21 grades,
650 students, 16 classrooms
No living quarters
Population of central community: 5,600
Principal crops: Potatoes, corn, vegetables,
cattle, pigs
6. Challacava, Arani Province, Zone J
Central School: 5 grades, 144 students
Sectional schools: 7 schools, 10 grades, 268 students
7. El Cercado, Campero Province, Aiquile District
Central school: 9 grades, 13 teachers, 188 students
Sectional schools: 11 schools, 29 grades, 16 teachers
519 students
Population of central community: 980
Principal crops: Corn, wheat, potatoes
8. Itucho, Chapare Province, Chapare District
Central school: 7 grades, 16 teachers, 260 students
Sectional schools: 5 schools, 5 teachers, 84 students
Population of central community: 1,500
Principal crops: Coca, citrus fruits, bananas,
peanuts and cattle
9. Koari, Arani Province, Zone I
Central school: 11 grades, 364 students,
10 classrooms, and
2 hectares of land
Sectional schools: 9 schools, 237 students,
5 living quarters, 13 hectares of land
Population of central community: 2,300
Principal crops: Wheat, barley, papa, cattle
sheep and pigs

10. Laimiña, Carrasco Province, Zone K
Central school: 6 grades, 178 students,
and
4 hectares of irrigated land
Sectional schools: 13 schools, 45 grades,
847 students, 13 living quarters and
31 hectares of land
Population of central community: 525
Population of surrounding communities served by the
sectional schools: 3,600
Principal crops: corn, vegetables, potatoes,
wheat, fruit trees, cattle,
sheep, pigs, chickens
11. Matarani, Esteban Arce Province, Zone G
Central school: 7 grades, 192 students
12 classrooms, and
8 hectares of land
Sectional schools: 12 schools, 29 grades,
501 students, 20 classrooms,
8 living quarters, and
29 hectares of land
Population of central community: 1,700
Principal crops: wheat, corn, potatoes, sheep, and
cattle
12. Misicuni, Quillacollo Province, Zone B
Central school: 4 grades, 56 students,
2 classrooms, and
2 hectares of land
Sectional schools: 19 schools, 19 grades, 217 students
3 living quarters, 14 hectares
of land
Population of central community: 450
Principal crops: potatoes, barley, cattle, sheep
and llamas
(This nuclear system was recently created. A major
hydroelectric plant and reservoir for irrigation is
to be built in this area.)
13. Novillero, Campero Province, Aiquile District
Central school: 6 grades, 8 teachers, 167
students
Sectional schools: 6 schools, 15 grades, 10
teachers, 245 students
Population of central community: 350
Principal crops: corn, potatoes, wheat, fruit trees

14. Paractito, Chapare Province, Chapare District
Central school: 57 grades, 25 teachers, and
195 students
Sectional schools: 11 schools, 145 teachers and
351 students
Population: 400
Principal crops: Coca and rice

15. Pisco mayu, Arani Province, Zone J
Central school: 5 grades, 126 students,
3 classrooms, and
2 hectares of land
Sectional schools: 10 schools, 17 grades, 466
students, 18 classrooms,
13 living quarters, 14 hectares
of land
Population: 4,050
Principal crops: Potatoes, sheep

16. Piusilla, Ayopaya Province, Zone E
Central school: 5 grades, 185 students, and
4 hectares of irrigated land
Sectional schools: 18 schools, 186 students,

Population of central community: 1,200
Principal crops: Potatoes, wheat, barley, sheep,
mules

17. Pjoko, Mizque Province, Zone K
Central school: 5 grades, 126 students, and
4 classrooms, and
4 hectares of land
Sectional schools: 11 schools, 34 grades, 556
students, 12 classrooms,
8 living quarters, 20 hectares
of land
Population of central community: 525
Population of surrounding communities: 2,800
Principal crops: Potatoes, corn, peanuts, onions
vegetables, fruit trees, cattle,
sheep, pigs, chickens

18. Quecoma, Jordan Province, Zone H
Central school: 6 grades, 130 students,
6 classrooms, and
6 hectares of land
Sectional schools: 8 schools, 10 grades, 284
students, 8 classrooms,
8 living quarters, 16 hectares
of land
Population of central community: 450
Principal crops: Corn, wheat, potatoes, barley
cattle, goats, chickens
19. Sacambilla, Arani Province, Zone J
Central school: 9 grades, 226 students,
13 classrooms, and
2 hectares of land
Sectional schools: 11 schools, 203 students,
8 living quarters, 13 hectares
of land
Population: 1,270
Principal crops: Wheat, barley, corn, potatoes,
cattle, sheep, pigs
20. Yayani, Ayopaya Province, Zone F
Central school: 5 grades, 178 students,
6 classrooms, 3 hectares of land
Sectional schools: 5 schools, 177 students and
5 hectares of land
Population of central community: 482
Population of surrounding communities: 1,198
Principal crops: Corn, wheat, potatoes, sheep, and
cattle

TOTALS FOR THE 20 NUCLEAR SYSTEMS

Students in central schools	3,755
Students in sectional schools	<u>7,322</u>
TOTAL	11,077
Teachers 490	
Number of central schools	20
Number of sectional schools	<u>200</u>
TOTAL	220

RURAL SCHOOLS IN THE COCHABAMBA DISTRICT, 1975

Central schools	78
Sectorial schools	<u>728</u>
Total	806

Classrooms

Constructed through 1973	1,338
Constructed in 1974	<u>207</u>
Total	1,545

Sports fields	444
School gardens	197
School land	887 hectares

NUMBER OF GRADES, COCHABAMBA DISTRICT, 1975

	<u>Number of Grades (Classes)</u>	<u>Number of Students</u>
Pre-primary	253	4,168
1st Grade	785	16,500
2nd "	642	9,713
3rd "	396	5,889
4th "	207	3,106
5th "	121	1,980
6th "	39	*
7th "	22	*
8th "	<u>15</u>	*
Total	2,480	

*Data not available.

PERSONNEL OF THE COCHABAMBA DISTRICT, 1975

Central office staff	27
Nuclear School Directors	75
Central school teachers	488
Central school specialist	177
Agriculture	30
Health	44
Home economics	38
Crafts and recreation	65
Sectoral school teachers	1,068
Total teachers	1,808
Men	878
Women	930
Normal school graduates	1,550
Certified by seniority	160
Certified by in-service training	24
Interim teachers (non-certified)	74

RURAL STUDENTS IN BASIC CYCLE (GRADES 1-5) COCHABAMBA DISTRICT, BY AGE AND SEX, NOVEMBER 1974

		<u>AGES</u>														
<u>GRADES</u>		<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>TOTAL</u>	
1	Boys	1,836	3,890	1,715	920	379	159	63	33	16	2	3	-	-	9,016	Boys
	Girls	1,554	3,161	1,499	775	296	107	66	16	7	3	-	-	-	7,484	Girls
	Total	3,390	7,051	3,214	1,695	675	266	129	49	23	5	3	-	-	16,500	Total
2	Boys	26	727	1,902	1,336	877	354	203	127	60	30	10	-	-	5,652	Boys
	Girls	16	697	1,415	773	629	320	148	46	14	3	-	-	-	4,061	Girls
	Total	42	1,424	3,317	2,109	1,506	674	351	173	74	33	10	-	-	9,713	Total
3	Boys	-	1	433	985	947	498	396	239	111	45	8	2	-	3,665	Boys
	Girls	-	8	393	587	552	289	231	110	47	5	1	1	-	2,224	Girls
	Total	-	9	826	1,572	1,499	787	627	349	158	50	9	3	-	5,889	Total
4	Boys	-	-	15	245	423	410	365	267	175	75	13	1	-	1,989	Boys
	Girls	-	-	17	155	297	321	214	118	64	15	6	-	-	1,117	Girls
	Total	-	-	32	400	720	641	579	385	239	90	19	1	-	3,106	Total
5	Boys	-	-	-	7	43	200	279	324	325	164	20	3	-	1,365	Boys
	Girls	-	-	-	5	28	99	149	174	111	44	5	-	-	615	Girls
	Total	-	-	-	12	71	299	428	498	436	208	25	3	-	1,980	Total
6	Boys	1,862	4,618	4,065	3,493	2,669	1,621	1,306	990	687	316	54	6	-	21,687	Boys
	Girls	1,570	3,866	3,324	2,295	1,802	1,046	808	464	243	70	12	1	-	15,501	Girls
	Total	3,432	8,484	7,389	5,788	4,471	2,667	2,114	1,454	930	386	66	7	-	37,188	Total

November 1974
Cochabamba District
Rural Schools

UNCLASSIFIED
ANNEX III
Page 10 of 11
Exhibit 4
Page 1 of 1

RURAL NUCLEAR SCHOOLS*
CLASSIFIED "B" AND "C"
(According to the Rural Learning Needs Analysis)

DISTRIBUCION DE ZONA DE SUPERVISION GESTION DE 1975

ZONA "A" PROF. RENE PARAVICINI

1. Nucleo Huayllani
2. Chifata
3. Nucleo Melga
4. " Candelaria
5. " Iluri Grande
6. " Rodeo
7. " Ichucollo

ZONA "B" PROF. GERONIMO ENCINAS

1. Nucleo Azirumarca
2. " Bella Vista
3. " Chapisirca
4. " Chojfucollo
5. " La Chulla
6. " Pairumani
7. " Pucara
8. Colegio Laboral Ceramica

ZONA "C" PROF. ABDON CABALLERO

1. Nucleo Collpa
2. " Challa
3. " Leque
4. " Parotani
5. " Ramadas
6. " Tunas Vinto
7. " Uchu Uchu
8. " Viloma

ZONA "D" PROF. DIONISIO SOLIZ

1. Nucleo Playa Ancha
2. " Apillapampa
3. " Sicaya
4. " Tacopaya
5. " Aguas Calientes
6. " Bolivar
7. Politécnico Buen Retiro

ZONA "E" PROF. ANIEAL OSINAGA

1. Nucleo Altamachi
2. " Cocapata
3. " La Aguada
4. " Lachiraya
5. " Piusilla
6. " Chillani

ZONA "F" PROF. GERMAN BUSTOS

1. Nucleo Calchani
2. " Charapaya
3. " Machaca
4. " Pocanche
5. " Punacachi
6. " Sanipaya
7. " Tiquirpaya
8. " Yayani

ZONA "G" PROF. RUBEN ESPINOZA

1. Nucleo Huafacota
2. " Mendez Mamata
3. " Santa Rosa
4. " San José
5. " Matarani
6. " Tijrascka
7. Normal Recreaciones Tipo 2

ZONA "H" PROF. HUGO JIMENEZ TAMEZ

1. Nucleo Esc. Tolata
2. " Laguna Carmen
3. " Santa Lucía
4. " Ana Rancho
5. " Chilijohi
6. " Quecoma
7. " Siches
8. Escuela Normal Promotores Salud
9. Nucleo Esc. Huasa Calle

ZONA "I" PROF. LUCIO BAUTISTA ORTIZ

1. Normal Paracaya
2. Colegio Laboral Tejidos V. Rivero
3. Colegio Papa Juan XXIII San Benito
4. Nucleo Esc. Requerón Kasa
5. " Koari
6. " Sacabambilla
7. " La Villa
8. " Camacho Rancho
9. Aplicación Paracaya
10. Nucleo Esc. Aramasí

ZONA "J" PROF. RENE ANTEZANA CAMACHO

1. Colegio Lab. La Bélgica
2. Normal Vicos
3. Experimental Copacabana
5. Nucleo Esc. Cuchu Muela
6. Picocuyo
7. Nucleo Esc. Cañadas
8. " Challacaba
9. " Collpa Ciaco
10. " Alalay

ZONA "K" PROF. FANOR VELASCO ZECARRA

1. Nucleo Esc. Wayapacha
2. " Epizana
3. " Leimifa
4. " La Habana
5. " Tin Tin
6. " Piocko

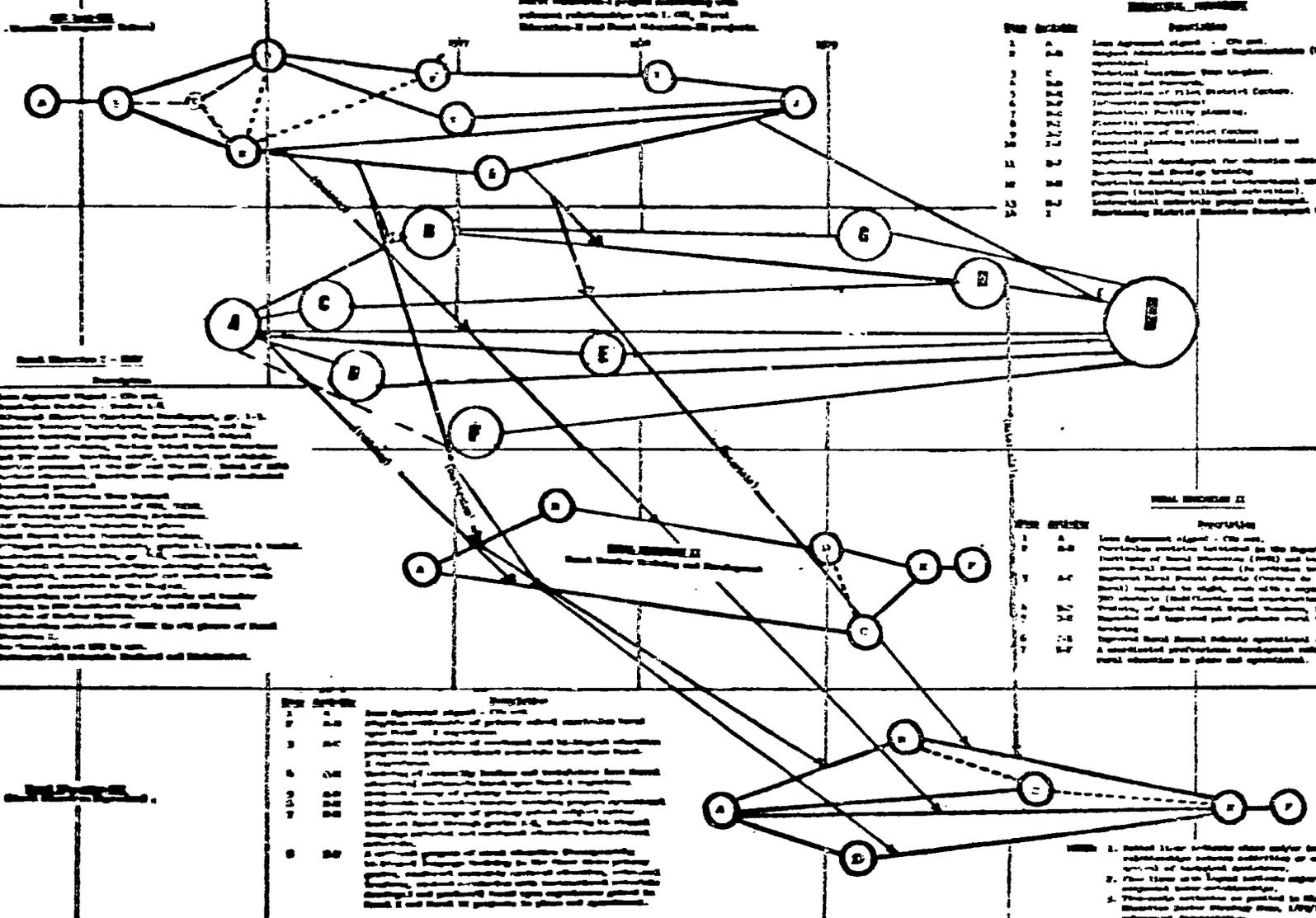
* Rural Education I Project sites
are underlined.

NOTE: The following sites in the Chapare or Aiquile area are classified "B" or "C": El Cercado, Ibucho, Novillero, Paractito.

Misunt is in Zone B and is classified "A".

EDUCATION SECTOR STRATEGY

Several Education-4 projects interlocking with relevant relationships with I. 020, Rural Education-2 and Rural Education-33 projects.



EDUCATION SECTOR STRATEGY

Proj. Number	Description	
1	1.01	Loan Agreement signed - 1964
2	2.01	Project Administration and Implementation (PAAI) operations
3	3.01	Technical Assistance from Unesco
4	4.01	Planning and Research
5	5.01	Development of State District Councils
6	6.01	Technical Assistance
7	7.01	Structural Facility Planning
8	8.01	Financial Management
9	9.01	Construction of District Councils
10	10.01	Financial planning (unsubsidized and subsidized)
11	11.01	Technical development for education administration
12	12.01	Recruitment and Training Institute
13	13.01	Operation Development and Institutional Assistance Program (including bilingual education)
14	14.01	Institutional development program development
15	15.01	Strengthening District Councils Development Center

RURAL EDUCATION II

Proj. Number	Description	
1	1.01	Loan Agreement signed - 1964
2	2.01	Technical assistance provided by the Republic
3	3.01	Instruction of Rural Education (IRE) and focus on
4	4.01	Rural Education Institute (REI) studies for IRE
5	5.01	Support Rural School projects (primary or secondary level) operated in night, with or without the
6	6.01	REI Institute (with Research and Development)
7	7.01	Operation of Rural School Project Institute, IRE in
8	8.01	Research and technical post graduate work (Master's level)
9	9.01	Support Rural School Institute operations (S)
10	10.01	A specialized performance development within the
11	11.01	Rural Education Institute and operations

RURAL EDUCATION III

Proj. Number	Description	
1	1.01	Loan Agreement signed - 1964
2	2.01	Project Administration of primary school operations from
3	3.01	Project Administration of secondary and technical education
4	4.01	Operation and maintenance of non-subsidized rural school
5	5.01	Construction of secondary schools and technical schools from
6	6.01	Operation and maintenance of rural school with a
7	7.01	Technical assistance for secondary school operations
8	8.01	Technical assistance for primary school operations
9	9.01	Technical assistance for secondary school operations
10	10.01	Technical assistance for primary school operations
11	11.01	Technical assistance for secondary school operations
12	12.01	Technical assistance for primary school operations
13	13.01	Technical assistance for secondary school operations
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98	98.01	Technical assistance for primary school operations
99	99.01	Technical assistance for secondary school operations
100	100.01	Technical assistance for primary school operations

1. Rural Education Institute (REI) studies for IRE
 2. The REI Institute (with Research and Development)
 3. Operation of Rural School Project Institute, IRE in
 4. Research and technical post graduate work (Master's level)

UNC. JPTED
 ANNEX IV
 Page 1 of 17
 Exhibit 1

RURAL EDUCATION I

COMPONENTS	THE FRAME				
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BOLIVIA-EDUCATIONAL DEVELOPMENT STRATEGY-1974-1981

		CALENDAR YEARS										
		74	75	76	77	78	79	80	81			
1974 ADMIN REFORM B INSTRUCT DEVELOPMENT	1	SIGN LOAN AGREEMENT - MEET CONDITIONS PRECEDENT										
	2	COMPLETE CENTERS										
	3	PREPARE OVERALL TRAINING PLAN, PROGRAM BUDGET										
	4	TRAINING - ADMIN PERSONNEL										
	5	TRAINING - DISTRICT LEVEL										
	6	TRAINING - SCHOOL LEVEL										
	7	EVALUATION & REVISIONS - TRAINING										
	8	INITIAL SURVEY - INSTRUCTIONAL MATERIAL NEEDS										
	9	CURRICULUM RESEARCH BASED ON SURVEY										
	10	ADOPT INSTRUCTIONAL MATERIALS POLICY BASED ON SURVEY & RESEARCH										
	11	PUBLISH REGULAR TEST BOOKS & MANUAL MATERIALS PRIMARY & NORMAL										
	12	PUBLISH LIMITED BILINGUAL MATERIALS										
	13	PUBLISH BILINGUAL AND SPANISH EDUCATION MATERIALS TO BULE										
	14	ESTABLISH RESPONSIBILITY WITHIN MINISTRY FOR EDUCATIONAL A-YEAR FACILITIES COUNTRIES										
1976 RURAL TEACHER DEVELOPMENT B	1	SIGN LOAN AGREEMENT - MEET CONDITIONS PRECEDENT										
	2	NORMAL SCHOOL TEACHER DEVELOPMENT - IN-SERVICE IN COUNTRY & OTHER TEACHERS										
	3	CURRICULUM REFORMS FOR NORMAL SCHOOL STUDENTS - RELEVANT CURRICULUM										
	4	PHYSICAL FACILITIES										
	5	USE VISITING PROFESSOR PROGRAM										
	6	USE PUBLICATIONS, SHORT COURSES, etc.										
	1977 RURAL EDUCATION B	1	SIGN LOAN AGREEMENT - MEET CONDITIONS PRECEDENT									
		2	TRAINING OF COMMUNITY LEADERS AND TECHNICIANS NATIONWIDE - BASED ON EXPERIENCE OF TS LOAN									
		3	FURTHER REVISION AND MODIFICATION AND ADOPTION PRIMARY SCHOOL CURRICULUM NATIONWIDE (TS LOAN EXPERIENCE)									
		4	REVISIONS TO CURRICULUM AND ADOPTION OF NON-FORMAL EDUCATIONAL MATERIALS NATIONWIDE									
		NATIONAL SURVEY OF RURAL SCHOOL FACILITIES AND ADAPTABILITY TO TS LOAN CONCEPT										
		EVALUATION, REORDERING OF PHYSICAL PART										

RURAL EDUCATION I - TECHNICAL ASSISTANCE TIME FRAME AND PERT

UNCLASSIFIED
ANNEX IV
Page 4 of 17
Exhibit 4
Page 1 of 1

1975 1976 1977 1978 1979 1980
Oct to Dec Jan Apr July Oct Jan Apr July Oct Jan Apr July Oct Jan Apr July Oct Dec

Technical Assistance

A. Long Term (Grant Funded)

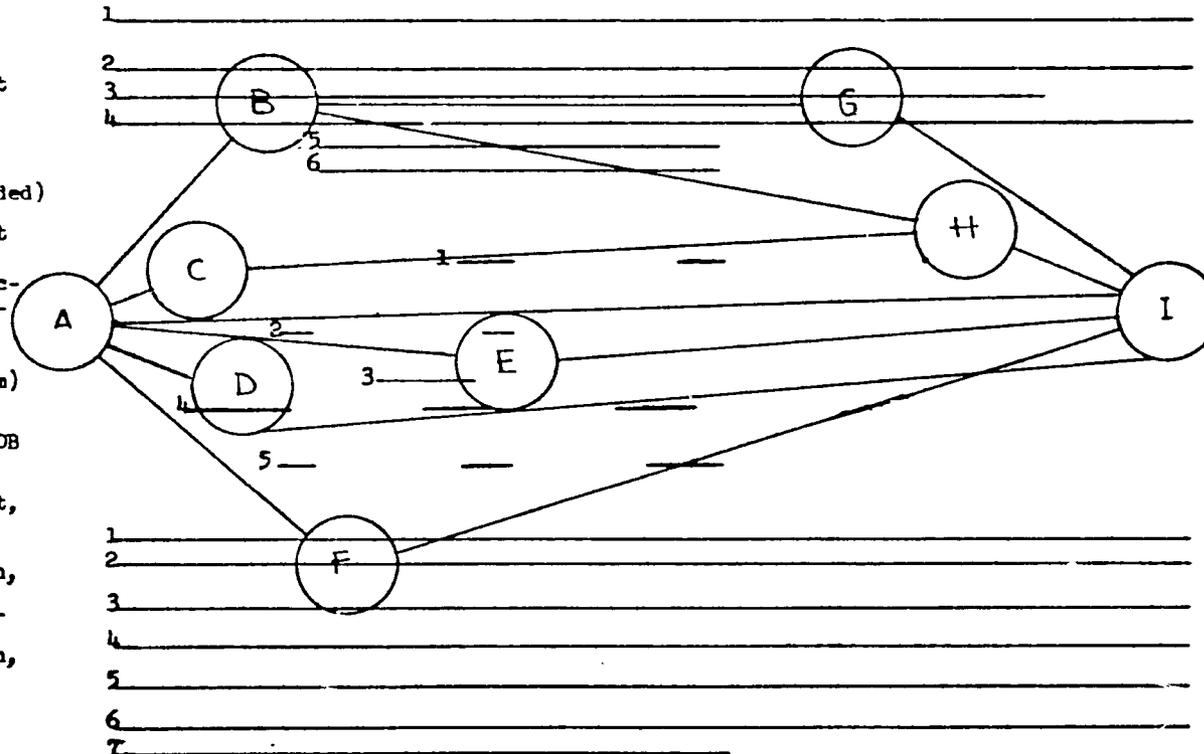
1. Rural Education Planning Advisor
2. Curriculum and Instructional Materials Specialist
3. Bilingual Education Specialist
4. Rural Normal School Advisor
5. Industrial Arts Specialist
6. Educational Radio Specialist

B. Short Term Consultants (Loan Funded)

1. Education Materials Consultant (6mm)
2. Evaluation of Normal School Activities, Facilities-Use, Curriculum and Training (6 mm)
3. Evaluation of Nuclear School Systems and Bilingual Ed.(6 mm)
4. Non-Formal Education (12 mm)
5. *

C. Bolivian Technical Assistance (GOB Funded) 1/ 2 mm/yr.

1. Bilingual Education Spec. list, La Paz
2. Educator/Linguist, Cochabamba
3. Rural Normal School Technician, RNS, Vacas
4. Curriculum and Materials Technician, Cochabamba
5. Bilingual Education Technician, Cochabamba
6. Non-formal Ed. Technical Coordinator, Cochabamba
7. Project Engineer



1/ All positions are GOB funded except Project Engineer. He will be paid from loan funds.

* Education Consultant (2 people, 20 mm)

— Technical Assistance
○ PERT Activities as described on PERT Chart.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

UNCLASSIFIED -
ASPCA IV - Page 5 of 17
Exhibit 5 - Page 1 of 13

Fund FY 80
Total U.S. Funding \$5,000,000
1985

Project Title & Number: Rural Education I (511-0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	DISCRETARY ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To establish a more equitable educational system which is institutionally and substantively responsive to the needs of rural Bolivia.</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> 1. Increase in the retention rate of rural students from 14% in 1970 to 21% in 1980 and to 40% by 1990. 2. Reduce the rate of salary to support costs from 95% to 90% by 1980. 3. Increase the enrollment in rural primary grades by approximately 5% per year, that is increase the rural enrollment from 87% of those eligible in 1973 to 92% in 1980. 4. Decrease in illiteracy rate from an estimated 80% to 70% by 1985. 	<ul style="list-style-type: none"> - Records of MEC on rural school enrollment, cohort flow, grade distribution, repetition rate and retention rate. - A test of learning outcomes to establish literacy rates. - A review of records and special studies of contract advisors. - Accounting records and evaluation reports. 	<p>Assumptions for achieving goal target:</p> <ul style="list-style-type: none"> - That GOR will continue to increase its concentration of resources for education and economic development in rural Bolivia. - That the decentralized administrative reforms being implemented through the Education Management Project, and the prototype system developed by this Project can be successfully replicated in all departments of Bolivia. - That the rural people will become increasingly responsive to and the MEC will become more supportive of the initiatives undertaken in the process of decentralizing the education system. - That the GOR will provide essential financial support for educational development. - That Government policies will motivate education systems to produce better teachers and provide a better educational environment for students. - That adequate foreign assistance will be provided.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

UNCLASSIFIED
ANNEX IV - Page 6 of 17
Exhibit 5 - Page 2 of 13

Life of Project: _____
From FY 75 to FY 80
Total U.S.F. Funding \$5,000,000
Date Prepared: _____

Project Title & Number: Rural Education I (511-0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose</p> <p>To test various systems for improving the quality and efficiency of rural education in twenty rural locations in the Department of Cochabamba by December 1980.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> 1. The NEDC will be analyzing requirements, and initiating curricula changes in the Normal School at Vacas and the nuclear systems yearly. 2. The Rural Normal School at Vacas will be providing trained professionals for both the Normal and Non-formal Education requirements in the rural areas of the Department. 3. The enrollment of females in the rural primary grades will have increased by 40% in the 20 Nuclear School Systems and by at least 10% in the other areas of the Department of Cochabamba. 4. The enrollment of males in the rural education program will have increased by 25% in the 20 Nuclear School Systems and by at least 10% in other areas in the Department. 5. The retention rates in the 20 Nuclear School Systems will have doubled in grades 4-8. 6. There will be a growing community interest in the selection of and implementation of reforms in Primary curricula in NFE programs in the 20 Nuclear Sites. 	<p>Verification of Conditions Expected at End of Project</p> <ul style="list-style-type: none"> - Actual observation by educational experts and records of MEC. - Observation and comparison of old and new curriculum for rural education, on spot check basis at several central, sectional schools of the Rural Nuclear Systems. - Inspection and school records. 	<p>Assumptions for achieving purpose:</p> <ul style="list-style-type: none"> - That rural people in the target area will be responsive to educational changes in curriculum and non-formal education. - That training methods meet needs for training teachers in Bolivia. - That GOR will make available adequate funds to support and continue teacher training, curriculum development, non-formal education programs and related activities. - General increase from 1975 to 1980 based on total school population of 121,500 in 1975. <ul style="list-style-type: none"> a) from 34% in 1975 to 55% in 1980 based on female population of 63,180 in 1975. b) from 49% in 1975 to 63% in 1980 based on male population of 58,320 in 1975. * Daniere and Swett - Continuing Sector Assessment, Bolivia: Social Equity and Internal Efficiency of Bol. Primary Ed.

Project Title & Number: Rural Education I (511-0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS					MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of Outputs:						Assumptions for achieving outputs:
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>		
1. School Construction Program a. Sectional Schools repaired and/or refurbished - latrines, teachers' housing and new schools b. Central school facilities and new NFE facilities constructed as required c. Facilities for Normal School at Wocas increased from 400-500 and existing facilities repaired and refurbished d. Dormitories constructed to accommodate 350 students from outlying rural areas	25	75	100	-	-	1. Inspection, USAID and CORES	
2. Normal School Teachers, School Administrators, Rural Teachers and Non-formal Technicians trained in third countries: a. Technical training in non-formal education technology: 1) Non-formal curriculum development 2) Basic technology and programming 3) Technical track installation and management 4) Non-formal education technology b. General Training in Bilingual Education	5	7	8	-	-	2. Reports of advisors Observation of charged practices and work accomplished	
3. In-service Teachers Trained a. Staff oriented at Wocas to present in-service training seminars	5	-	-	-	-	3. Reports from NEDC and advisor	
	15	15	15	6	-		

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

DECLASSIFIED

ANNEX IV - Page 8 of 17
Exhibit 5 - Page 4 of 13

Life of Project _____
From FY _____ to FY 80
Total U.S. Funding \$6,675,000
Date Prepared _____

Project Title & Number: Rural Education I (511-0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS										
Outputs:	Magnitude of Outputs:		Assumptions for underlying outputs:										
b. Seven week teacher training seminars for primary school grades 1-5	<table border="1"> <tr> <th>1976</th> <th>1977</th> <th>1978</th> <th>1979</th> <th>1980</th> </tr> <tr> <td>500</td> <td>500</td> <td>500</td> <td>-</td> <td>-</td> </tr> </table>	1976	1977	1978	1979	1980	500	500	500	-	-		
1976	1977	1978	1979	1980									
500	500	500	-	-									
c. Seven week teacher training seminars for primary school grades 5-8	<table border="1"> <tr> <th>1976</th> <th>1977</th> <th>1978</th> <th>1979</th> <th>1980</th> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> <td>65</td> <td>-</td> </tr> </table>	1976	1977	1978	1979	1980	-	-	-	65	-		
1976	1977	1978	1979	1980									
-	-	-	65	-									
4. In-service Department Administrators Trained through on-the-job training		b. Reports from DEEC and advisors											
a. Seven week session for in-service primary grades 1-5 from bilingual, non-formal and curriculum development units	<table border="1"> <tr> <th>1976</th> <th>1977</th> <th>1978</th> <th>1979</th> <th>1980</th> </tr> <tr> <td>5</td> <td>5</td> <td>5</td> <td>-</td> <td>-</td> </tr> </table>	1976	1977	1978	1979	1980	5	5	5	-	-		
1976	1977	1978	1979	1980									
5	5	5	-	-									
b. Seven week session for grades 6-8	<table border="1"> <tr> <th>1976</th> <th>1977</th> <th>1978</th> <th>1979</th> <th>1980</th> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> </tr> </table>	1976	1977	1978	1979	1980	-	-	-	1	-		
1976	1977	1978	1979	1980									
-	-	-	1	-									
c. Administrator trained in bilingual education techniques	<table border="1"> <tr> <th>1976</th> <th>1977</th> <th>1978</th> <th>1979</th> <th>1980</th> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>-</td> <td>-</td> </tr> </table>	1976	1977	1978	1979	1980	1	1	1	-	-		
1976	1977	1978	1979	1980									
1	1	1	-	-									
5. Curricula Revision and Textbook Development													
a. Texts plus Teachers Guides G 1	25000												
Texts plus Teachers Guides G 2	27750												
Texts plus Teachers Guides G 4	18000 29200												
Texts plus Teachers Guides G 3	13500												
Texts plus Teachers Guides G 5	23200												
Texts plus Teachers Guides G 6, 7, 8	20000												
Non formal Texts	20000												
6. New Normal School Programs Instituted													
a. Curricular developed and approved													
b. Teachers Trained and materials prepared													
c. Students will begin to study the following course materials or track													
1. Technical Education Track	<table border="1"> <tr> <th>a.</th> <th>b.</th> <th>40</th> <th>60</th> <th>80</th> </tr> </table>	a.	b.	40	60	80							
a.	b.	40	60	80									
2. Radio Education Material	<table border="1"> <tr> <th>a.</th> <th>a/b.</th> <th>10</th> <th>15</th> <th>20</th> </tr> </table>	a.	a/b.	10	15	20							
a.	a/b.	10	15	20									
3. Bilingual Education Material	<table border="1"> <tr> <th>a.</th> <th>a/b.</th> <th>200</th> <th>300</th> <th>400</th> </tr> </table>	a.	a/b.	200	300	400							
a.	a/b.	200	300	400									
4. Non-Formal Education Material	<table border="1"> <tr> <th>a.</th> <th>b.</th> <th>a/b.</th> <th>b.</th> <th>b.</th> </tr> <tr> <td></td> <td>40</td> <td>60</td> <td>80</td> <td></td> </tr> </table>	a.	b.	a/b.	b.	b.		40	60	80			
a.	b.	a/b.	b.	b.									
	40	60	80										

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

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ANNEX IV - Page 9 of 17 Life of Project
Exhibit 5 - Page 5 of 13 From FY 76 to FY 80
Total U.S. Funding \$5,600,000
Date Prepared

Project Title & Number: Rural Education I (511 - 0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS					MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Output:	Magnitude of Output:						Assumptions for underlying outputs:
7. New Units in DEEC established and staffed	1976	1977	1978	1979	1980		
a. Planning Unit							
Primary Ed (Curricula Spec.)	x	x	x	x	x		
Non-Formal Ed and Community (Curricula Spec. & Tech. Organ.)	x	x	x	x	x		
Normal School Coordinator	x	x	x	x	x		
b. Evaluation Staff							
6.	x	x	2x	3x	4x		
a.							
b.							

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

UNCLASSIFIED
ANNEX IV - Page 10 of 17
Exhibit 5 - Page 6 of 13
Life of Project: From FY 75 to FY 80
Total U.S. Funding: \$1,574,000
Date Prepared: 1/78

Project Title & Number: Rural Education I (511-0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS						MEANS OF VERIFICATION	ASSUMPTIONS		
Inputs	Implementation Target (Type and Quantity)							Assumptions for providing inputs:		
AID	1976	1977	1978	1979	1980	Total				
<p>A. Technical Assistance - Grant Funded</p> <p>1. Rural Ed. Planning Adv./18 mm.^{1/}</p> <p>2. 1 Rural Normal School Adv./60 mm.</p> <p>3. 1 Curriculum & Instructional Materials Specialist/60 mm.</p> <p>4. 1 Bilingual Education Specialist 36 mm.^{1/}</p> <p>5. 1 Industrial Arts Specialist/24 mm.</p> <p>6. 1 Educational Radio Programmer/24 mm.</p>		75	75	75	75	300	Signed contracts.	<p>- Commodities will arrive when needed.</p> <p>- Government stability will permit building and training plans to be carried out.</p> <p>- GRN, contract and U.S. personnel will be competent.</p>		
<p>Total Grant Funded T.A.</p>	150*	-	75	75	75	375				
	150*	-	75	75	75	375				
	-	37	75	75	37	224				
	-	150*	-	-	-	150				
	-	150*	-	-	-	150				
	300	412	300	300	262	1,574				
<p>5 Short-term Consultants - Loan Funded</p>										
<p>a) 1 Education Materials Consultant/6 mm.</p>		9	10	-	-	19				
<p>b) 1 Evaluation of Normal School activities, facilities use, curriculum and training (in-service and pre-service) 6 mm</p>			36	-	-	36				
<p>c) 1 Evaluation of Nuclear School Systems and Bilingual Education/6 mm.</p>		37	-	-	-	37				
<p>d) 1 Non-formal Education Specialist/12 mm.</p>	24	24	24	-	-	72				
<p>e) 2 Education Consultants (Rural Education)/20 mm.</p>	37	37	50	-	-	124				
<p>8. Project Engineer (Bolivia; National/36 mm.</p>	20	20	20	-	-	60				
<p>Total Loan Funded T.A.</p>	21	90	179	-	-	350				

^{1/} Positions funded under Educational Management Project in 1977 and 1978.
* Initial contract funded for two years.

Analysis of Rural Learning Needs in Cochabamba^{1/}

By: Harry Peacock

INTRODUCTION

Eight to twelve percent of the rural population of Bolivia lives in situations which have been so protected that little visible evidence exists of their encounter with modern society, but the mass of campesino villages provide clearly distinguishable signs of the influence of modernism in social, political, and economic structures. Such signs may be used as indicators to distinguish varying degrees of acculturation. In order for education programs to have maximum effectiveness, this analysis of rural learning needs identifies steps that should be taken to identify the acculturation level of rural communities and appropriate strategies to be applied to them.

The idea of individually designed curriculum and methodology for each community would present a serious administrative problem. However, it should be possible to identify general levels of acculturation by villages or zones and to define educational and rural learning needs according to these levels. Thus the classification of communities into categories can facilitate development of structural designs which avoid the creation of major resistance to programming. The avoidance of cultural confrontation^{2/} allows acceleration of acculturation without extreme social disintegration and the placing

^{1/} Annex V is a summary of the Analysis of Rural Learning Needs in Cochabamba prepared by Mr. Peacock for this Project. The complete analysis has been forwarded to AID/W under separate cover.

^{2/} Montaña Mario, Elementos de Antropología Social Boliviana, La Paz, 1972 Chapter IX, pp. 109-116.

In this Bolivian publication, Montaña treats specifically the problems of cultural confrontation in Bolivia. Cultural confrontation, the head-on encounter of two different value systems calling for acceptance of one and rejection of the other, is significantly reduced through the bilingual introduction to school. A major aim of the rural education program is to allow the rural population to meet Western-Urban society on the terms of the rural community. There can be no question that traditional Bolivian society is anxious to engage in cultural borrowing and this is the process which rural education should serve. The major challenge perhaps is for campesinos to "learn to be" through interaction with more modernized segments of society without feeling the compulsion to "learn to be like" those other groups.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

DECLASSIFIED

WORK IV - Page 12 of 17
Exhibit 5 - Page 8 of 13
Life of Project: From FY 75 to FY 80
Total U.S. Funding: \$6,675,000
Date Prepared:

Project Title & Number: Rural Education I (511-0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS FOR PROVIDING INPUTS						
Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs						
3. 200 Sectional Schools of the 20 Nuclear School Systems	<table border="1"> <thead> <tr> <th>1976</th> <th>1977</th> <th>1978</th> <th>1979</th> <th>1980</th> <th>Total</th> </tr> </thead> </table>	1976	1977	1978	1979	1980	Total		
1976	1977	1978	1979	1980	Total				
a. Furnishing for buildings - blackboards, tables, chairs, etc.	<table border="1"> <tr> <td>107</td> <td>200</td> <td>95</td> <td>-</td> <td>-</td> <td>402</td> </tr> </table>	107	200	95	-	-	402		
107	200	95	-	-	402				
b. Library books	<table border="1"> <tr> <td>20</td> <td>10</td> <td>10</td> <td>-</td> <td>-</td> <td>40</td> </tr> </table>	20	10	10	-	-	40		
20	10	10	-	-	40				
c. Agriculture tools	<table border="1"> <tr> <td>10</td> <td>5</td> <td>5</td> <td>-</td> <td>-</td> <td>20</td> </tr> </table>	10	5	5	-	-	20		
10	5	5	-	-	20				
d. Teacher housing furniture	<table border="1"> <tr> <td>25</td> <td>31</td> <td>-</td> <td>-</td> <td>-</td> <td>56</td> </tr> </table>	25	31	-	-	-	56		
25	31	-	-	-	56				
e. Carpentry tools	<table border="1"> <tr> <td>5</td> <td>3</td> <td>2</td> <td>-</td> <td>-</td> <td>10</td> </tr> </table>	5	3	2	-	-	10		
5	3	2	-	-	10				
b. Materials and Supplies for Training Courses	<table border="1"> <tr> <td>167</td> <td>249</td> <td>112</td> <td>-</td> <td>-</td> <td>528</td> </tr> </table>	167	249	112	-	-	528		
167	249	112	-	-	528				
a. 120 participants during 3 weeks at \$5 per week per participant	<table border="1"> <tr> <td>3</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>3</td> </tr> </table>	3	-	-	-	-	3		
3	-	-	-	-	3				
b. 500 rural teachers in-service training course during 7 weeks, for three years at \$5 per week per participant	<table border="1"> <tr> <td>18</td> <td>18</td> <td>17</td> <td>-</td> <td>-</td> <td>53</td> </tr> </table>	18	18	17	-	-	53		
18	18	17	-	-	53				
5. Materials and Supplies for Non-formal Education	<table border="1"> <tr> <td>21</td> <td>18</td> <td>17</td> <td>-</td> <td>-</td> <td>56</td> </tr> </table>	21	18	17	-	-	56		
21	18	17	-	-	56				
a. Furnishing and Equipment	<table border="1"> <tr> <td>31</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>31</td> </tr> </table>	31	-	-	-	-	31		
31	-	-	-	-	31				
b. Supplies*	<table border="1"> <tr> <td>4</td> <td>2</td> <td>3</td> <td>-</td> <td>-</td> <td>9</td> </tr> </table>	4	2	3	-	-	9		
4	2	3	-	-	9				
6. Furnishing, Equipment and Supplies for Curriculum Dev. Commissions, Bilingual Education and Dev. of New Rural Curriculum	<table border="1"> <tr> <td>35</td> <td>2</td> <td>3</td> <td>-</td> <td>-</td> <td>40</td> </tr> </table>	35	2	3	-	-	40		
35	2	3	-	-	40				
b. 14	<table border="1"> <tr> <td>14</td> <td>6</td> <td>3</td> <td>-</td> <td>-</td> <td>23</td> </tr> </table>	14	6	3	-	-	23		
14	6	3	-	-	23				
7. Instructional Materials & Supplies									
a. Bilingual Educational (Material Production)									
1) Development and Publication of Grade I Material	<table border="1"> <tr> <td>1</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> </tr> </table>	1	-	-	-	-	1		
1	-	-	-	-	1				
a) 10,000 Reading Primer 150 p. (Offset)	<table border="1"> <tr> <td>a. 1</td> <td>2</td> <td>4</td> <td>-</td> <td>-</td> <td>7</td> </tr> </table>	a. 1	2	4	-	-	7		
a. 1	2	4	-	-	7				
b) 10,000 Int. Readers 150 p. (Offset)	<table border="1"> <tr> <td>b. 1</td> <td>2</td> <td>4</td> <td>-</td> <td>-</td> <td>7</td> </tr> </table>	b. 1	2	4	-	-	7		
b. 1	2	4	-	-	7				
c) 750 Teachers Manual (Spanish as a 2nd. language)	<table border="1"> <tr> <td>c. 2.</td> <td>2.</td> <td>3.5</td> <td>-</td> <td>-</td> <td>7.5</td> </tr> </table>	c. 2.	2.	3.5	-	-	7.5		
c. 2.	2.	3.5	-	-	7.5				
* From the US\$ 4 allocated in 1976, US\$ 2 represents grant funds support for Non-formal program supplies.									

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

DECLASSIFIED

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Exhibit 5 - Page 9 of 135

FY 75 to FY 80

Total U.S. Funding \$6,674,000

Date Prepared

Project Title & Number: Rural Education I (511 - 0454)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	REPORT/AGENCY ACTIONS
Inputs:	Implementation Target (Type and Quantity) (UNIT)		Assumptions for providing inputs
d) 750 Teachers Manual (Math.) 75 p. (Offset)	d. .53 - - - .53		
e) 750 Syllable & World Building Manual (Offset)	e. 1.25 - - - 1.25		
f) 750 Teachers Manual (Writing)	f. .50 - - - .50		
g) 2,000 Sets of Cuisenaire Color Rods	g. 4 - - - 4.		
2) Development and Publication of Grade II Teaching Materials	- 1 - - - 1.		
a) 8,500 Intermediate Readers	a. - 6.50 - - - 6.50		
b) 8,500 Social Studies Reader	b. - 6.50 - - - 6.50		
c) 8,500 First Spanish Readers	c. - 5 - - - 5.		
d) 750 Teachers Transitional Reading Manual	d. - .50 - - - .50		
e) 750 Teachers Manual (writing guide, dictation and simple composition)	e. - .60 - - - .60		
f) 750 Teachers Guide (Math)	f. - .50 - - - .50		
3) Development & Publication of III Grade Teaching Materials	- - 1 - - 1.		
a) 7,000 Bilingual Social Studies Text	a. - - 6 - - 6.		
b) 7,000 Bilingual Natural Science & Environment Text	b. - - 6 - - 6.		
c) 7,000 Math Work Guide Books	c. - - 6 - - 6.		
d) 600 Teachers Programmed Writing Guide-book	d. - - .45 - - .45		
e) 600 Programmed Math. Schedules	e. - - .45 - - .45		
f) 7,000 Introductory Grammar (Quechua) Revised	f. - - 6 - - 6.		
b. National Textbook Commission			
1) Development of new Rural Curriculum	1) 2 - - - 2.		
2) Publishing new curriculum (1000 copies)	2) 6 - - - 6.		

PROJECT DESIGN SUMMARY UNCLASSIFIED
 LOGICAL FRAMEWORK

ANNEX IV - Page 14 of 17
 Exhibit 5 - page 10 of 17

Project Title & Number: Rural Education I (511-0454)

		1976	1977	1978	1979	1980	Total
3) Materials Production -	3)		1				1.
4th. Gr. 375 Teachers Guides							
Language			.60				.60
375 Teachers Guides							
Math.			.60				.60
5000 Reader IV ¹			4.50				4.50
2500 Reader IV ²			2.50				2.50
5000 Reader S.S. & Sc.			4.				4.
5000 Math. Textbook			4				4.
4) Materials Production	4)			1			1.
5th. Gr. 4,500 S.S. Readers				4			4.
4,500 Science Readers				4			4.
4,500 Math. Text				4			4.
5) Materials Production	5)			1			1.
6th. Gr. 2,500 Text 1				2.50			2.50
2,500 Text 2				2.50			2.50
2,500 Text 3				2.50			2.50
2,500 Text 4				2.50			2.50
Math.				2.50			2.50
6) Materials Production	6)			1			1.
7th. Gr. 1,800 Text 1				2.50			2.50
1,800 Text 2				2.50			2.50
1,800 Text 3				2.50			2.50
1,800 Text 4				2.50			2.50
7) Materials Production	7)			1			1.
8th. Gr. 1,500 Text 1				2.50			2.50
1,500 Text 2				2.50			2.50
1,500 Text 3				2.50			2.50
1,500 Text 4				2.50			2.50
8) Rural Vocational							
a. Grade VI				7			7.
b. Grade VII				7			7.
c. Grade VIII				6			6.
		18.75	42.80	98.18			159.73

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

UNCLASSIFIED

APPENDIX IV - Pg. 15 of 15
Exhibit 5 - Pg. 11 of 11
Date: 11/15/76
U.S. Funding: \$1,150,000

Project Title & Number	1976	1977	1978	1979	1980-85 (000)	Total	
C. Participant Training							
1. Third Country Training:							Pre-Age., FIC/76
40 participants to Ecuador/Peru 2 weeks each group of 10 Each Group 2 Bilingual Ed. 5 Nucleo Directors 3 Normal School Teachers	1.	36.50				36.50	
2. Orientation Seminar (5 weeks) General Orientation 120 participants (20 nucleo directors, 80 sectional teachers, and 6 normal school teachers, 2 supervisors and 2 district admin- istrative personnel plus 10 MEC participants)	2.	26.50				26.50	
3. In-Service Training Courses 500 people, 7 weeks (3 years)	3.	154	154	153		461.	
4. In-Service Training Course 65 people, teachers of 6, 7, 8 grades plus Materials Comm., 6 people (7 weeks)	4.			21		21.	
5. Staff Training Courses 30 people - 4 weeks	5.	5.50	5	5		15.50	
6. Non-Formal Education Third Country Training 20 participants 1 1/2 months	6.	19.50				19.50	
		242.	159	179		580.	
D. Curriculum Reform and Design							
1. Bilingual Education Curr. Materials Team (6 people). Transportation and Per Diem Local Travel	1.	13	13	13		39.	Pre-Age.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

UNCLASSIFIED

ANNEX IV-Page 16 of 177
Exhibit 5 Page 12 of 12

Life of Project
From FY 75
to FY 80
Total US\$ 1,874
Cost in US\$

Project Title & Number Rural Education I (511-0454)

	1976	1977	1978	1979	1980	Total	
	US\$ (000)						
2. Curriculum Reform Commission (17 people, 6 mos.), Transportation and Per Diem, Local Travel	2.	17				17.	
3. Curriculum Materials Commission (6 people, 8 mos.) Transportation and Per Diem, Local Travel	3.	10	10	11		31.	
		40	23	24		87	
5. Socio Linguistic Research		70	70	-		140	Signal Contracts
7. Non-Formal Education							
a. Training to Community Groups		17	17	17		51	
b. Organization of Council Seminars		13	13	14		40	
c. Research and Operation		7	7	7		21	
d. Evaluation		4*	4*	4*		12	
		41	41	42		124	
8. Improved Facilities							
1. Building Improvement and Construction at Vacas Normal School		400	278			678	
2. Building refurbishments and constr. of new facilities at 20 Central Schools			256	100		356	
3. Construction of new facilities and refurbishment of existing classrooms at 200 Sectional schools			640	200		840	
		400	1,174	300		1,874	

* The US\$ 12 represents grant funds to cover expenditures in the evaluation (design, surveys and interpretation).

PROJECT DESIGN SUMMARY UNCLASSIFIED
 LOGICAL FRAMEWORK

ANNEX IV - Page 17 of 17
 Exhibit 5 - Page 13 of 13
 Life of Project: From FY 76 to FY 80
 Total U.S. Funding \$2,678,000
 Date Prepared

Project Title & Number: Rural Education I (511-0454)

	1976	1977	1978	1979	1980	Total
II. GOB and Community Inputs			US\$ (000)			
A. Salary of Cochabamba Director of Activities, Travel and Per Diem	16	16	16	16	20	84
B. Salaries for out-of-country trainees	150	150				300
C. Salaries Non-Formal educators	80	80	81	81		322
D. School lunch support	15	15	15	15		60
E. Building maintenance	50	50	50	50		200
F. Labor for Nuclear System building and remodeling	438	153				591
G. Land for RNS and Nuclear School Systems	14					14
H. Salaries for RNS Teachers, Summer Salaries	9	9	9	3		30
I. Furnishing, Equipment materials and supplies	190	53	33	27	22	325
J. Salaries for Curriculum Reform and Design Commission	70	43	43	44		200
K. Salaries for Shop teachers	140	140	140	140	140	700
L. Technical Assistance	53	63	63	63	64	316
M. Research Operation Non-Formal Education	3	2	2			7
N. Lodging and food Support by Communities	2	2	3			7
O. Financial Support to Community Programs	49	50	51			150
	<u>1,289</u>	<u>826</u>	<u>506</u>	<u>439</u>	<u>246</u>	<u>3,306</u>

Analysis of Rural Learning Needs in Cochabamba^{1/}

By: Harry Peacock

INTRODUCTION

Eight to twelve percent of the rural population of Bolivia lives in situations which have been so protected that little visible evidence exists of their encounter with modern society, but the mass of campesino villages provide clearly distinguishable signs of the influence of modernism in social, political, and economic structures. Such signs may be used as indicators to distinguish varying degrees of acculturation. In order for education programs to have maximum effectiveness, this analysis of rural learning needs identifies steps that should be taken to identify the acculturation level of rural communities and appropriate strategies to be applied to them.

The idea of individually designed curriculum and methodology for each community would present a serious administrative problem. However, it should be possible to identify general levels of acculturation by villages or zones and to define educational and rural learning needs according to these levels. Thus the classification of communities into categories can facilitate development of structural designs which avoid the creation of major resistance to programming. The avoidance of cultural confrontation^{2/} allows acceleration of acculturation without extreme social disintegration and the placing

^{1/} Annex V is a summary of the Analysis of Rural Learning Needs in Cochabamba prepared by Mr. Peacock for this Project. The complete analysis has been forwarded to AID/W under separate cover.

^{2/} Montaña Mario, Elementos de Antropología Social Boliviana, La Paz, 1972 Chapter IX, pp. 109-116.

In this Bolivian publication, Montaña treats specifically the problems of cultural confrontation in Bolivia. Cultural confrontation, the head-on encounter of two different value systems calling for acceptance of one and rejection of the other, is significantly reduced through the bilingual introduction to school. A major aim of the rural education program is to allow the rural population to meet Western-Urban society on the terms of the rural community. There can be no question that traditional Bolivian society is anxious to engage in cultural borrowing and this is the process which rural education should serve. The major challenge perhaps is for campesinos to "learn to be" through interaction with more modernized segments of society without feeling the compulsion to "learn to be like" those other groups.

of the individual in a situation of dissonance between externally promoted goals and identification with local community norms.²

The system of community classification⁴ used in this paper follows sociological-anthropological criteria rather than geographic delineations. The basis for the distinction between communities in categories "A", "B" and "C"⁵ is related to degree of acculturation. Communities designated "A" reflect the highest level of acculturation into modern society.

Specific factors utilized in the classification are as follows:

"A" type communities -

1. Rural school teachers commute from urban areas to teach in rural schools.
2. Rural schools operate on a "continuous schedule" (four to six hours).
3. Although the community may maintain an agricultural base, there is a high level of involvement in commerce.
4. Both Quechua and Spanish are spoken.
5. Some of the women and all of the men use Western dress.

³/ Psycho-social identity develops out of a gradual integration of all identifications. (Erikson, *Childhood and Society*, W. W. Norton & Co. Inc., New York, 1963, p. 241). When the child enters school he normally has a highly developed nucleus of identity. If the encounter with new models does not require the rejection of existing identity patterns, the child may continue the integration process without the trauma of identity crisis. Consequently, recognition of cultural patterns and community expectations (language, economic activities, authority patterns and tabus) is crucial.

⁴/ The criteria for community classification were suggested by Sr. Robert Carvajal, Bolivian specialist in Quechua language and culture; confirmation was provided by anthropologists Luis Rojas A. and Mario Montaña, linguist Henry Spent, rural teachers and rural school supervisors. The Project Committee and the MEC have used this criteria along with other information from the MEC to design the Project and select sites.

⁵/ For a list of the Project sites according to the classification refer to Annx III, Exhibit 2.

"B" type communities -

1. Agriculture or crafts provide the basis for the economy.
2. Quechua with a mixture of Spanish words is spoken.
3. Women wear native "pollera" dress. Men wear Western dress.
4. Rural teachers live in the community throughout the week.

"C" type communities -

1. Quechua is spoken with very little Spanish influence.
2. Some men wear traditional homespun clothing.
3. The local economy revolves around agriculture and native crafts.
4. Rural teachers live in the communities full time.

The comparison between community types "A", "B", "C" in regard to their relative interest in a given learning need provide guidelines for:

1. the formulation of curriculum content with identification of priority areas.
2. the selection of strategies for communities where pilot activities could be best executed.
3. the development of a program which would be most easily adapted to execution on a national level.

ANALYSIS OF RURAL LEARNING NEEDS

The analysis of the rural learning needs of male and female rural school children and rural communities in the Department of Cochabamba centers on those needs as perceived by the three previously defined categories of rural communities ("A", "B", "C").

This design also provides for comparison of the relative importance of identified learning needs as rated by communities of types "A", "B", "C"^{6/}.

The rating scale applied in the design is as follows:

6	very high interest
5	high interest
4	low interest
3	indifferent
2	mildly opposed or resistant
1	highly opposed or resistant
0	very highly resistant

The Department of Cochabamba area was categorized by eleven rural education supervisors of the DEDC. Twenty-seven nucleos were classified as being located in "A" type communities, twenty-seven in "B" type communities, and twenty in "C" type communities. An analysis of discrepancies in learning needs as perceived for communities of types "A", "B", and "C" reveals a significant differentiation between the learning needs of "A" and "B" ^{7/}

6/ In a given community those educational needs which are rated very low interest or where resistance is indicated should be treated with extreme caution. For example, Anthropologist Mario Montaña explains that in the case of "C" type communities the resistance to some activities commonly related to reduction of infant mortality is based on the belief that if a parent shows too much concern for a child before weaning, the spirits will take the child. The basic problem is not one of lack of concern or lack of love. Recognition of the probability of cross-cultural conflict (cultural confrontation) may allow rural school workers to develop, through consultation with members of the community, practices which will achieve mutually desired aims without direct violation of cultural norms. It might result that care, vaccination of infants and improved early feeding patterns would not be noticed by the spirits.

Those learning needs which are rated specially high are points where major emphasis must be given if the credibility of the educational process is to be enhanced.

7/ Curriculum reform, teacher training and materials development components strategies have not been adjusted to reflect these cultural variations, rather the Project Committee has provided for sufficient flexibility in the overall design; e.g. provisions for teachers to develop materials to meet local variations.

type communities. At the same time, while some differences appear, there is a high degree of similarity in the perceived learning needs of communities of types "B" and "C". (See pages 6 and 7). This pattern was consistent with regard to the adult female population, the adult male population, and, to a somewhat lesser degree, with the school age population, both male and female.

Thus, the conclusions which may be drawn are the following:

- (1) A similar curriculum design and implementation strategy might be applied to those nucleos classified "B" and "C". "A" type nucleos would require significant program adjustment in formal education activities and even greater variation in the approach to non-formal education.
- (2) There is a tendency for "A" type communities to request urban-oriented education. (In part this tendency may be attributed to a reflection of the attitude of the rural teachers, themselves, who seek the higher status of urban teachers).^{8/}
- (3) Since the strategy suggested by the technical team from the MEC calls for a high level of community participation in the development of specific content and in the direction of non-formal education activities, a reliance on community organization and involvement requires a level of solidarity which is not consistent with the urban-oriented "A" type communities.
- (4) It would therefore not be advisable to attempt to include the most highly acculturated zones in a pilot program stressing community organization and bilingual teaching since the communities where Spanish is commonly spoken and where children enter school partially bilingual present strong resistance to bilingual instruction.

An Analysis of the computer material developed from Survey of Interest Levels of Learning Needs in rural communities in the Department of Cochabamba has contributed to development of general guidelines for:

- A. The selection of the communities where the proposed Project can best be executed;
- B. The identification of priority areas in curriculum development and teacher training for the formal education component of the Project; and
- C. The development of the non-formal education strategy of the Project.

8/ Diagnóstico Integral de la Educación Boliviana, Aspecto Socio Cultural.
Prof. Gonzalo Gantier G., pp. 78-79.

It should be kept in mind that the original survey did not solicit responses from the communities themselves but rather from qualified secondary sources.^{9/} These sources were asked to classify all the potential target communities according to a typology based on a scale where A was the most urban and Spanish oriented and C was the most rural and vernacular-oriented. The following analysis is based on that classification and what the respondents considered to be parent's interests in their own and their children's learning needs.

A. The rationale for the Selection of Target Communities:

The selection of Project communities was based in part on the typology used in the Survey of Learning Needs. The responses solicited for all the communities provided three strong reasons for targeting the Project activities mainly in B and C type communities rather than A type communities.

1. B and C type communities will be more receptive^{10/} to bilingual education than A type communities.

Indicators which demonstrate adherence to traditional cultural patterns include those specifically dealing with the use of the vernacular and others of equal significance. Tables Nos. 31, 32 and 33^{11/} which provide interest ratings of 0 to 6 in increasing scope of interest for male and female youth with regard to the use of the vernacular, show a 3 rating in community type A while B and C communities register 4 ratings.

Items 4.1 (knowledge of community organization) and 7.3 (authority-subject relationships) indicate that adults and youth of A type communities are less certain of the prescribed community norms than their peers in B and C type communities. This is demonstrated in that the population of A type communities is perceived as having higher interest in developing clear understandings

^{9/} Secondary sources included the following individuals: Sra. Maria de Rojas, Rural School Teacher; Sr. Mario Montaña, Bolivian Social Anthropologist; Sr. Roberto Carvajal, Bolivian Quechua Specialist; Sra. Rosario de Carvajal, Specialist in Female Quechua Culture; Sr. Manuel Rojas, Rural Teacher; Sr. Simón Céspedes, Rural School Teacher; Sr. Marcelino Limachi, Rural Development Specialist; Sr. Germán Claros, Literacy Specialist; and 10 rural supervisors from the DEDC.

^{10/} As explained later B and C type community residents also need bilingual education more than those of A type communities. B and C type community residents need bilingual education to improve their standard of living.

^{11/} See Exhibit 2 of this Annex.

of local organization and authority systems (Tables 31, 32, 33, and 36, 37, 38). Adult population of type A communities register a 4.0 rating on items 4.1 (knowledge of community organization) while B and C type communities register 3.0 ratings on the same item (Tables 36, 37, 38). The rating registered for the youth population of A type communities with respect to authority-subject relationships is 5.0; B type communities registered 4.0; and C type communities registered 3.0 (tables 31, 32, 33).

Although this data is not surprising since the criteria for establishment of A, B, and C categories was based on the level of acculturation, it lends support to the conclusion that B and C type communities will be more receptive to bilingual education than will the A type because:

a) The relatively looser social structure of type A communities indicates that they are shifting toward urban-Spanish culture; and

b) There is less interest in use of the vernacular in A type communities than B and C types.

2. Community organization patterns are better established in B and C type communities.

As pointed out in reference to implementation of a bilingual education component, the community organization patterns are better established in B - C type communities. This group cohesion should facilitate the involvement of local communities, which is a principal factor in assuring continuity of programs. Situations where community organization and authority patterns are well established should be in a better position to make material inputs as well as contribute to the local adaptation of basic curriculum.

3. B - C type communities demonstrate the highest level of demand for practical skills development.

One of the fundamental concerns of Rural Education I is to implement educational activities which develop practical skills related to rural life. A high interest level relating to acquisition of these skills has had a direct bearing on the selection of communities where the program could best be initiated. The young male population of A type communities (table 6) shows an interest level for practical skills of 4.5. This is the same interest level as reported for social sciences and is lower than interest reported for basic education and natural science. In B - C type communities (table 9) an interest level of 5.4 is shown for practical skills, ranking second only to basic education. This indicates that parents of B - C type communities are perceived as giving more importance to the development of practical, mechanical, and agricultural skills among the male youth than do the parents of A type communities. This pattern is consistent, though slightly less pronounced, among the female population (tables 1, 2, 3 and 4).

In the case of adult females, the category of practical skills relates primarily to the production of handicrafts. In B - C type communities, this population group rated practical skills higher than any other item in the survey (table 14). A type communities rated the same item below nutrition and human production, while at the same level as five other learning interests (table 11).

Analysis of practical skills among the adult male population requires consideration of responses to the specific questions (tables 36, 37, 38). Adult males in A type communities rated operation and maintenance of a truck or tractor very high (6.0) and the same response was given with regard to construction skills. In B and C type communities the responses to these items were 5.0 and 4.0 respectively. However, with respect to a question concerning the operation and maintenance of small machines such as water pumps and hand sprayers, the response was low for type A communities (4.0) and higher for B - C type communities (5.0). The conclusion that may be drawn is that there is a greater interest in the development of practical skills in B - C type communities that are closely related to those skills which might be taught in a formal program for youth. Simple shops or shop equipment provided at a central school could be utilized to meet much of the adult population's demand for the development of practical skills.

B. Priority Areas in Curriculum Development and Teacher Training in Normal Education

Above all else, the adult population of rural Bolivian communities is perceived as expecting that formal education will provide their children with basic educational skills of numeracy and literacy in the Spanish language (tables 31, 32, 33). Although it may be anticipated that the proposed activities in Rural Education I will meet with some degree of skepticism at the local level, it is believed that confidence will increase as it becomes clear that the new pedagogical approaches, primarily bilingual education ^{12/} do indeed meet their priority learning needs such as basic skills and general skills development.

The second highest level of interest indicated for youth falls under the category of general skills (tables 36, 37, 38). This reflects concern that school children acquire basic mechanical skills which would enable them to use and maintain articles commonly present in their communities such as water pumps, pressure lamps, kerosene stoves, bicycles, flash-lights, transis-

^{12/} See Bilingual Education by Donald Burns. This discussion deals with the teaching of mathematics within the bilingual education context and the predicted timing of a favorable community reaction to bilingual education because of the student's ability to handle mathematical concepts.

torized radios or electric motors. General skills also includes the interest level ratings for development of skills in handicrafts and the introduction of new agricultural products.

Resistance to change should be reduced when the most obvious changes respond to levels of high interest. The "high interest" area of practical skills has been ignored traditionally in the elementary schools. By being highlighted in the revised curriculum, it can act as catalyst for the entry of other "low interest" elements, i. e. individual and family living standards, into an integrally desirable package.

The responses to specific questions indicate that a practical application of natural science will bring positive responses from parents (tables 11-20), enhancing acceptance of the teacher as well as promoting confidence in the general school program. A failure to make practical application of science in the areas of agronomy and animal husbandry would be to forfeit a prime learning situation and to miss a major opportunity to generate community support for the revised school program.

The relatively low interest given to the use of Quechua in schools (tables 11, 12, 13, 16, 17, 18) does not detract from the validity of the use of the vernacular as an approach to the teaching of reading, writing, and numeracy. Rather it indicates a misunderstanding of the new methodologies which can be resolved as the new methodologies demonstrate that literacy and numeracy are more easily learned in Spanish as a second language. If the new pedagogical approach is connected with low interest content, it may be impossible to overcome the initial resistance. Therefore, to a high degree the community acceptance of bilingual methods and materials in elementary education will depend on the incorporation of "high interest" areas in their content.

C. Development of a Non-Formal Education Component

The analysis of learning needs of the adult population in rural Cochabamba suggests that the same basic content be used for non-formal education strategies for all communities A, E, and C (tables 36, 37, 38, 40). With the exception of health and hygiene, the areas of highest interest indicated in the survey correspond to those areas considered most important by representatives of the MEC. Health and hygiene could best be incorporated into the non-formal learning experience under the areas of nutrition and information concerning human reproduction, which consistently rate high.

By prioritizing the interest levels (4.0 and above) in tables 15 and 20 the non-formal education program can emphasize most profitably four areas. The primary emphasis should include the four areas of high interest to both men and women; secondary emphasis will be placed on the five areas of high interest to either men or women; and last, the remaining six of less interest to both.

The Learning Needs of Rural Men and Women

Learning Needs	Prioritized Interest Level		Priority Activity in Top half of Scale for Men & Women	Priority Activity in Top half of Scale for Women and lower half of Scale for Men	Priority Activity in Top half of Scale for Men and lower half of Scale for Females	Priority Activity in lower half of Scale for Men and Women
	M	F				
Practical skills	4	1	X			
Nutrition	0	2		X		
Financial Transact.	3	3	X			
Administrative & organizational Concepts	8	3		X		
Human Reproduction	7	3		X		
Investment & Credit	1	3	X			
Home Economics and Management of Home and Farm	2	4	X			
Vernacular	0	5				X
Spanish	8	6				X
Marketing	5	7				X
Health and Hygiene	9	8				X
Parent-child relationship	0	7				X
Follow and Understand instructions	0	7				X
Production-inputs and outputs	3	0			X	
Pricing	3	0			X	
Production Techniques	6	0				X
Economic Organizations	6	0				X

Scale: 1=high interest; 1-4 priority in top half of scale
 9=low interest; 5-9 priority in bottom half of scale
 0=no interest in activity

The preceding areas of emphasis indicate the need for the following types of technical personnel:

1. Crafts and home industries - M and F
2. Home Economics and Nutrition - F^{13/} and M
3. Literacy and community education - M and F
4. Pricing and Marketing - M and F
5. Health - M and F
6. Agromechanics - M
7. Agronomy - M
8. Animal Husbandry - M and F
9. Financing and organization - M and F
10. Cooperative Organization and Management - M and F

The distinct male and female breakdown of these areas strongly suggests that the personnel should be carefully selected to reflect the stated needs of the men and women with whom they will be working.

^{13/} When M or F is underlined both males and females are interested in the area but the underlined category is more interested.

CURRICULUM REFORM, TEACHER TRAINING
BILINGUAL EDUCATION 1/ AND NON-FORMAL EDUCATION:
Strategies, Methodology and Implementation

By: Annie Laurie - Curriculum and Teacher Training Specialist
Donald Burns - Bilingual Education Specialist
Francisco Swett - University of California (211 Grant)

CURRICULUM REFORM 2/

A. The National Education Plan and Curriculum Reform

The National Plan recognizes the need to diversify the school curriculum in order to meet the needs of Bolivia's people. Curricula will be revised so that the techniques of teaching/learning will be in accord with the new focus on a pragmatic education. This new focus is "realistic in its educational content; complete as total life-long education for socio-economic and cultural development;

1/ Bilingual education is not defined as a Major Project Component in Part I, Section II. This annex treats it at the same level as the Major Project Components because of its importance to the three components.

2/ The authors used the following basic considerations along with the Analysis of Rural Learning Needs (See Annex V Exb 1) to provide a basis for design of curriculum, content and strategies.

1. Major participation by communities in planning and execution of local educational programs is essential for development of local responsibility.
2. The attitude of dominance on the part of the rural teacher is to be replaced by the activity of dialogue.
3. The role of agricultural incentives should be given equal consideration with production techniques in promoting increased production.
4. Urban and rural populations should be aware of the aspect of both economic efficiency and social justice contained in the rural education program.
5. Cultural confrontation should be avoided in the promotion of cultural borrowing at the election of the rural society.

coherent, a unit in its logical presentation; flexible in its adaptation to reciprocity among modes and levels of the educational system; democratic, through the active participation of the whole society in its critical judgement; and finally, an instrument of change, of social development and of human liberation."^{3/} It is stated that because of the demographic reality and diversity of the country, it is necessary to give precedence to the rural areas. The stereotyped, old curriculum must be revised to reflect reality, relevance, economic feasibility, variety and dedication to the ideals of participation of the student in his own education through reference to his culture. Thus, through a revised rural curriculum and the rural teacher training suggested, on page eight of this Annex further impetus will be given toward the integration of rural Bolivians into the socio-economic-cultural life of their country. More important, the rural Bolivian will develop a greater sense of self, and so begin the process of increasing the quality of his own life.

B. Curriculum Reform

Learning needs of rural Cochabamba girls and boys stem from three characteristics of education, i.e. personal growth, acquisition of skills and knowledge, and participation in development. The activities developed to meet the learning needs in the three characteristic areas will come from rural community sources, primarily in the first three years of formal education. The interaction of the rural school, the Quechua speaking home environment and the bilingual community will contribute to personal growth through an understanding of self in relation to peers, family and community; to the acquisition of skills and knowledge through the need to understand how one lives and how one can learn to live better; and to participation in development through contributing to planning and executing school and community projects, or listening to the planning sessions of adults in the community.

The later ciclo básico years (grades 4-5) and the ciclo intermedio years (grades 6-8) need a curriculum which will be practical, focused on the solution of common problems faced by the children in their school, home and community. There need be no lack of reading, writing and math, nor social studies, science and bellas artes. The substance of these subjects, however, must treat solutions to common problems by meeting individual (personal growth) and group (participation in development) needs.

The need to reform the present curriculum is recognized and called for in the MEC "Diagnóstico". This document emphasizes the need for an approach which permits the gradual incorporation of rural people into the economic, social and political life of Bolivia.

In order to carry out the necessary educational reforms, it is essential that a group of educators, a Curriculum Reform Commission, be composed of ten rural school directors, three teachers from the Rural Normal School, one member from each of the following offices: Rural Education in Cochabamba, Rural Education in La Paz, National Education Planning Office, and the Rural Curriculum Development Group. They will work out of the Cochabamba DEEC full time for a period of six months to:

1. Develop a skeletal curricula. 4/
2. Develop the curriculum filler, a highly detailed set of content, activity and materials at each grade level and for the Project communities. 5/ An example of a skeletal curriculum for first grade would be:
 - Social and natural sciences and concepts of personal hygiene, based on the child's immediate environment. 6/
 - Learning number values, concepts and processes of math.
 - Learning Spanish as a second language.
 - Reading and writing.

4/ See Part I , Section 2 , Tables 1, 2 and 3 for detail.

5/ (This will make it possible for a teacher who needs to develop understandings of a science concept to choose from a detailed list of content, activity, etc., those items which relate directly to the community in which she is working. The skeletal curricula will contain the what, and the filler will indicate how to achieve the what in a relevant, active, useful way).

6/ The authors reviewed several Bolivian primary readers while preparing the skeletal curriculum and filler. Existing materials for grades 1-3 use urban examples to explain concepts. For example, the rural child learns through his reading book that the family unit includes a man wearing a suit, a woman in a short dress and two children. They live in a large home, and drive a large car. There is no indication that the father might wear spun cotton pants or that the mother wears cholo clothes.

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6/ The authors reviewed several Bolivian primary readers while preparing the skeletal curriculum and filler. Existing materials for grades 1-3 use urban examples to explain concepts. For example, the rural child learns through his reading book that the family unit includes a man wearing a suit, a woman in a short dress and two children. They live in a large home, and drive a large car. There is no indication that the father might wear spun cotton pants or that the mother wears cholo clothes.

A curriculum which will meet the learning needs of rural Bolivian school children must consider how and what the community produces, the social organization of the campesinos and their cultural heritage. In this way, educational values will approximate the values of the culture and form a framework within which the school can work. The curriculum may have a common framework for rural Bolivia, a kind of basic skeleton, but the bulk of the curriculum must be drawn from the life of the community. In this way children can relate to the materials and their parents can understand, appreciate and see the usefulness of the curriculum content in economic terms. 7/

The methodology suggested for curriculum reform will encounter the problem of finding substitutes for Nuclear School System directors and Rural Normal School teachers 8/ while they work at the Cochabamba DEDC on building a new curriculum. All of the participants in this activity will need to work full-time. They will need to make occasional trips to rural schools to verify data.

A grant funded Curriculum and Instructional Material Specialist will work out of the DEDC with this group to help the MEC and DEDC insure that the philosophical orientation, objectives, methods of work, and rationale will be understood and internalized. The group will determine bench marks in the course of the first two weeks, and evaluate their work daily in light of the new concepts which are basic to this Project. The Curriculum Reform Commission will be charged with replacing the passive consumption of education with individual and group creativity.

C. Materials Production

1. Orientation

The Rural Education I Project will begin with an Orientation Seminar directed by the DEDC and Cochabamba Rural Education Officials.

7/ This approach to curriculum design does not overlook the fact that rural children and youngsters face the possibility of migration, and also, that interaction with other Bolivian communities is expected to increase as a result of the improvements in communications and transportation networks. In fact, it is expected that pupils will become cognizant of these possibilities and anticipated dynamic changes. The emphasis of the curriculum, however, will stress how the economic, political, cultural and social basis of the local and regional communities can be strengthened to improve the standards of living of the particular groups.

8/ The MEC has indicated that replacements are available.

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8/ The MEC has indicated that replacements are available.

It will select the staff for the Curriculum Reform Commission mentioned above and the team to prepare bilingual education materials for grades 1-3. The Seminar will last 3 weeks; and involve 120 participants, the 20 Nuclear School System Directors, 80 teachers from sectional schools, 8 Rural Normal School teachers, officials from the Departmental and La Paz offices of the MEC, and technical personnel from the DEDC.

The objectives of this orientation include: presenting an overview of the Project, and an understanding of the Project goals, methods and philosophical orientation; creating a favorable attitude toward bilingual education; and encouraging active participation of the teacher corps in education and community development. The last week of the Seminar the participants will learn about a base-line data survey, its use and value in evaluating the work of the Project. The group will be trained in interviewing techniques and data recording.

2. Baseline: Data Survey

Immediately following the Orientation Seminar, the Baseline Data Survey will be carried out. Teams of three or four will visit all of the schools in the 20 Nuclear School Systems in the Project, approximately 220 communities.

A well designed base-line survey can be a valuable tool for Project evaluation, and needs to include questions that elicit data germane to the major Project components.

3. Curriculum Reform Commission

This Commission selected during the Orientation Seminar will work for six months. The make-up and duties of the Commission are spelled out in I B, page 2 and 3 of this Annex.

4. Bilingual Education Materials Team

The team of six selected at the Orientation Seminar to be responsible for creating bilingual materials for grades 1, 2 and 3 will work together on materials for 8 months per year for 3 years. During the remaining four months ^{9/} they will be responsible - along with other Teams, for the bilingual education training of the 500 in-service teachers.

^{9/} The four months includes vacation time for team members and three weeks of training for in-service staff.

5. Upper Grade Materials Production Team

A team of six people selected from the Curriculum Reform Commission at the end of its work will be responsible for creating materials for grades 4, 5, 6, 7 and 8. They will work over a period of four years to prepare these texts, and will have responsibility for the education of in-service teachers beginning the second year of the Project.

D. Socio-Cultural Implications

The social implications of an education which places major emphasis on personal growth, acquisition of skills and knowledge, and participation in development are broad in scope and may be expected to contribute to the overall goal of a strong, integrated and stable Bolivia.

Primarily affected by curriculum reform and teacher training for rural Bolivia will be the rural Bolivians, children and adults. Using their community and culture as a resource for learning will result in a psycho-social development essential to socio-economic progress. The social implication of curriculum reform and teacher training is the campesino's perception of self as valuable, useful and capable of gainful work. He begins to respect his abilities to think, plan and contribute to the community. He expresses his thoughts, doubts and ideas, and learns to dialogue, evaluate and rebut. Authority figures are seen as resources, usually helpful, not completely dominant and not exploitive.

The teacher sees himself as one who helps others attain fuller development. He accepts his limitations - i.e., he can't know it all. He learns from the community just as they learn from him. He works creatively with members of school and community, MEC regional and national authorities, and representatives of organizations which have input into the community, such as health, agriculture, cooperatives, etc. The teacher's role facilitates psycho-social development which in turn results in socio-economic progress.

The application of new education concepts will increase the status of rural woman and female children. Rural women need more education. The opportunities for non-formal education in addition to formal education will offer further opportunities for rural woman.

Attitudes toward rural education have historically been conservative as evidenced by the "Diagnostico". Rural people were considered ignorant. The teacher was never expected to say "I don't know". The inequality

between rural and urban education contributed to the exploitation of the campesino and caused him to retreat further into his closed cultural community. The campesino permitted his children, or some of his children, to attend school until he needed them to work. Often a girl was denied schooling because it was considered unnecessary for her adult role. She tended sheep as a child, worked beside her husband and made the home as an adult. This may sound discriminatory against the girl but it was a rational attitude in the tradition-oriented society of rural Bolivia. What need had she, or other rural youngsters, to know that Bolivia exported tin to 52 countries in 1956, or to memorize the different kinds of marsupials that inhabit Australia?

The new stated educational policy gives precedence to Bolivian rural education in all its phases. This includes curriculum reform toward a practical, relevant and applied education. To accomplish these objectives the teachers will be re-trained in order to be able to respond to the pressures for economic, social and technical change that sustained development requires. Moreover the MEC will promote this change by allocating increased funding to rural education and emphasizing the need for rural students to stay in school longer.

While there is not one single optimal way to measure change, the Project contemplates the design of indicators that should signal substantive attitudinal changes on the part of community members. Periodic surveys designed, monitored, and interpreted by experienced observers of Bolivian rural society would explore the family's reaction to:

- a) the teacher's new approach to their children's learning
- their participation in that learning process,
- b) the new materials being used, e.g. the validity of bilingual education; and
- c) new programs outside the traditional formal structure, e.g. non-formal education that requires their participation.

II. TEACHER TRAINING

A. Strategy

If a relevant, formal education designed to meet the learning needs of rural children is to become a reality, the training and/or retraining of the Bolivian rural teacher corps is essential. This requires the introduction of such concepts as:

- team teaching,
- using the community as the major resource for content and method,
- following interest leads of children,
- encouraging and stimulating creative endeavor both individual and group,
- expressing opinions and evaluating on the basis of one's own criteria,
- sharing leadership,
- learning through experimentation,
- resolving real problems,
- teaching within the learners' capacity to comprehend,
- learning through doing,
- recognizing one's limitations,
- facilitating the participation of all who have knowledge or skills which the school and community want,
- helping to meet stated needs,
- stimulating the identification of needs,
- reinforcing the value of local culture,
- using the local language,
- becoming sensitized to non-verbal communication and
- conserving natural resources and utilizing human resources more efficiently.

The normal school curriculum for teacher preparation will become the main tool for the development of pragmatic teachers - individuals who function as members of specialized teams, teach school or work as technicians in meeting community needs. Rural Normal School students will practice teach for two periods of six weeks each in sectional and central schools of two different communities. This enables the students to observe and practice new concepts taught at the Rural Normal School under actual conditions.

The process of introducing teacher education curriculum change will require from one to three years. Students, teachers and advisors

will prepare the changes, try them out in the classroom, and evaluate their effectiveness in light of the concepts listed above.

Rural School teachers represent the largest and most difficult group requiring reorientation. The need to retrain this groups is obvious. They are closest to the target group in the present Project: the school community. The rural teachers' training scheme may well develop from the training 1/ of the Directors and Supervisors of the 20 nuclear schools. If taught in the way that one would hope for them to teach, this group would work with their nuclear systems' teachers as a team, and would develop together a realistic approach to education (using the concepts stated above as a guide).

This training activity would take three months of vacation for the Nuclear School Directors and Supervisors and seven weeks per year for three years for rural teachers. Periodically, perhaps once a month, the nuclear systems' teachers would be required to meet with their Director to report on interest shown in the community and make plans to be carried out in their respective schools. Since these meetings will be carried out on a regular basis, they should provide a stimulant to and mutual reenforcement of new concepts, ideas and methods that teachers need, especially isolated teachers. During the following summer vacation the teachers and directors from the 20 schools will meet to exchange experiences, to evaluate work done, to receive specific information requested earlier (skills, knowledge and/or clarification of concepts), and to continue their learning to understand and apply the new curriculum materials.

B. Implementation

1. Rural Normal School Teacher Training

The Normal School Teachers at Vacas are graduates of the Instituto Superior de Educación Rural, a theoretical training institution. The training for this group will close the distance between theory and practice, a not uncommon need among educators in general. This training will be accomplished in two ways. Forty teachers 2/ will observe and study for a two week period in Ecuador and Perú.

The observation sites in these two countries were chosen to

1/ The 20 Nuclear School Directors will be trained as staff members for in-service training of rural teachers. See page 15 of this Annex

2/ This group will include rural teachers and department level personnel in addition to Rural Normal School teachers.

demonstrate the value and use of bilingual education in the first three grades of the primary school. The participants will be involved in an objective demonstration of such basic concepts as using the local language to teach and communicate, and to reinforce the value of local cultures 3/.

The second type of training will be provided by a long-term Rural Normal School Advisor. He will work with the Rural Normal School Technician and the staff members for five school years to develop the framework for normal school education.

a. GROUP DEVELOPMENT 4/

The advisors first will hold numerous sessions with all the teachers to help them:

- 1) define the role of the Rural Normal School teacher;
- 2) list and categorize the Rural Normal School teachers' felt needs (educational, personal, professional, etc.);
- 3) list and categorize the positive qualities of a rural school teacher, i.e., what should a teacher do:
 - in her classroom?
 - with her community?
 - for her professional growth? etc.
- 4) describe education for a rural primary student;
- 5) trace the relationship of the Rural Normal School teacher, through the rural normal school student to the rural primary student;
- 6) determine the responsibilities of Rural Normal School teachers for the education of the rural primary student;
- 7) define the role of the Rural Normal School student in Curriculum Reform

3/ See: Fortún, Julia Elena - Educación y Desarrollo Rural, México, Instituto Indigenista Interamericano 1973.

4/ See Table 1 - Rural Normal School Teacher Education Time Frame

b. SMALL GROUP ACTIVITY^{5/}

After completing the previous exercises, most of the teachers will have faced many of their own shortcomings. Working with the advisors in related study areas, small groups will analyze the present curriculum in the light of their responses to 1 through 7 above and select for the revised curriculum that which contributes to rural education.

c. CURRICULUM DESIGN AND DEVELOPMENT^{5/}

After working for about three months in small groups, several general sessions will be held to stimulate group cohesion, to reinforce decisions on deletions from the curriculum and to discover areas of mutual concern in teacher education. These sessions will be used to introduce the concept of team teaching. The advisor will help teachers to understand:

- 1) how to determine study areas of major need for a rural community;
- 2) how to design and carry out a simple survey to determine needs objectively;
- 3) why a base-line study is important;
- 4) the interpretation and use of the data gathered to design curriculum content;
- 5) the evaluation of results of new curriculum design;
- 6) how to redesign curriculum content to fulfill stated needs;
- 7) the need for flexibility to meet changing conditions;
- 8) the contribution of Rural Normal School students to curriculum change.

Over a three year period, the task of the advisor will be to help the Rural Normal School teacher become aware of his role in rural socio-economic development, his role in the production of good rural teachers, and his role in curriculum development to meet the needs of rural teachers in rural communities.

^{5/} See Time Frame - Rural Normal School Teacher Education, Table 1

2. Rural Normal School Student Training

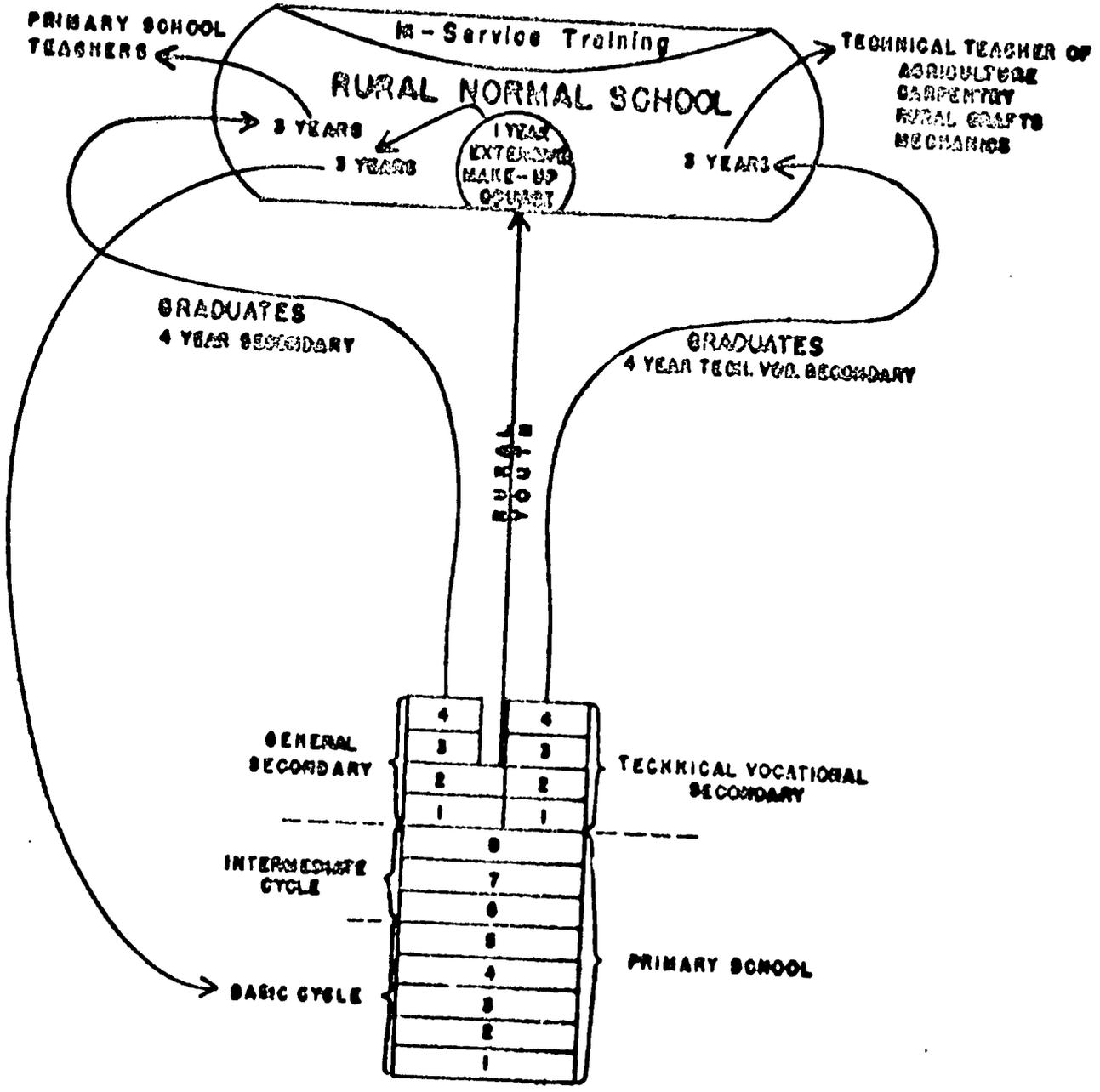
The changing role of the Rural Normal School teacher will first be felt among the students of the Rural Normal School. After a three year education, these students serve the rural community in a variety of ways, depending on the courses (track) followed at the Rural Normal School. Those selected for entrance will come from the following sources:

- a. Bachilleres Académicos (Academic Secondary Graduates)
- b. Bachilleres Técnicos (Technical-Vocational Second Grade)
- c. Sons and daughters of campesinos who have passed the second year of secondary school and successfully completed the two semester intensive make-up course at the Rural Normal School.

Eighty percent of the group will prepare for Primary School teaching and twenty percent for specialized technical teaching, both in the schools and in the community. The major purpose of the Rural Normal School remains the production of primary school teachers. This group will help to design the methods and materials needed for the revised curriculum content of courses. Students will participate in community development activities related to their studies. For example, health courses will include the mapping of the district; practical arts courses will include activities such as how to design and install a water system (and how to determine its feasibility). A creative approach to problems will be stressed. Students will be required to solve real problems in groups, maximizing the cooperative approach. The single textbook will be replaced by a reference library; the science textbook will be enriched by a science laboratory for practical experimentation; shop and agriculture equipment will help to demonstrate theory and give additional experience in the use of labor saving tools and equipment. The oral and written expression of students who participate in educational broadcasts from Normal School broadcasting transmitter will improve in direct relation to the feedback from the listeners.

The 1000 watt broadcasting transmitter will be a source of technical information for the campesino. Programmed materials in agriculture, animal husbandry, health, hygiene, sanitation and weather

RURAL PRIMARY EDUCATION TRACKS
OF THE RURAL NORMAL SCHOOL



will be prepared. In addition, programs transmitting cultural and linguistic activities will be presented.

The planning, development and use of this communications tool for non-formal education at the Rural Normal School will be supervised by the Educational Radio Specialist, who will be contracted for two years.

During the third year of study, the Rural Normal School students will practice teach at a central school then at a sectional school. During the two separate practice teaching periods the student teacher will gradually assume the task of preparing, executing and evaluating the student's education. The student teacher and the classroom teacher will evaluate the response of the children to the student-teacher, the involvement of children in planning their learning, the quality of communication, subject-matter presentation and relevance to the specific situation. Based on this evaluation the student-teacher will be prepared to improve her professional status by additional training in weak areas at the Rural Normal School.

Normal School students will have a balanced curriculum of theory and practice to prepare them for the education of rural youth.

The second group to receive specialized training at the Rural Normal School are the technical-vocation students. They will work out of the Central School in formal and non-formal education programs with Central and Section School students and the community.

The Industrial Arts Specialist and the Rural Normal School Technician and other specialists will work with the technical staff and students to develop courses in Agriculture, Health, Sanitation, Industrial Arts, Cooperative and other technical fields. They will study general education courses, teacher education, community development, and practical arts. Also they will learn to work as part of a team to help the learner identify and express his needs. Teaching techniques will be adjusted and adapted to the learning ability of the students. The agriculture, health, shop and library facilities will give the technical students the opportunity to practice and improve their skills. Their practice teaching will consist of applied field experience in two Central Schools.

Rural youth, children of campesinos, who have completed two years of secondary school are the third group to receive special training.

Their training will include one year of intensive make-up courses to prepare them to enter regular teacher preparation courses. After graduation from the Rural Normal School they will be qualified to teach the first five grades of the rural school.

3. In-Service Teacher Training

The in-service training component is important because of its size and close contact with the target group. The only time when these teachers are available for training is during summer vacations. The plan proposes to use seven weeks of summer vacation in three consecutive years to teach the new curriculum and explain new materials, define the role of the teacher in her community, extend concepts and techniques in bilingual education, and develop an understanding of how to use the community as a major resource for content and method.

Before this training can take place, the staff will hold a four week seminar in which to decide on strategy, programming, division of responsibilities, and other administrative matters. The Staff Training Seminar will be held at Vacas for approximately 30 people, the 20 Directors of Nuclear School Systems, 2 Rural Normal School teachers, 2 District Supervisors, 6 members of the Bilingual Education Team and MEC curriculum, rural education and administrative personnel. The specific planning for the training course content and method, materials for distribution, and final evaluation need to be decided at this time. A checklist will be developed and used throughout the seven weeks of the course to insure that crucial points in the specific planning are not overlooked. The Curriculum and Instructional Materials Specialist, the Bilingual Education Specialist, the Rural Normal School Advisor, and the Rural Education Planning Advisor will work closely with the group.

The five hundred in-service teachers will be trained simultaneously in two groups, one in Vacas and one in Paracaya. The teaching staff will organize the participants into their 20 respective nuclear groups, about 25 in each group. The Nuclear System Director in each group will be responsible for organizing the morning sessions when participants will study, interpret, and clarify the new curriculum. Participants will discuss ways in which the curriculum will be used, and

upper grade teachers will make concrete method and material suggestions which will become part of the text materials developed for the upper grades. Active participation of specialists and technicians from inside and outside the Ministry will be encouraged to teach concepts such as: using the community as the major resource for content and method and encouraging and stimulating creativity.

Group development techniques such as group decision making, feedback, role-playing, within and between groups activity, and general reporting sessions will be used in the teaching/learning curriculum sessions to stimulate the understanding of concepts which increase participation of communities in their development.

The afternoon session will be under the direction of the Bilingual Education Team. The Team will train the participants in bilingual education techniques and materials usage. The first week will include general orientation and theory, and lecture presentations followed by question and answer periods.

Beginning the second week, participants will be divided into small groups so that each person may practice bilingual education materials (the day's assignment) on his peers. The subjects will include Reading and Writing, Spanish as a second language, and Mathematics. Those who practice will receive their peers comments and criticism and will have the opportunity to practice again in the light of the critique received. Although ideally the practice would be with children, the logistics in this case are insuperable. The technique is old and defensible when reality is not feasible. Just as one learns to ride a bike by riding, one learns to teach by teaching.

Teacher Education: Training Chart

GROUP	OBJECTIVES OF TRAINING	TIME
Rural Normal School Teachers <u>20</u>	<p>Threefold objective: To cause the Rural Normal School teacher to be aware of and active in:</p> <ol style="list-style-type: none"> 1. his role in rural socio-economic development 2. his role in the production of rural schoolteachers, 3. his role in curriculum development to meet the needs of teachers in the rural community 	<p>See time frame: Rural Normal Teacher Education</p>
Rural Normal School Students <u>400</u>	<p>To prepare the primary school/teacher capable of the following:</p> <ol style="list-style-type: none"> 1. understanding his role in school and community; 2. appreciating local culture, history, anthropology, and change; 3. interpreting and applying bilingual education theory; 4. using bilingual education materials and methods; 5. knowing, interpreting and using the new primary curriculum and materials; 6. working as part of a team with other teachers and members of the community; 7. evaluating himself to continually improve his work. <p>To prepare technical educators with the capabilities listed above plus the practical vocational skills needed in rural communities.</p>	<p>During five years of Project</p>

TABLE 1

TIME FRAME

<u>Rural Normal School - Teacher Education</u> <u>with Rural Normal School Advisor & Technicians</u>		<u>1976</u>					<u>1977</u>					<u>1978</u>							
		2	4	6	8	10	12	2	4	6	8	10	12	2	4	6	8	10	12
I.	Group Development - all teachers. RNSE																		
	A. Define the role of rural normal school teacher.																		
	B. List and categorize the RNS teachers' felt needs																		
	C. List and categorize the positive qualities of a rural school teacher																		
	D. Describe education for a rural primary student																		
	E. Trace relationship of RNS teacher, through RNS student to rural primary student																		
	F. Determine responsibilities of RNS teacher for education of rural primary student																		
	G. Define the role of the rural normal school student in curriculum reform.																		
II.	Small group activity, related study areas, i. e. science, social studies, psychology, methods, language, arts-shop-ag health and sanitation - phys. ed. (six or seven groups)																		
III.	Curriculum design and development																		
	A. How to determine study areas of major need for a rural community																		
	B. Simple survey design and execution to determine needs objectively																		
	C. Importance of base-line studies																		
	D. Interpretation and use of data gathered to design curriculum content																		
	E. Evaluation of results of new curriculum design																		
	F. Redesigning curriculum to fulfill stated needs																		
	G. Need for flexibility to meet changing conditions																		
	H. Rural normal school student in curriculum change.																		
IV.	Transfer of Technology																		
	A. In this Project why do we teach through involvement and participation																		
	B. Explain the contrast of student-teacher relationship in involvement vs. lecture teaching																		
	C. Demonstrate the value of creative participation vs. rote memory learning																		
	D. Demonstrate teacher's role in group problem solving																		
	E. Relate this technology to the solution of community problems																		

III. BILINGUAL EDUCATION

A. Strategy

1. The Rural School and the Vernacular language.

The Bolivian rural vernacular speaking school child, whether in rural or suburban areas, enters the school with what may be called at least a serious deficiency in the official language of the school. Since the rural teacher in a large majority of the cases is, himself, a vernacular speaker, with a high degree of bilingualism, in Spanish and Quechua or Aymara, the situation demands that the vernacular be used officially or unofficially in communication between teacher and student. The nonexistence of published texts in any language and the unavailability of the official teaching guide (Planes y Programas) of the Ministry of Education places an enormous burden on ingenuity and imagination of the individual teacher. The Vacas Rural Normal School curriculum includes no consideration of the Teaching of Spanish as a Second Language or the special problem of teaching literacy to students in a language (Spanish) he does not speak and which is not associated with the emotional springs which motivate his conduct. In this situation, reading, writing and learning of Spanish as a spoken language is mechanical with little of the satisfaction and enjoyment which are important to a positive attitude toward learning and development.

2. The Rural School and the Parent

Often unaware of the options which an experimental educational program may open to him, or very much aware of the often promised but never accomplished reform in education, the rural Cochabamba vernacular speaking parent quickly responds to the question of his expectations of the school to be that of learning reading, writing and Spanish^{1/}.

While it is questionable that he has ever seen concrete examples of positive returns from these activities in his own society, he is very much aware that Spanish is the principal vehicle for vertical, social and economic mobility. He recognizes that the social and political powers which govern his life are in the hands of those who possess these tools. His dilemma, of course, stems from the fact that the principal agent for acquiring these tools (the public school) is

^{1/} Alegria et al 1971.

primarily an urbanizing and alienating institution which if too successful will deprive him of a resource for his family income by reinforcing the already existing problem of migration toward urban society 2/.

3. Project Content of Bilingual Education Program in Cochabamba

Establishing bilingual education in Cochabamba as an integral part of the education system will require not only the general considerations listed above, but also a serious and effective demonstration of its effectiveness in rural areas where mastery of vernacular languages exceed mastery of the official language. The present proposal contains an initial demonstration phase which includes research, recruitment, orientation, curriculum and teaching material development. Application of bilingual education in the rural vernacular speaking areas of Cochabamba over a five year period will include evaluation and reporting which will lead to expansion of bilingual education to other rural, vernacular speaking areas of Bolivia. This initial phase will provide the framework and content for the expanded program on a national level and will provide testing of teaching materials before the larger expense of final publication and expansion is undertaken.

A three year curriculum design for the bilingual education aspects of Rural Education I in Cochabamba is planned. Establishing some specific period must underlay the beginning of teaching material development, but the choice of three years could be considered tentative enough to allow feedback from the experience in the rural schools to modify and refine objectives and goals established. In scheduling the production of materials it is planned that, following testing, adequate refinement and modification can be made to permit more permanent and attractive reduplicating to be staggered with the production of new materials for each higher level. A Bilingual Education Team to prepare rural education materials will be selected during the Project Orientation Sessions. The group will work with the Bilingual Education Specialist and local technicians out of the DEDC on materials for grades 1-3.

2/ While this may be a valid parental concern in those cases where children are expected to make a significant contribution to the family economy, it is recognized that migrating family members may actually contribute to strengthening the future economic position of those who remain behind through their remittances and consumption that is no longer charged to the family economy.

BILINGUAL EDUCATION SKELETAL CURRICULUM

1st. GRADE ^{3/}	2nd. GRADE	3rd. GRADE
<ul style="list-style-type: none"> - Reading and writing in the vernacular based on mastery of oral language experience of the student. - Spanish as a 2nd language based on language usage possibilities of the child's milieu. - Mathematic Concepts and Processes using visual & tactical teaching materials related to the decimal number system of Quechua. - Social & Natural Sciences based on environmental reality. 	<ul style="list-style-type: none"> - Intermediate reading in the vernacular with Social/ Natural Science curriculum content. - Writing (Dictation and simple composition). - Spanish: Grammatical exercises, oral & written; Spanish transitional reading. - Mathematics: Simple problem solving, formulas, weights and measurements. 	<ul style="list-style-type: none"> - Subjects adapted to National Curriculum. Bilingual texts emphasizing rural ambient & functional Relationships to the Community which includes: - Advanced reading in the vernacular. - Composition in the vernacular on topic and initial writing in Spanish. - Problem solving based on mastery of math processes.

^{3/} Designed for six years of age and up.

B. Implementation

Given the specialized nature of bilingual aspects of Rural Education I, the restraints created by traditional attitudes, and the nature of existing rural education patterns of Cochabamba and nationwide, Rural Education I will need:

- 1) Official endorsement and support of the program at national and local levels.
- 2) Adequate theoretical and technical orientation at national and local levels of both administrative and technical personnel, and
- 3) An active involvement of rural communities, rural school teachers, normal school staffs, supervisory and administrative personnel in the development of curriculum and teaching materials and the advisory support and cooperation of existing agencies, official and private, supplemented by additional foreign expertise as technical consultants.

An important contribution to the bilingual aspects of this Project is expected to be made by a proposed Socio-linguistic Research Survey ⁴/ . The Project will finance a Socio-linguistic Survey by a competent researcher to reflect the social constraints characteristics of Quechua and Aymara speaking peoples. It will develop the research base needed to spread the information nationwide.

Socio-linguistic and statistical information generated by this research will be useful in supplying insights into cultural values underlying all the components of the Project. This research, together with the Baseline Data Survey, will provide orientation not only for Rural Education I but the two Rural Education Projects planned for Interim Quarter 1976 and 1977.

The following calendar describes the chronological inter-relationships of bilingual education activities.

⁴/ This activity will be financed under the Educational Management and Instructional Development Loan (511-V-051 and Rural Education I.

C. bilingual Education and the National Education Framework

An educational program which applies bilingual methodologies in the present context of rural vernacular speaking areas of Cochabamba must enjoy support and sympathy at several administrative and social levels to survive. There exists a somewhat hostile environment toward the use of the vernacular language in education which is traditional in the existing structure of the national educational system 5/.

The basic hostility and leveling tendency of the national system stands perhaps as the principal obstacle to such a Project. Although foreign specialists can make a valuable contribution to the success of the Project, especially at the level of orientation, testing and evaluation, to inject a substance of hope for continuity in the Project, Bolivian resources not only will direct the Project but carry the brunt of the personnel involvement at all levels, national and local.

At the national level, there exists a recent statement of intent in the educational reform to provide teaching texts in the three major languages of the country, Spanish, Quechua and Aymara 6/. This implies, together with other national policy statements, an endorsement of the use of vernacular languages in the programs of formal education. To guarantee the official backing of such projects, however, the Ministry of Education will establish a Bilingual Education Office in La Paz and Cochabamba which could recruit personnel and agencies and provide the coordination and administrative direction for field programs in bilingual education.

5/ The basic concept of "integration", evident in the dominant Spanish speaking society, requires not only the superimposition of the urban model upon the rural student but also the irradiation of values and symbols of the rural society. The rural teacher either from rural or sub-urban areas who is submitted to the effects of this basic philosophy becomes himself the principal proponent for effecting it in the rural school student with all of the depreciative and discriminating overtones of the "on level removed" layer of society. For a fuller treatise on this subject see J. Albó, *Idiomas, Escuelas y Radios en Bolivia*, Educación Popular, Doc. 7 and 8, series D, Vol. 7, La Paz, 1973 pp. 1-29.

6/ Presencia, viernes 4 de abril de 1975. "En diez años el analfabetismo quedará reducido al mínimo."

IV. NON-FORMAL EDUCATION

A. The National Education Plan and Non-Formal Education

The National Education Plan of October, 1974, clearly states the GOB's commitment to non-formal education although nowhere is there a description of exactly what non-formal education involves or should involve.

The National Education Plan supports the nature of the Non-Formal Education Project when it speaks of conserving authentic values, and of the community structuring diverse forms of education to achieve its development. As characteristics of non-formal education, the plan cites, ^{1/}

Flexibility which permits communities to structure their own levels of educational promotion.

Integration of human forces with resources in the community, in permanent and dynamic action.

Correlation with formal education to achieve joint action in line with national socio-economic development.

Globalization, understood as a process, generated by the community, which attends to the whole population by means of unconventional educational approaches.

B. Strategy

At a general level non-formal education may be expected to fulfill the learning needs of: present users of formal education; individual groups of youths and adults who are outside the formal system; and the community at large.

At the present time the formal system is clearly unable to fulfill the learning needs of rural children ^{2/}. The quantitative indicators of intake and retention show that school enrollment in the rural areas is 49 percent for eligible males and 33 percent for eligible females. The age distribution of enrollment shows that the school experience for most children is comprised within the ages of six and eight.

^{1/} National Education Plan, page 50.

^{2/} See Harry Peacock's report on Rural Learning Needs, Annex V, Exh. 1.

Boys log, on the average 2.9 years in school while girls barely reach 2.1 years. Retention is extremely low: one fifth of rural children are expected to go beyond the basic three year level and only four percent will likely finish the six-year cycle. 3/

The curriculum, it is also known, is not adapted to the child's needs and environment. The Diagnostico noted as much when it pointed out that (a) the content of courses lacks practical orientation, it is obsolete, and alien to the pupils' mentality, (b) the methods strengthen a passive attitude on the part of students and (c) there is lack of support materials like textbooks and other teaching aids. There is no substantial difference between urban and rural curricula other than the addition of five extra hours per week in the rural school for agricultural and health education, and home economics. As designed, the curricula lead into higher forms of education and reflect the values imposed by a middle-class urban culture; some practical content and an appearance of academic and humanistic solidity.

Non-formal education must also serve the needs of the very large group of youths and adults who are already outside the scope of the formal system and, most likely, have never been in the formal system. By serving these groups on a community-wide basis it is expected that (a) community resources will be mobilized to fulfill specific community interests and requirements, (b) as a result of serving these groups, social cohesion will be strengthened at the community level, (c) non-formal education will provide one of the fundamental basis for the development of permanent learning systems and (d) non-formal education will also complement and supplement the formal system.

In order to fulfill these requirements it is also expected that programs of non-formal education will be designed to foster personal growth provide meaningful opportunities for the acquisition of knowledge and skills, and strengthen community participation in development. 4/

3/ A. Ianlere and Francisco Swett, Continuing Sector Assessment, Bolivia: Social Equity and Internal Efficiency of Bolivian Primary Education.

4/ Personal Growth entails the development of awareness of one's own culture and socio-economic situation, relationship with others, goal formation, efficacy, dialog skills, and interaction with authority. Acquisition of Skills and Knowledge entails the series of learning processes that enable individuals to receive, interpret, store and retrieve information. Depending on individual maturation, interests, abilities, and external conditions these processes allow individuals to function effectively in their external environment. Participation in Development results from the interaction of personal growth and acquisition of skills and knowledge and involves the activities whereby communities in dialog ascertain priority needs, make contact with resources persons and agencies, formulate plans, and initiate activities which are related to their selected goals.

These considerations have to be tempered by the recognition that at the present time, the information base on non-formal education in the Cochabamba Department is practically non-existent. The Ministry has signed a contract with ISAP which is expected to produce a systematic survey of non-formal education which should include: (a) a comprehensive inventory of programs of non-formal education in the Department, (b) location, scope and characteristics of programs, (c) their incidence over different groups of users and beneficiaries, (d) type of organization, (e) financing of program activities, and (f) causes and conditions for program replicability under similar or different circumstances.

Non-formal education programs constitute, by definition, a disjoint aggregate of activities that originate in individual communities, in the government sector, or in organizations whose educational objectives are geared to meet specific learning needs of diverse population groups and communities. This requires that, in addition to having access to a systematic information base, a mechanism for coordination and liaison be established.

C. Implementation

Mindful of the limitations outlined above, the lack of an adequate information base and the need to achieve coordination, the organization proposed here will:

- a) set up a Non-Formal Education Working Group to operate at the department level;
- b) organize a Multisectoral Group of public and private development agencies that operate in the area of non-formal education in Cochabamba;
- c) establish a liaison mechanism with programs of non-formal education;
- d) aid in the development of Community Resources Groups which will be in charge of the day-to-day functioning of non-formal education programs at the local level; and,
- e) foster the creation of Community Councils whose main functions will be (i) to represent individual community interests when joint community planning is required, (ii) to take charge of institutionalizing the generation and exchange of information, (iii) to obtain community financing for proposed activities, and (iv) to negotiate agreements under which department level organizations will work at the community level.

The Non-Formal Education Working Group will help communities establish programs by advising the intersectoral groups and individual communities on project feasibility and initiation, focusing on project scope, structure, organization and financing. They will coordinate with the field personnel of other Ministries and private agencies in the areas of health, agriculture and campesino development. The group's primary operational role would be to link the communities with non-formal education organizations. Organizationally, it will be semi-autonomous from the Cochabamba Rural Education Division in planning and implementation, but administratively dependent on the MEC for funding, office space and personnel.

The group would enjoy equal status with the Department of Rural Education in Cochabamba and with the Multisector Group.

The working relationships would meet the following conditions:

a) the role of the Multisector Group and of the Rural Education Department would be to advise the Non-Formal Education Working Group on the desirability of initiating projects and programs, given those institutions' interests and plans of action;

b) to ensure the validity of its advisory role, the Multisector Group would, on a periodic basis, provide pertinent information on the individual agencies programs and projects;

c) the Non-Formal Education Working Group would consult with individual agencies on projects that it wants to promote. To make the consultations effective it would:

- i) convey community interests,
- ii) define location, scope, and content of proposed programs and projects,
- iii) defend project feasibility, and
- iv) recommend alternative courses of actions that may be taken.

On the basis of its consultations with, and advice from the Multisector Group, the Non-Formal Education Group would design plans for the non-formal strategy.

The primary operational role to be played by the Non-Formal Education Working Group is that of providing liaison with the communities and with non-formal education organizations. In this way, its bureaucratic component will be kept to a minimum and will consist

of clerical personnel: 3 secretaries, 1 office boy, 1 part-time accountant, and 1 office manager. The technical personnel will consist of 2 research assistants, 1 librarian, and specialists in the following areas: financing and organization, marketing and pricing, health, nutrition, agriculture and animal raising, home economics and management, literacy and community education, cottage industry and artisan crafts, and cooperative organization and management. In this way, the professional make-up of the office will approximate the types of non-formal education activities that are expected to be carried out in the department. The specialists will be qualified technicians who can provide leadership in the communities on the basis of their knowledge and skills. Should people with the required qualifications not be found, the Project includes funds for a period of training that, depending on the training requirements, may be carried out inside or outside the country. Since it is essential that professionals from the non-formal education group be able to communicate effectively with community representatives they will have to meet certain requirements: a) a rural orientation, i.e. demonstrated interest and empathy for the rural communities and their welfare, b) ability to work with different groups of rural people whose interest and circumstances may vary, c) a working knowledge of the Quechua language.

The specialists will allocate their effort according to geographic and program specialization and they should spend approximately two thirds of their time operating in the communities. Expenses incurred by the non-formal education office will be mostly for transportation and "mobilization bonuses" tacked onto the personnel's monthly salary. It will be expected that communities will provide lodging and food. ^{5/}

In order to fulfill its liaison role, the Non-Formal Education Working Group shall have the following functions:

a) promote and initiate training at the community level for skill acquisition and personal growth with a view toward having campesinos as much as possible take over project implementation in the short run;

b) build and maintain a data bank on projects initiated and underway;

c) provide information exchange on projects that are being implemented in different areas of the department and detect new project areas;

^{5/} Some GOB funds will be available for food and lodging.

- d) make available the technical support that communities may need;
- e) maintain effective liaison with other planning and executing agencies in the department. Request their participation in projects that due to their scope and content the office cannot handle by itself;
- f) help community councils organize seminars at the regional, provincial and departmental level;
- g) monitor advance of non-formal education programs and provide support for on-going evaluation;
- h) serve as intermediary between communities and credit and marketing sources, (by providing the pertinent information on parties concerned and arranging collaterals when necessary).

The non-formal education group also will attach high priority to its working relations at the field level with personnel from other Ministries and with programs already engaged in non-formal education. Among the former, the Ministries of Health, Agriculture and Campesino Affairs deserve special mention since they have field personnel working as extension agents and manning rural health posts. The programs of non-formal education may include: Radio San Rafael, FOTRAMA, ALFALIT, DESEC, Equipo Chapare, and the Adventist Mission. Cooperation with the programs would take the form of periodic meetings and visits, exchange of information, and, to the extent possible signing of convenios for joint planning. 6/

At the community level the strategy contemplates the organization of community resource groups and community councils in Cochabamba. The former would be closely integrated with individual programs. The groups would be made up by: program leaders 7/ and participants,

6/ For example, the following organizations are expected to participate in various community projects:

- 1) ACLO, a private church-related community development organization, would be responsible for community promotion and coo-education once a community has made the initial commitment to the program;
- 2) FOMO, the Ministry of Labor's skills training program, would be responsible for development of construction skills among local workers; and
- 3) SNDC, the National Community Development Service, would provide building materials and technical supervision for construction projects.

7/ People with particular leadership ability or technical expertise who reside in the community.

representatives of the central or sectional schools, as the case may be, technical educators assigned to the community under the teaching training component of this Project, and local government members or representatives. As the community resource groups are organized the Non-Formal Education Office would be expected to play the role of "catalyst" in sustaining whatever enthusiasm is generated. This is a crucial factor as past experience shows that unless enthusiasm is generated through tangible results the project may well fail to have any significant impact. The community resource groups would be expected to:

- a) establish new projects in response to community interests;
- b) appoint the people who would represent the community in the Councils;
- c) define the tasks to be assigned to group participants according to individuals' interests and preferences;
- d) request through the Community Council the presence and participation in the community of Non-Formal Education Office representatives; and
- e) search out opportunities for the design and implementation of new non-formal education programs and the reform, if needed, of ongoing programs.

It must be re-emphasized that the success of these community resource groups will be crucially dependent on tangible results. The potential of Cochabamba communities to organize themselves is not known with any degree of certainty and, moreover, communities do not have a uniform degree of capacity to organize. Yet it can be assumed that communities will react favorably if they find the organization to work in their own self interest. For this purpose to be achieved resource groups should not only perceive that the programs undertaken will result in positive economic and social benefits to them, but, also, they should exercise real power. The exercise of this power would be through the community councils and would entail: the power to conduct negotiations with outside agencies and to sign such agreements; the power to decide who should work with the community and to dismiss individuals or agencies whose work the community does not perceive to be in its own best interest; and define the forms and conditions of cooperation and work with interested parties.

The Community Council also would be responsible for the generation and exchange of information, the initiation of programs and projects which cut across community lines, as well as raising money

to support community resource group activities. The council members, selected by the resource group members and community leaders, would represent their communities in any negotiations with other communities when joint projects or programs are expected to get underway. As regards the generation and exchange of information, the strategy foresees a series of periodic meetings held at the departmental or provincial level. The periodic meetings would also represent opportunities for seeking regional cooperation, plan strategies on an aggregate level and discuss common problems and their solutions.

D. Operational Strategy

The strategy designed above will become operational during the first year 8/ of project implementation. The initial steps will involve essentially the mechanics of administration: organizing the non-formal education central office, setting up the multisector group, and recruiting and training the specialists who will constitute the Non-Formal Education Working Group.

The training is justified on technical, pedagogical, and psychological grounds. The technical level of group members initially may not be high enough, or, even if it is high enough, it may need to be strengthened to operate under the specific constraints of the Cochabamba Project environment. It would be unrealistic to discount the heavy demands of a successful effort since it requires an integration of multiple and difficult roles - technician, rural oriented and Quechua speaking. Moreover, the technicians also must be good pedagogues who can communicate effectively with rural people in a personable and convincing way. Psychologically they must withstand frustrations at all levels: in their association with MEC and the constant pressure for "traditional ways" of getting things done, in their dealings with the multi-sector group and the lack of direction that this group may exhibit and, above all, in their work with communities that will, in all likelihood, greet the Project with skepticism and indifference.

The in-country component will be geared to upgrading the technical level of the specialists. Given the multidisciplinary orientation of the group, not much emphasis will be given to specific courses (too many would have to be offered). Team members will be given bibliographies and reading lists which they are expected to cover. The acquisition of a reference library concentrating on the individuals'

8/ This does not mean that each community will have a project during the first year rather than the process of selecting the project will have begun.

specialities (plus whatever literature that may already exist in non-formal education in Spanish or development of materials in Quechua) should fulfill the requirements of the loosely structured approach adopted here. Training in community development, non-formal methodologies and extension services will be arranged with the appropriate agencies and Ministries. This cooperation will be arranged through the inter-sectorial activities of the Ministries of Health, Education and Agriculture.

The outside training (which is anticipated to last for a period of 10 weeks) will expose members to experiences already gained under similar circumstances. Ecuador is one of the countries recommended here 9/ because:

a) significant experience in non-formal education has already been gained with the University of Massachusetts. Bolivian team members will be expected to be critical in accepting or rejecting the approaches adopted by the University group;

b) the Ministry of Education in Ecuador is also undergoing an administrative reform. One of the results has been the creation of a Department of Non-Formal Education the functions of which are somewhat similar (albeit more conventional) to those that have been assigned to the Non-Formal Education Working Group;

c) the cultural make-up of the rural ethnic population is very similar to that of Cochabamba; and

d) the external environment (geography, economic organization and production patterns) is also comparable.

As soon as the Non-Formal Education office begins to function in Cochabamba, it is anticipated that the first round of loan funded short-term technical assistance will be provided 10/ to insure that the non-formal education group begins to function effectively.

Before the Non-Formal Education office begins to function, the Non-Formal Education Technical Coordinator and the Rural Education Planning Advisor will have been working with the Baseline Data Survey to insure the inclusion of questions

9/ Other countries experiences will also be searched for comparative experience, e.g. ACPD in Colombia.

10/ The short-term technical advisor will be expected to provide his inputs for the duration of the Project in periods of 3 months every year for four years.

which should yield information on demographic and cultural make-up of communities, economic organization, social stratification and leadership patterns, and capacity to organize. In addition, the survey should provide a clear idea of the work of other non-formal education organizations in the area or in specific communities, and how joint planning may proceed.

The Non-Formal Education Technical Coordinator will work with the short-term Non-Formal Education Consultant to interpret the Baseline Data Survey information and ensure that the results of the survey are applied in the design of the initial approach to the communities.

The success of the initial approach to the communities is crucial to the future effectiveness of the Project. To take this difficult step successfully, the Project strategy requires the organization of training sessions 11/ at the community level. These training sessions will be offered during 4 weeks in each of the years of Project implementation. The sessions will be conducted 4 times each year. They will bring together 4 different participants each time from each of five nuclear school communities, or a total of 20 participants in every session. About 80 individuals would receive training each year in community organization and development. They will learn how to set up the resource groups, to negotiate contracts, to keep records and generate information. They would also meet other community participants which could spur the desired intercommunity cooperation and joint planning.

Following the initial training sessions, the resource groups will be expected to develop their action plans, i.e. to identify their needs, interests and strengths and ways of meeting and using them. This is not intended to be a process whereby communities become activity generators overtime but rather become active participants in their own development. The resource groups, assisted by the non-formal education group, will be cognizant of the work of other development agencies, ministries and non-formal education groups and determine how they relate to community interests or action plans.

At this point, the resource groups and community leaders would have to form the Community Council. The council would be the resource group's representative in negotiating an agreement with the various agencies working in the resource group's area. In addition, the council would solicit funds for the community contribution to the Project.

11/ Preliminary discussions are underway to determine if NCDS facilities in Cochabamba would be suitable for the Project.

This period of transition from idea to practice will have to be carefully monitored. Non-formal education team members will be expected to be in constant contact with the resource groups. Signs that some resource groups are stalling would necessitate careful evaluation of the reasons why this is occurring and would place demands on the non-formal education group to define alternative approaches to that community's courses of action.

The functions of the non-formal education group will then settle down to the provision of technical assistance, periodic visits to the communities, organization and updating of the data bank, survey design and execution and, again at the end of the first year of Project life, carrying out the first of the annual evaluations which, from beginning to end, should take approximately 10 weeks.

Activities at the field level during that first year (and in subsequent years) will include the initiation of new projects or redefinition of on-going ones. Depending on their scope and content they may be strictly community ventures, or they may be carried out within the nuclear community system. Also during this period programs of non-formal education working in this area will be expected to provide information to the communities and the non-formal education group on their project objectives, strategies, and time frames.

The non-formal education group also will coordinate activities with other ministries and development agencies. This will take place at the top with the Multi-Sector Group. In accordance with the organizational strategy spelled out earlier, the parties will be requested to provide information on their plans of action while the non-formal education group submits project feasibility studies. Multisector Group concurrence should result in negotiations at the field level with the department level non-formal education organization that will work with the community on the Project.

D. Financial Support

Financing of new projects or strengthening of on-going ones is a bottleneck that any rural development scheme experiences. In addition, the lack of appropriate information on the communities' financial needs makes it difficult (and also unrealistic) to define specific ex-ante financial schemes.

It is anticipated that the communities' and agencies' financial needs for project implementation will be supported from two sources: fund sources from within the department and community, and a financial support fund that will be set up as an integral part of the Project strategy.

Fund resources within the department include public and private banks; development agencies and ministries that have funds set aside for specific purposes. Some of these agencies will be included in the Multisector Group, thus they will become familiar with what goes on, and what types of financial requirements have to be met, at the community level. In addition, the Multisector Group will be asked to serve as intermediary between the non-formal education group and the non-formal education programs and communities on the one hand, and sources of credit that may be tapped.

The financial support fund of \$100,000 allocated from the loan component of the Project plus GOB matching funds will be disbursed in four equal installments of \$25,000. The amount of the fund has been set at approximately \$5,000 per nuclear community system for any given year. While no hard and fast rules will be established to allocate the monies as among different communities, the following general principles of allocation will be followed:

a) The applications for funding will have to originate in the communities through the Community Councils.

b) When non-formal education programs show a demonstrated need for support, they will conduct negotiations with the interested communities. The non-formal education group and community council also will participate in these negotiations to ensure that the communities interest are served.

c) Under normal procedures the Non-Formal Education Office will decide whether the support in question is feasible and justified. If an impasse arises between the community and the non-formal education office, the community will have the right to appeal to the Multisector Group which will then have the power to make the final decision. The Community Council will decide whether or not the community is able to negotiate an agreement with the non-formal education organization.

d) No nuclear community system will be able to draw more than \$6,000 from the fund. This is introduced so that the distribution of monies will not be skewed in favor of a few communities.

e) The non-formal education group will actively seek to make equitable use of these funds among the different communities.

f) Up to one half of the funds will be granted to the communities. The other half will be provided on a matching fund basis. The non-formal education group will be charged with the responsibility for evaluating the impact of the financial support fund on project performance at the community level. Should it be demonstrated that the financial scheme is not fulfilling its intended purposes, the non-formal education group will, with the aid of the Non-Formal Education Consultant, recommend alternative procedures for the disbursement of funds, or, if necessary, recommend discontinuation of the financial support.

PROJECTION OF EDUCATIONAL OUTCOMES, COSTS
AND ECONOMIC RETURNS UNDER ALTERNATIVE
PROJECT STRATEGIES (primary education only)

The five program alternatives contemplated in this analysis are:

- For the rural population of Bolivia
 - A. No project, i.e. continuation of present trends in Bolivian rural education.
 - B. Project sequence consisting of Rural Education I, II and III.
 - C. An alternate project sequence involving the same development costs as B, but by-passing the experimental phase in Cochabamba.
- For 20 school systems in Cochabamba
 - D. No project.
 - E. Project sequence consisting of Rural Education I only.

I. Projection of Educational Outcomes

Measurable educational outcomes relevant to the calculation of costs and social benefits include (a) annual enrollments in grades 1 to 8 and (b) number of children successfully completing grades 3, 5 and 8 respectively. These are predicted for all children of the target population presently enrolled, and for all age cohorts reaching school age from 1976 to 1990.

The target population under program alternatives D and E is that served by the 20 school systems retained for the Cochabamba experiment, i.e. the potential impact of Rural Education I on the rest of the nation in the absence of follow-up through Rural Education II and III is neglected in the calculations. The target population under alternatives A, B and C is the whole rural population of Bolivia. Under B, the differential

Impact of the project sequence on the population of the 20 experimental systems is neglected in the calculations.

The educational outcomes of interest have two basic determinants:

- (1) the number of children in each age cohort entering first grade and
- (2) the average "flow" of such children through the system and out of it. These two components are analyzed separately below.

1. Projection of entries into the rural primary school system

Based on available estimates of the size of each rural age cohort at age 6 developed by CONEPLAN, and on estimates of the size of the entering class in corresponding years (first grade enrollment net of estimated number of repeaters), we find that the proportion of rural children reaching school has grown quite rapidly during the recent years: from 71.1% in 1967 to 85.9% in 1973.^{1/} This represents in part a response to the GOB policy of expanding school facilities in rural areas under nuclear arrangements, and in part an increased sensitization of rural families to the potential value of education. Since the enrollment used in the estimates is the enrollment in rural schools, and since there is evidence that a substantial number of rural children attend urban schools (e.g. Cochabamba and Santa Cruz), the actual percentage of rural children reaching first grade exceeds the calculated amounts by several points in both years.

The percentage of each age cohort entering first grade in the rural system is projected to grow at a declining rate until 1977, when it stabilizes at 92%. Taking account of the additional fraction absorbed by urban schools, 92% represents a reasonable ceiling for the rate of entry into the rural system, at least within the horizon of our projections.

Table 1 shows estimates and projections of the size of each cohort from 1965 to 1990, based on CONEPLAN data available up to 1980,

^{1/} These figures represent slight underestimates of actual percentages, since a substantial proportion of the children in first grade have entered after age 6 and thus belong to an earlier (i.e. smaller) cohort than the one to which enrollments are related.

together with entry percentages and numbers entering first grade. Corresponding figures also are shown for the population of the 20 experimental school systems in Cochabamba, on the assumption that (1) the 1975 ratio of school-entry age population to primary enrollment and (2) the annual population growth rates are the same for the twenty systems as for rural Bolivia in general.^{2/}

2. Projection of children flow through the system

Flow charts of the UNESCO type were calculated for the two rural cohorts entering first grade in 1965 and 1969 respectively, as well as for the urban cohort entering first grade in 1968. The charts are based on enrollment data by grade available for the relevant periods, as well as on supplementary data covering "promotion" and "non promotion" to the next grade and "desertion" during the school year. Such data are not sufficient to ensure a proper estimate of the flows, since various hypotheses consistent with them can be made with respect to the proportion of "promoted" pupils actually going into the next grade, the proportion of "deserters" and "non-promoted" repeating the grade, and the extent to which multiple repetitions of grades do occur.

The assumptions used in the attached estimates are that: (1) 1/10 of the "deserters" and 2/10 of the "non-promoted" do repeat their grade, (2) repeaters are promoted in the same proportion as non-repeaters, and (3) repeaters who are not promoted drop out. ^{3/}

The charts indicate that the flow of rural pupils through the system has improved markedly in the recent past. Starting with the same 1,000 entrants in first grade, the number successfully completing (promoted from) the third grade rose by 29% (from 232 to 300) between the 1965 and 1967 cohorts. The number completing the fifth grade rose by 22% (from 139 to 170), and the number completing the eighth more than doubled (from 15 to 32). However, this performance is still way

^{2/} It is assumed in this analysis that 430 out of the 11,077 pupils enrolled in the Cochabamba systems are in pre-primary grades.

^{3/} The rural charts are based strictly on actual enrollment data, with the exception of an adjustment for the absence of "non-promotions" in the school year 1969. The urban chart was adjusted more extensively to erase abnormalities in the data reported for the relevant sequence of years and grades (abnormalities being identified in relation to the behavior of neighboring sequences).

below that observed in the 1968 urban cohort, where the number successfully completing the 3rd, 5th, and 8th, grades are 715, 632, and 403, respectively. Were the linear rates of advance observed between 1965 and 1969 to continue unchanged, it would take until 1994 for the percentage of rural pupils completing the third grade to reach the 1968 urban average; the 1968 urban completion percentages in the fifth and eighth grades would not be reached until 2029 and 2053 respectively.

Projections of the flow characteristics of successive cohorts were made on the following basis.

1) Projection in the absence of Projects

(Program alternatives A and B). In the absence of educational reform, it is assumed that the linear annual advance observed between the 1965 and 1969 cohorts for each of the completion percentages will be maintained over the projection period. There is indirect evidence that the movement observed between these two years has, indeed, been sustained. Table 2 shows "retention ratios" from each grade to the next for three pairs of years ranging from 1965-66 to 1972-73. While these refer to raw enrollment figures and do not measure retention for any individual age cohort, they are good indicators of the trend of pupil retention among successive cohorts. It is apparent from the table that the movement beyond 1968-69 has continued the trend observed between 1965-66 and 1968-69.

Estimates of corresponding enrollment figures are obtained through interpolation of enrollments by grade/year in the flow chart of the 1969 rural cohort and enrollments by grade/year in the flow chart of the 1968 urban cohort. The estimation is done separately for grades 1-3, 4-5 and 6-8 as follows:

a) For grades 1-3. Reference is made to the number of students promoted from grade 3. Calling PT the number promoted in the rural cohort entering in year T, P69 the number promoted in the 1969 rural cohort, and PU the number promoted in the 1968 urban cohort, the relative advance of promotions between 1969 and T is computed as:

$$P_T = \frac{P_T - P_{69}}{P_U - P_{69}}$$

This same relative advance is assumed to apply to enrollments by grade/year: If E_{69} is the enrollment in some grade/year for the 1969 rural cohort and E_U is the corresponding enrollment in the 1968 urban cohort, the difference $E_T - E_{69}$ (where E_T is the unknown enrollment of the cohort entering in year T) is given by:

$$E_T - E_{69} = (E_U - E_{69})$$

1) For grades 4-5, Reference is made to the number of students promoted from grade 4, and for grades 6-8, the reference is to promotees from grade 8. Otherwise the procedure is the same as with grades 1-3.

2) Projection under alternative project sequences

(B, C, E) Projections of the flow characteristics under project sequences B, C and E are based on expected advances of the rural flows in relation to the urban flow (urban cohort entering in 1968).

The base cohort flow under sequences C and E is that predicted under 1) above for the 1976 rural cohort in the absence of Projects. For sequence B, the base cohort flow is that predicted under 1) for the 1977 rural cohort. Under each sequence, all elements (or characteristics) of the base flow are assumed to advance at a uniform rate toward corresponding elements (or characteristics) of the 1968 urban flow.

If r_T is specified as the rate of advance for year T and if we designate an element F of the flow as F_B for the base cohort, F_T for the cohort entering in year T, and F_U for the 1968 urban cohort, we have:

$$F_T - F_B = (F_U - F_B)$$

Clearly, the rates r_T for successive years will depend on the sequence of projects undertaken. Table 3 shows the expected series of ratio r_T from 1976 to 1990 under each program sequence, and chart 3 describes the same series graphically. In all cases, the ratios by 1990 are equal to 1.00, which means that the rural flow has become equal to the 1968 urban flow.^{4/} The path to that "maximum" level does

^{4/} With respect to flows through grades 6-8, the "goal" is reduced to 1/2 the 1968 urban flow, i.e. a r_T factor of 1.0 corresponds to only 1/2 the urban achievement.

vary, however. For the experimental program under Rural Education I, over half of the difference between the base flow and the 1968 urban flow will be made up six years after the program begins. For the sequence of Rural I, II and III, a similar advance will have been achieved on a national scope five years after the nation-wide projects (Rural Education II and III) have been started. The reason for this more rapid advance is that nation-wide reforms will benefit from the knowledge acquired through experimentation (Rural Education I). With respect to project sequence C, it is estimated that the application of resources nation-wide without the benefit of concentrated experimentation in the initial phase will result in slow progress over the first five years and a substantial lag in the achievement of parity with the 1968 urban flow.

3. Projection of educational outcomes

The logical procedure for the projection of educational outcomes on the basis of the information developed in sections 2 and 3 is straightforward:

a) For each successive year T, multiply 1/1000 the size of the entering age cohort (obtained in 1) by elements of the associated flow chart (obtained in 2) to get enrollments and grade completions from the cohort over the next nine years (or more years if different percentages of the cohort are assumed to enter first grade in years T, T+1, T+2, etc.)^{5/}

b) Add up enrollments and grade completions by year to obtain total annual enrollment and total promotions through grades 3, 5 and 8 in each year.

In view of the limited resources available to complete this analysis, the heavy computations involved in the procedure just described were by-passed in favor of a shorter method that provides adequate approximations: Briefly, projected enrollment each year was based on a moving average of total enrollment in grades 1-5 and 6-8 from cohorts entering in previous years, the lags and averaging procedures having been tested over the period 1965-1973 for which actual enrollment figures are available. A similar procedure was used for the projection of grade completions.

^{5/} Note that a proportion of the cohort also enters in year T-1 before reaching school age.

In addition to enrollment and grade-completion figures, table 4 shows the number of pupils reaching each level of final attainment, i.e. the number successfully completing the third grade but not the fifth, and the number completing the fifth but not the eighth. These numbers are obtained, for each cohort, by subtracting 5th. grade completions from 3rd. grade completions (3rd. grade final attainment) and 6th. grade completions from 5th. grade completions (5th. grade final attainment).

A brief review of the projections reported in tables 4A, 4B, 4C, 4D and 4E reveals the following important features:

- The growth of national rural enrollment in the absence of any project (Table 4A) will average 4.5% yearly between 1975 and 1990.

The efficiency of the pupil flow in the terminal 1990 rural cohort will still be low, with only 656 out of 1,000 entrants successfully completing the third grade, 338 completing the fifth and 120 completing all eight primary grades.

Under the sequence of Rural Education Projects I, II and III (Table 4B), national enrollment in the rural primary system will grow at an average yearly rate of 6% between 1975 and 1990, and it will exceed the "no-project" enrollment by 28% in the last year (1990).

The efficiency of the pupil flow in the terminal 1990 cohort will have reached the urban level (1968 cohort ^{6/}with 715 out of 1,000 successfully completing third grade, 632 completing the fifth and 201 completing the eight).

- The impact of Rural Education I on its target area in the absence of any further program (Table 4E) falls somewhere between that of sequences B and C at the national level.

II. Projection of education costs under alternative programs

1. Projection of recurrent costs

The projection of recurrent costs under each program alternative is based on an initial projection of the number of teachers employed. The teacher salary (exclusive of family benefits) is then multiplied by the number of teachers each year to obtain annual teacher costs. Finally, other recurrent costs are calculated as a variable proportion of teacher costs and added to the latter.

^{6/} One half the urban level in grades 6-8.

(1) Projection of number of teachers employed. Pupil/teacher ratios in the basic grades (1-5) are projected to increase from 23/1 in 1973 (actual) to 35/1 at a later date. In the intermediate grades (6-8), the ratio is projected to increase from 18/1 in 1974 (actual) to 30/1 at a later date. The goal of 35 pupils per teacher in the basic grades differs from that adopted under the Preliminary Education Plan of the GOB (40) for the reason that a 40/1 ratio appears excessive in single-teacher schools.

It is assumed that for some years to come, the Ministry will have to increase its rural teaching force by a minimum of 500 a year in order to absorb the output of its Normal Schools. Thus, the rural teaching force is projected to increase nationally by 500 a year until such time as the total teacher/pupil ratio is consistent with the goal of 35/1 in basic grades and 30/1 in intermediate grades. 7/ From this point on, the ratios remain constant at their desired level.

In the absence of any project (programs A and D), the desired ratios fail to be reached within the projection period. The same occurs under all project sequences except B (Rural Education I, II and III); in the later case, the desired pupil-teacher ratios become effective in 1987.

(2) Annual cost per teacher. Since all costs are calculated at 1974 prices, the average salary used in the computation is that specified in the Preliminary Education Plan of the GOB under a similar standard \$b.22,800 per year.

(3) Other recurrent costs as a percentage of teacher costs. Projected percentages are shown in table 5, together with projections of number of teachers, teacher costs, other recurrent costs and total recurrent costs. In line with previous commitments of the GOB, they are projected to increase from approximately 5.5% in 1974 to 10.0% in 1980. It is assumed that the increase will continue until 1985 when it will stabilize at 15.0%.

(4) Projected total recurrent costs. These costs are shown in table 5. Because of the lag in achieving desired pupil/ teacher ratios, the cost projections are the same under project sequences as they are under no-project, except in the case of sequence B, where the cost exceeds the no-project cost from 1987 onward.

7/A corresponding allocation of new teachers is assumed for the target schools under Rural Education I, based on their share of total school enrollment.

2. Projection of costs of capacity creation

Each addition of two pupils to enrollment between year T and year T + 1 is assumed to require the purchase of one desk-chair combination, and each addition to the teaching force occurring between year T and year T + 1 is assumed to require the addition of one school-room and associated equipment, i.e. no resort to double sessions is expected beyond what presently occurs. Estimates of the Preliminary Education Plan are again utilized:

Cost of School room (1974 prices)

Space	\$1,60,000
Others (including blackboard)	<u>1,000</u>
Total	\$1,61,000

Cost of desk-chair combination/pupil 200

Thus, the cost of capacity creation between years T and T + 1 is obtained through multiplication of the number of added teachers by \$1,67,000 and multiplication of the number of added pupils by 200; the cost is applied to year T.

3. Projection of annual cost of project sequences

(1) The annual recurrent cost of each project sequence is obtained by subtracting recurrent education cost in the absence of Project from education cost under the Project sequence. Since, however, the compared recurrent costs are generally similar, the recurrent cost of project sequences turns out to be zero except over the last years of project sequence B.

(2) The cost of capacity creation associated with a project sequence is again obtained by subtracting cost in the absence of project from cost under the project sequence. For reasons already discussed, an additional cost of school construction is incurred only under sequence B, during the last five years of the projection.

(3) Excluding the Project development costs, total costs of the project sequences (calculated for all age cohorts entering through 1990) are shown below after discounting at 10% to the year 1974.

(in million pesos)	Sequence E (Rural Ed. I)	Sequence B (Rural Ed. I, II, III)	Sequence C (Alternate)
Discounted recurrent costs	0.000	24.480	0.000
Discounted costs of capacity creation	0.380	41.307	10.420
Total	0.380	65.787	10.420

(4) The Project development costs, as presently projected for each fiscal year, are shown in table 6. Their discounted values (10% to 1974) are calculated below:

(in million pesos)	Sequence E (Rural Ed. I)	Sequence B (Rural Ed. I, II, III)	Sequence C (Alternate)
Discounted Project deve- lopment costs	115.500	511.131	511.131

III. Projection of social returns

Two types of social returns are computed under each program: Addition to GDP and shift of the income distribution in favor of the rural population. In both cases the estimates represent a minimum expectation of returns.

1. Addition to GDP

Additions to GDP are calculated in terms of the increased productivity expected from (a) workers with higher levels of educational attainment and (b) workers affected by the latter through demonstration. The annual addition to worker productivity is assumed to be effective from age 18 to age 50. For each worker reaching his final education attainment in year T, and for all workers affected by him through demonstration, future productivity gains are reduced to a simple figure through discount at 10% to year T.

a. Productivity increased in agriculture. The addition to future productivity is first estimated for those pupils who will choose to work in agriculture.

(1) On the basis of an agricultural survey carried out in Ecuador previous to 1970, ^{8/}it is expected that the percentage

^{8/}Michael Finn; "Análisis de la Metodología utilizada en el Plan de Recursos Humanos de Ecuador de 1970". Table 3.2, pp.87.

of small-farm managers ready to utilize efficient production and marketing techniques under changed conditions (i.e. "modernizers") are as follows for different levels of educational attainment:

Completed less than 3 grades	15%
Completed 3 grades only	30%
Completed 5 grades only	50%
Completed 8 grades	75%

These figures are approximations of the survey results, since the latter are tabulated in accordance with a different breakdown of educational attainment (see table 7); in addition, the survey refers only to the use of fertilizers by farmers, rather than to the more complex attitudinal variable of interest. On the other hand, the survey figures offer the advantage of having been calculated separately for different sizes of farms and of being relatively stable for the four ranges of farm size in which most of the Bolivian population is actually working (less than 1 hectare, 1 to 5 hectares, 5.1 to 10 hectares, 10.1 to 20 hectares).

(2) It can be surmised that a high proportion of "modernizers" with less than 3 grades of education, and a substantial percentage of those with a final attainment of 3 grades, do shift to new techniques through imitation of their more educated neighbors rather than through their own informed initiative. It can be further presumed that such a "demonstration effect" is more powerful when emanating from individuals with 5th or 8th grade education than when the innovator is only moderately more educated than his neighbors.

Since the number of individuals with a final attainment of grade 5 is less than 10% of the rural population (in Ecuador as in Bolivia), and since the number with 8 grades or more is less than 8%, the data are consistent with the assumption that each modernizer with 5th grade final attainment has one imitator and each modernizer with an 8th grade attainment has one and a half.

It is accordingly assumed that each modernizer through education, at least as long as the proportion of 5th and 8th grade completers in the rural population remains small, will generate one additional modernizer if his final attainment is 5th grade and one and a half if it is 8th grade. For those educated under the new curriculum (project sequences), those figures are raised to 1.25 and 2 respectively.

(2) Assuming that all present GOB projects in the field of agriculture are carried out over the next decades, a small-farmer's willingness and ability to respond in full to the new opportunities thus created has been estimated to result in a minimum 50% increase in his productivity.

(3) Since the majority of farm women of working age are counted in the agricultural labor force, and since they play a substantial role in production and other management decisions, the 50% productivity increase is applied to all modernizers male or female, and the percentage of individuals of each educational attainment reaching the modernizer state is assumed the same for both sexes. Assuming as well equal participation rates in agriculture, the average increase in agricultural productivity per year generated by rural individuals reaching different levels of primary education can be calculated as follows:

(a) 3rd grade final attainment

- Increase in percentage of modernizers

over percentage in groups with no education = 15%

- Additional yearly productivity of modernizers

= 50% of \$b.2,000 (average GDP per agricultural workers in 1974)

- Multiplication factor through demonstration = 1

The average increase in agricultural productivity per year resulting from a 3rd grade final attainment is thus:

$$15\% \times 50\% \times 2,000 \times 1 = \$b. 150$$

(b) 5th grade maximum attainment

- Increase in percentage of modernizers over percentage in group with no education = 35%

- Multiplication factor through demonstration = 2 (2.25).
The average increase in agricultural productivity per year resulting from 5th grade final attainment is then:

$$35\% \times 50\% \times 2,000 \times 2 = \$b. 700 (787.5)$$

(c) 8th grade final attainment

- Increase in percentage of modernizers over percentage in group with no education = 60%
- Multiplication factor through demonstration = 2,5 (3)

The average increase in agricultural productivity per year resulting from 8th grade completion is thus:

$$60\% \times 50\% \times 2,000 \times 2.5 = \$b. 1,500 \quad (1800)$$

b. Productivity increases outside agriculture. For lack of adequate estimation procedures, average increases in productivity at each education level for individuals working outside agriculture are taken to be equal to those estimated above.

c. Discounted values of productivity increases. (discounted at 10% to year in which highest grade was completed)

The discounted values, assuming that the calculated increases in annual productivity are generated from age 18 to 50 are as follows for individuals of different attainment.

3rd grade attainment:	\$b. 676	
5th grade attainment:	\$b.3,157	(3,552)
8th grade attainment:	\$b.6,765	(8,118)

d. Projection of discounted economic returns of education under alternative programs. The discounted additions to GDP shown in Table 7 for each year of the projection are obtained through multiplication of the number of pupils projected to reach final attainments of, respectively, 3, 5 or 8 grades in that year ^{9/} by the relevant average discounted values calculated in c, then adding up the discounted additions originating from each attainment level.

The projections are computed for each alternative program, based on outcome projections reported in Table 4 (A, B, C, D, E).

e. Projections of discounted economic returns alternative project sequences. These projections are obtained for each project sequence by subtracting the relevant no-project returns obtained

^{9/}i.e. 3rd grade completion but not fifth, fifth grade completion but not eight, eighth grade completion.

in d from the educational returns obtained under the project sequence. Projections are reported in Table 8 for sequences B & C. Because the effect of the projects is to increase both retention and levels of attainment, the impact on economic productivity is slight in the first years (reduction of the number of persons available to the labor force) and strongly positive in later years (release of individuals previously retained in school with higher education level and productivity). For the total of pupils in age cohorts entering school until 1990, the total returns of the project sequence, all discounted at 10% to 1974, are as follows:

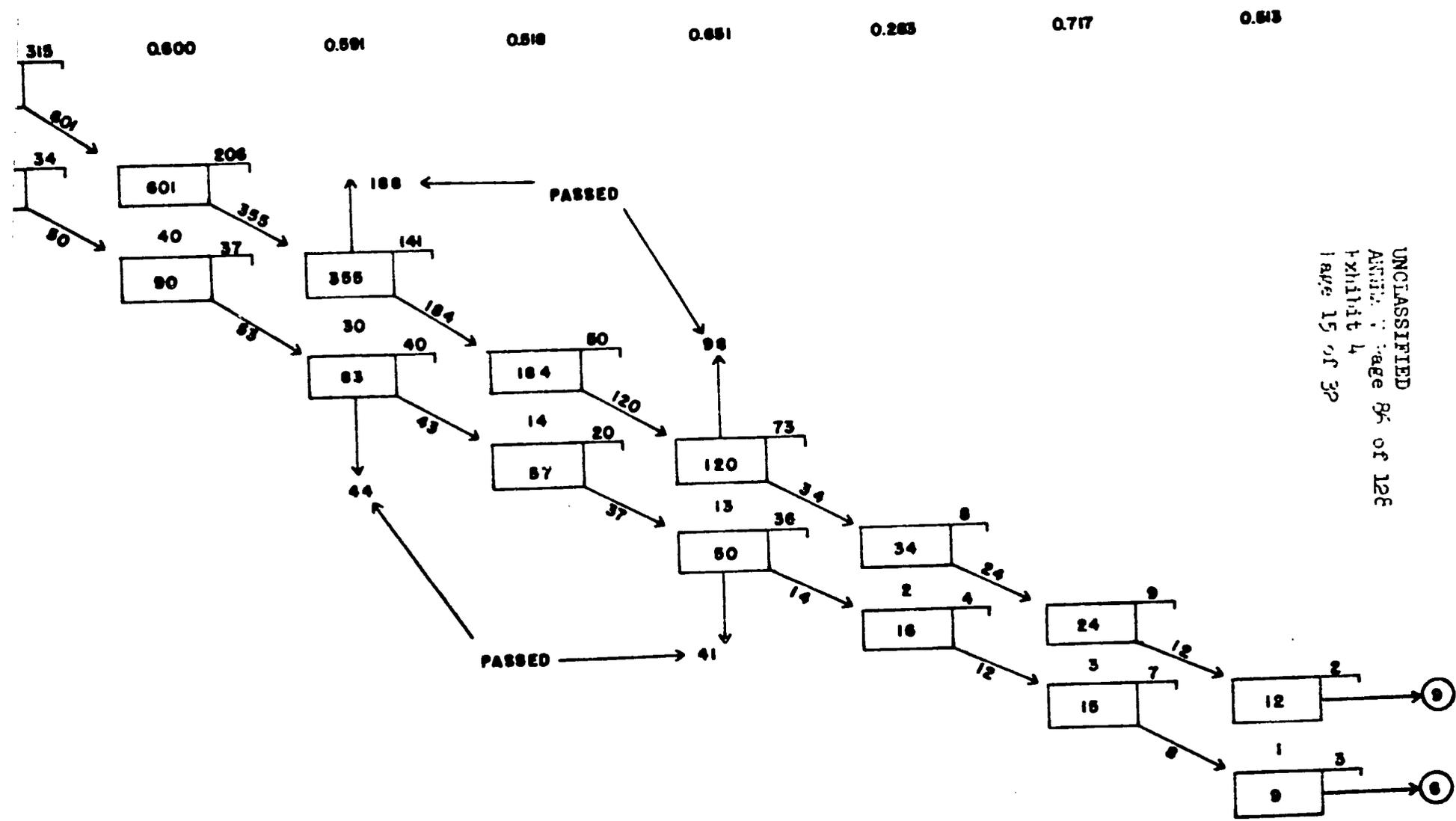
(in million pesos)	Sequence E (Rural Ed. I)	Sequence B (Rural Ed. I, II, III)	Sequence C (Alternate)
Discounted economic returns	22,945	635.78	456.22

2. Shifts in income distribution

In accordance with the projections made in Section 1, the number of individuals affected by "modernization" as a result of project sequence B (Rural Education I, II, III) would have reached 717,000 by the time pupils from the 1990 cohort are all at work. When this number is added to that expected under the no-project situation (679,000), it appears that a total of 1.396 million individuals will have made substantial gains in productivity as a result of the education provided within the projection period. This represents the size of the present agricultural labor force in agriculture, and about 70% of what the labor force can be expected to be at the end of the century.

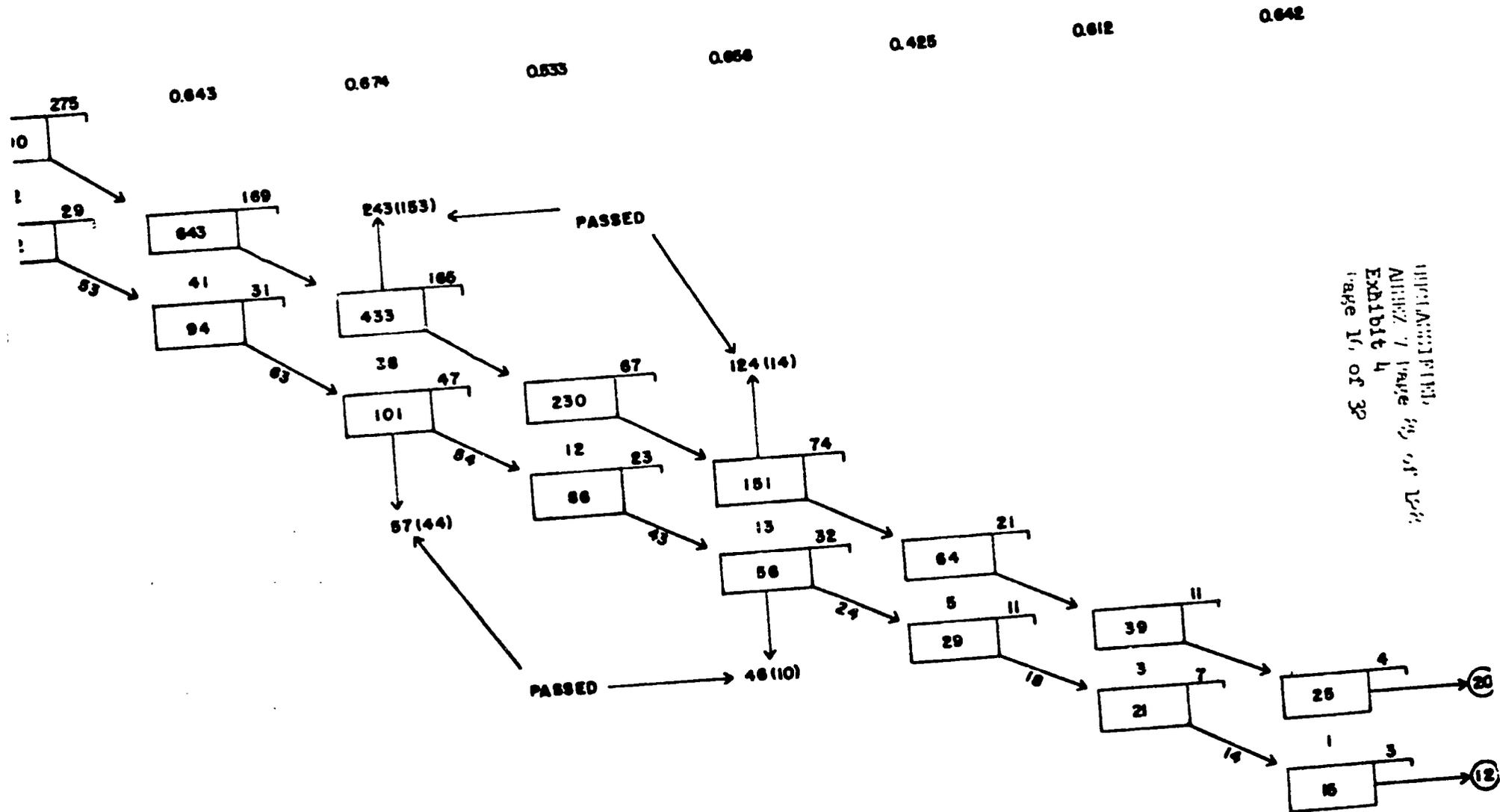
Since the percentage rise in rural incomes is of the same order as the percentage rise in productivity, the general conclusion is that, with the help of project sequence B, the vast majority of rural families in Bolivia will benefit within the next 25 years from a substantial increase in income (averaging as a minimum \$b. 2,000 per family). In the absence of such a program, some 30% of the families would fail to make this transition.

CHART I: FLOW OF PUPILS THROUGH THE RURAL SYSTEM COHORT ENTERING IN 1965



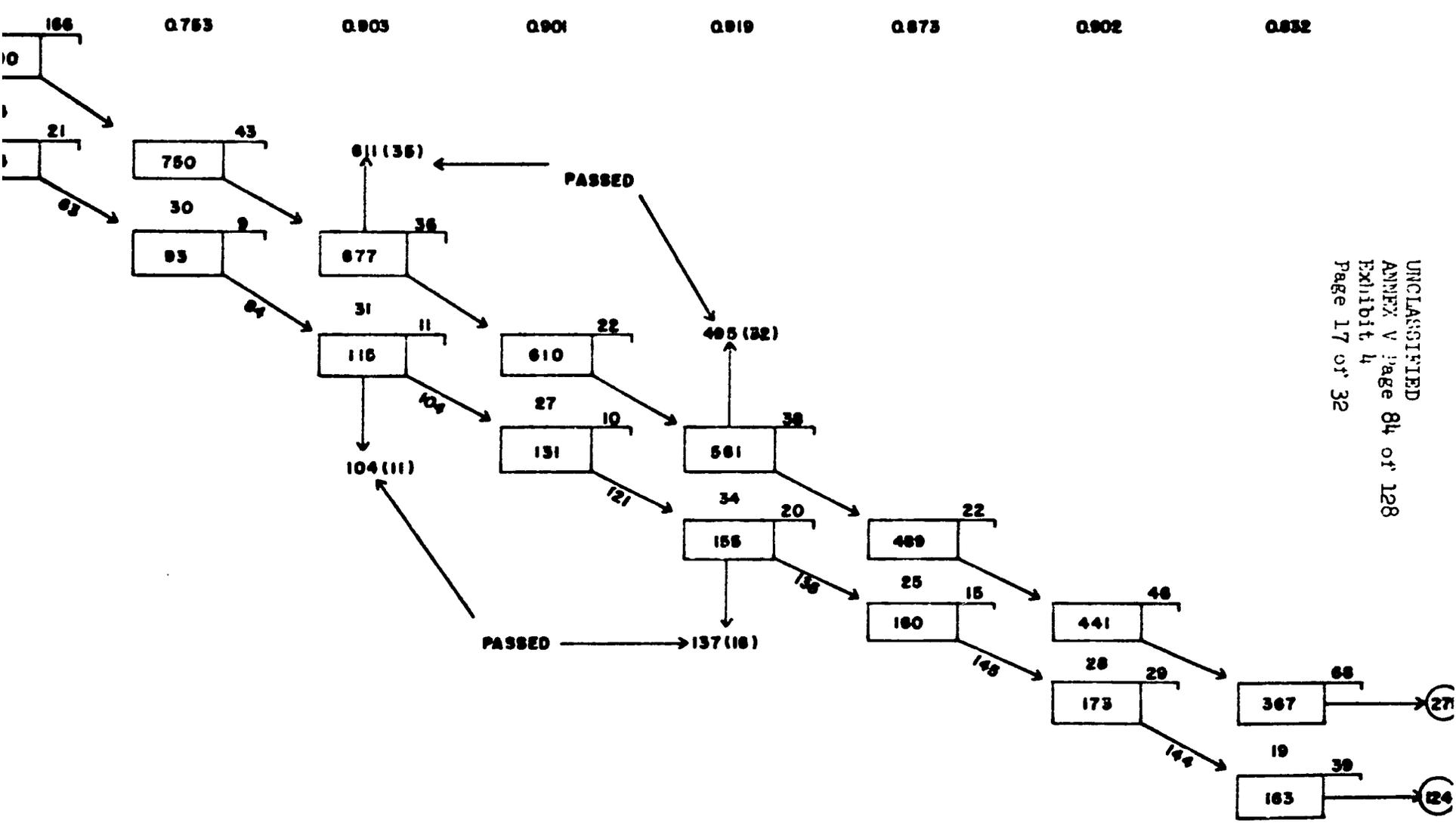
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CHART 2: FLOW OF PUPILS THROUGH THE RURAL SYSTEM COHORT ENTERING IN 1969



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CHART 3. FLOW OF PUPILS THROUGH THE URBAN SYSTEM (ADJUSTED)
COHORT ENTERING IN 1968



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TABLE 1

Projection of entering into First Grade (rural primary schools)

<u>Year</u>	<u>Rural population of entry age (000)</u>	<u>Fraction entering</u>	<u>Number of rural children entering First grade (000)</u>	<u>Number of children entering first grade in Cochabamba target area (000)</u>
1965	104.3	0.655	68.3	2.2
1966	106.7	0.683	72.9	2.3
1967	109.2	0.711	77.6	2.5
1968	111.8	0.738	82.5	2.6
1969	114.4	0.760	86.9	2.8
1970	117.0	0.786	92.0	2.9
1971	119.6	0.813	99.2	3.1
1972	122.3	0.837	102.4	3.3
1973	124.9	0.859	107.3	3.4
1974	127.6	0.879	112.2	3.6
1975	130.7	0.897	117.2	3.8
1976	133.3	0.910	121.3	3.9
1977	136.0	0.920	125.1	4.0
1978	138.7	0.920	127.6	4.1
1979	141.5	0.920	130.2	4.2
1980	144.3	0.920	132.8	4.2
1981	147.2	0.920	135.4	4.3
1982	150.2	0.920	138.2	4.4
1983	153.2	0.920	140.9	4.5
1984	156.2	0.920	143.7	4.6
1985	159.4	0.920	146.6	4.7
1986	162.5	0.920	149.5	4.8
1987	165.8	0.920	152.5	4.9
1988	169.1	0.920	155.6	5.0
1989	172.5	0.920	158.7	5.1
1990	175.9	0.920	161.8	5.2

TABLE 2

Transfer ratios/rural system

<u>Grades</u>	<u>1965-66</u>	<u>1968-69</u>	<u>1969-70</u>	<u>1972-73</u>
1-2	0.635	0.662		0.698
2-3	0.625	0.678		0.722
3-4	0.539		0.567	0.602
4-5	0.566		0.647	0.675
5-6			0.301	0.476
6-7			0.465	0.598
7-8			0.670	0.722

(Ratio of enrollment in grade (X+1) in year (T+1) over enrollment in grade (X) in year (T)).

TABLE 3

Relative Advance of Rural Pupil-flow Characteristics
under alternative project sequences *

	<u>A</u> <u>Rural I</u>	<u>B</u> <u>Rural I, II, III</u>	<u>C</u> <u>Alternate</u>
1977	0.68	-	0.06
1978	0.16	0.12	0.12
1979	0.24	0.23	0.18
1980	0.32	0.34	0.24
1981	0.42	0.45	0.30
1982	0.54	0.56	0.36
1983	0.68	0.68	0.42
1984	0.81	0.81	0.50
1985	0.91	0.91	0.60
1986	1.00	1.00	0.72
1987	1.00	1.00	0.82
1988	1.00	1.00	0.90
1989	1.00	1.00	1.00
1990	1.00	1.00	1.00

TABLE 4 A

PROGRAM ALTERNATIVE: NO PROJECT; TARGET AREA: RURAL POPULATION

Projection of enrollments in grades 1-5 (E_1) and 6-8 (E_3), completions of grades 3 (G_1), 5(G_2)^m and 8(G_3),
and number of pupils with maximum attainment of grades 3(G_1) and 5(G_2)

Y E A R	E_1 000	E_3 000	E 000	G_1 000	G_1' 000	G_2 000	G_2 000	G_3 000
71	247	10.5	257.0	27.5	12.0	12.5	10.5	-
72	264	11.0	275.0	30.5	13.5	14.0	11.5	1.0
73	282	13.0	295.0	34.0	15.0	15.5	12.5	1.5
74	300	15.5	315.5	37.5	16.5	17.0	13.5	2.0
75	318	18.5	336.5	41.0	18.5	19.0	14.5	2.5
76	336	21.5	357.5	45.0	21.0	21.0	16.0	3.0
77	354	24.5	378.5	49.0	23.0	22.5	17.0	3.5
78	371	27.5	398.5	52.5	24.5	24.0	17.5	4.5
79	387	30.5	417.5	56.0	26.0	26.0	18.5	5.0
80	398	34.0	432.0	59.5	28.0	28.0	20.0	5.5
81	410	37.5	447.5	63.0	30.0	30.0	21.5	6.5
82	422	41.0	463.0	66.5	31.5	31.5	22.0	7.5
83	435	44.5	479.5	70.0	33.0	33.0	23.0	8.0
84	448	47.5	495.5	74.0	35.0	35.0	24.5	8.5
85	461	50.5	511.5	78.0	37.0	37.0	25.5	9.5
86	474	54.0	528.0	82.0	39.0	39.0	26.5	10.0
87	488	58.0	546.0	86.0	41.0	41.0	27.5	10.5
88	502	61.5	563.5	90.0	43.0	43.0	28.5	11.5
89	517	65.0	582.0	94.5	45.5	45.5	29.5	12.5
90	532	69.0	601.0	99.0	48.0	47.0	31.0	13.5
R*			1.001.7	103.5	50.0	153.5	101.0	98.5

* Remnant of cohorts entering up to 1.990.

TABLE 4 B

PROGRAM ALTERNATIVE: RURAL EDUCATION I, II and III; TARGET AREA: RURAL POPULATION

Projection of enrollments in grades 1-5 (E_1) and 6-8 (E_3), completions of grades 3(G_1) and 8(G_3), and number of pupils with maximum attainment of grades 3(G'_1) and 5(G'_2)

Y E A R	E_1 000	E_3 000	E 000	G_1 000	G'_1 000	G_2 000	G'_2 000	G_3 000
71	247	10.5	257.0	27.5	12.0	12.5	10.5	-
72	264	11.0	275.0	30.5	13.5	14.0	11.5	1.0
73	282	13.0	295.0	34.0	15.0	15.5	12.5	1.5
74	300	15.5	315.5	37.5	16.5	17.0	13.5	2.0
75	318	18.5	336.5	41.0	18.5	19.0	14.5	2.5
76	336	21.5	357.5	45.0	21.0	21.0	16.0	3.0
77	354	24.5	378.5	49.0	23.0	22.5	17.0	3.5
78	371	27.5	398.5	52.5	24.5	24.5	17.5	4.5
79	387	30.5	417.5	56.0	24.0	26.0	18.5	5.0
80	408	34.0	442.0	60.5	22.6	28.0	20.0	5.5
81	432	37.5	469.5	66.0	21.0	32.0	23.0	6.5
82	457	41.0	498.0	72.0	20.5	38.5	27.5	7.5
83	482	46.5	528.5	78.0	19.0	45.0	32.0	8.0
84	509	54.5	563.5	84.0	17.0	51.5	36.0	9.0
85	538	64.0	602.0	91.0	15.5	59.0	41.0	11.0
86	570	74.0	644.0	98.0	14.5	67.0	45.5	13.0
87	598	84.0	682.0	104.0	13.5	75.5	52.0	15.5
88	624	94.5	718.5	108.5	13.5	83.5	57.0	18.0
89	637	106.5	743.5	110.0	13.0	90.5	61.5	21.5
90	650	118.5	768.5	112.0	13.0	95.0	64.5	23.5
R*			1,280.8	114.5	13.5	297.0	202.0	181.0

* Remnant of cohorts entering up to 1.990.

TABLE 4 C

PROGRAM ALTERNATIVE: ALTERNATE PROJECT SEQUENCE; TARGET AREA: RURAL POPULATION

Projection of enrollments in grades 1-5(E_1) and 6-8(E_3), completions of grades 3(G_1), 5(G_2) and 8(G_3), and
number of pupils with maximum attainment of grades 3(G'_1) and 5(G'_2)

Y E A R	E_1 000	E_3 000	E 000	G_1 000	G_1 000	G_2 000	G'_2 000	G_3 000
71	247	10.5	255.5	27.5	12.0	12.5	10.5	-
72	264	11.0	274.5	30.5	13.5	14.0	11.5	1.0
73	282	13.0	295.0	34.0	15.0	15.5	12.5	1.5
74	300	15.5	315.5	37.5	16.5	17.0	13.5	2.0
75	318	18.5	336.5	41.0	18.5	19.0	14.5	2.5
76	336	21.5	357.5	45.0	21.0	21.0	16.0	3.0
77	354	24.5	378.5	49.0	23.0	22.5	17.0	3.5
78	371	27.5	398.5	53.0	24.0	24.0	17.5	4.5
79	391	30.5	421.5	56.5	23.5	26.0	18.5	5.0
80	408	34.0	442.0	59.5	22.5	29.0	20.5	5.5
81	425	37.5	462.5	63.0	22.0	33.0	23.5	6.5
82	442	42.0	484.0	67.0	22.0	37.0	26.5	7.5
83	460	47.5	507.5	71.0	22.0	41.0	28.5	8.5
84	478	52.5	530.5	75.0	21.5	45.0	31.5	9.5
85	497	58.0	555.0	79.0	20.0	49.0	34.5	10.5
86	520	64.0	584.0	84.0	18.5	53.5	37.5	12.0
87	547	70.0	617.0	90.5	17.5	59.0	41.0	13.5
88	578	76.0	654.0	97.5	16.5	65.5	45.5	14.5
89	606	83.5	689.5	104.0	15.5	73.0	50.5	16.0
90	633	93.0	726.0	110.0	14.0	81.0	55.5	18.0
R*			1,210.0	114.5	13.5	285.5	194.5	159.0

* Remnant of cohorts entering up to 1990.

TABLE 4 D

PROGRAM ALTERNATIVE: NO PROJECT: TARGET AREA: 20 SYSTEMS IN COCHABAMBA

Projection of enrollments in grades 1-5(E_1) and 6-8(E_2), completions of grades 3(G_1), 5(G_2) and 8(G_3), and number of pupils with maximum attainment of grades 3(G'_1) and 5(G'_2)

YEARS	E_1	E_3	E	G_1	G'_1	G_2	G'_2	G_3
71	7,946	284	8,230	876	383	401	332	-
72	8,320	344	8,664	974	431	446	363	39
73	8,993	412	9,405	1,094	488	493	393	55
74	9,679	491	10,170	1,201	541	543	426	69
75	10,081	577	10,658	1,315	598	606	468	83
76	10,789	668	11,457	1,453	664	660	502	100
77	11,510	775	12,285	1,577	726	717	538	117
78	11,938	872	12,810	1,685	778	789	585	138
79	12,364	974	13,338	1,797	833	851	622	158
1980	12,796	1,096	13,892	1,911	890	907	654	179
81	13,234	1,209	14,443	2,006	939	964	688	204
82	13,360	1,312	14,672	2,102	988	1,021	722	229
83	13,807	1,418	15,225	2,225	1,050	1,067	748	253
84	14,260	1,528	15,788	2,053	1,115	1,114	771	276
85	14,720	1,621	16,341	2,482	1,181	1,175	805	299
86	15,185	1,717	16,902	2,616	1,248	1,238	842	319
87	15,656	1,836	17,492	2,753	1,319	1,301	877	343
88	16,133	1,959	18,092	2,894	1,389	1,368	916	370
89	16,616	2,084	18,700	3,037	1,463	1,435	953	396
1990	17,105	2,214	19,319	3,185	1,538	1,504	990	424
R*			32,198	3,335	1,614	4,941	3,213	3,175

* Remnant of cohorts entering up to 1990.

TABLE 4 E

PROGRAM ALTERNATIVE: RURAL EDUCATION I; TARGET AREA: 20 SYSTEMS IN COCHABAMBA

Projection of enrollments in grades 1-5(E_1) and 6-8 (E_3), completions of grades 3(G_1), 5(G_2) and 8(G_3), and number of pupils with maximum attainment of grade 3(G'_1) and 5(G'_2)

YEARS	E_1	E_3	E	G_1	G_1	G_2	G'_2	G_3
71	7,946	284	8,230	876	383	401	332	-
72	8,320	345	8,665	974	431	446	363	39
73	8,993	411	9,404	1,094	488	493	393	55
74	9,679	492	10,171	1,201	541	543	426	69
75	10,081	576	10,657	1,315	598	606	468	83
76	10,789	669	11,458	1,453	664	660	502	100
77	11,510	775	13,060	1,577	726	717	538	117
78	11,938	871	12,809	1,699	744	789	585	138
79	12,600	974	13,574	1,840	729	551	622	158
80	13,280	1,209	14,489	1,982	709	955	686	179
81	13,982	1,312	15,294	2,105	681	1,111	793	204
82	14,356	1,368	15,724	2,245	648	1,273	901	229
83	15,175	1,589	16,764	2,439	609	1,424	1,002	269
84	16,117	1,819	17,936	2,666	558	1,597	1,117	318
85	17,186	2,031	19,217	2,911	505	1,831	1,271	372
86	18,234	2,275	20,509	3,132	457	2,108	1,453	422
87	19,159	2,603	21,760	3,333	418	2,406	1,650	480
88	20,045	2,995	23,040	3,468	402	2,675	1,830	560
89	20,462	3,415	23,877	3,540	357	2,915	1,991	655
1990	20,880	3,793	24,673	3,611	419	3,066	2,090	756
R*			41,123	3,682	428	9,574	6,529	5,789

* Remnant of cohorts entering up to 1990.

TABLE 5 A&C

Program Alternative: No Project or Alternate Sequence; Target
 Area: Rural Population

Projection of recurrent Costs
 (000 of 1974 pesos)

	(1) No. of <u>Teachers</u>	(2) Annual Cost of Teachers	(3) Percentage other <u>Expenditures</u>	(4) Other <u>Expenditures</u>	(5) Total Recurrent <u>Expenditures</u>
1971	10,677	243,649.1	0.070	17,055.4	260,704.5
1972	11,958	272,881.6	0.065	17,737.3	290,618.9
1973	12,840	293,008.8	0.060	17,580.5	310,589.3
1974	13,340	304,418.8	0.055	16,743.0	321,161.8
1975	13,840	315,828.8	0.050	15,791.4	331,620.2
1976	14,340	327,238.8	0.06	19,634.3	341,873.1
1977	14,840	338,648.8	0.07	23,705.4	362,354.2
1978	15,340	350,058.8	0.08	28,004.7	378,063.5
1979	15,840	361,468.8	0.09	32,532.2	394,001.0
1980	16,340	372,878.8	0.10	37,287.9	410,166.7
1981	16,840	384,288.8	0.11	42,271.8	426,560.6
1982	17,340	395,698.8	0.12	47,483.9	443,182.7
1983	17,840	407,108.8	0.13	52,924.1	460,032.9
1984	18,340	418,518.8	0.14	58,592.6	477,111.4
1985	18,840	429,928.8	0.15	64,489.3	499,418.1
1986	19,340	441,338.8	0.15	66,200.8	507,539.6
1987	19,840	452,748.8	0.15	67,912.3	520,661.1
1988	20,340	464,158.8	0.15	69,623.8	533,782.6
1989	20,840	475,568.8	0.15	71,335.3	546,904.1
1990	21,340	486,978.8	0.15	73,046.8	560,025.6
R*	35,578	811,890.0	0.15	121,783.5	933,673.5

* Remnant of cohorts entering up to 1990.

TABLE 5 B

Program Alternative: Rural Education I, II, III; Target
Area: Rural Population

Projection of Recurrent Costs
(000 of 1974 pesos)

	(1)	(2)	(3)	(4)	(5)
	No. of <u>Teachers</u>	Annual Cost <u>of Teachers</u>	Percentage other <u>Expenditures</u>	Other <u>Expenditures</u>	Total Recurrent <u>Expenditures</u>
1971	10,677	243,649.1	0.070	17,055.4	260,704.5
1972	11,958	272,881.6	0.065	17,737.3	290,618.9
1973	12,840	293,008.8	0.060	17,580.5	310,589.3
1974	13,340	304,418.8	0.055	16,743.0	321,161.8
1975	13,840	315,828.8	0.050	15,791.4	331,620.2
1976	14,340	327,238.8	0.06	19,634.3	341,873.1
1977	14,840	338,648.8	0.07	23,705.4	362,354.2
1978	15,340	350,058.8	0.08	28,004.7	378,063.5
1979	15,840	361,468.8	0.09	32,532.2	394,001.0
1980	16,340	372,878.8	0.10	37,287.9	410,166.7
1981	16,840	384,288.8	0.11	42,271.8	426,560.6
1982	17,340	395,698.8	0.12	47,483.9	443,182.7
1983	17,840	407,108.8	0.13	52,924.1	460,032.9
1984	18,340	418,518.8	0.14	58,592.6	477,111.4
1985	18,840	429,928.8	0.15	64,489.3	499,418.1
1986	19,340	441,338.8	0.15	66,200.8	507,539.6
1987	19,886	453,798.5	0.15	68,069.8	521,969.3
1988	20,979	478,740.8	0.15	71,811.1	550,551.9
1989	21,750	496,335.0	0.15	74,450.3	570,785.3
1990	<u>22,521</u>	<u>513,929.2</u>	<u>0.15</u>	<u>77,089.4</u>	<u>591,018.6</u>
R*	37,534	856,525.9	0.15	128,478.9	985,004.8

* Remnant of cohorts entering up to 1990.

TABLE 5 D&E

Program Alternative: No Project and Rural Education I;
Target Area: 20 Systems in Cochebamba

Projection of Recurrent Costs
(000 of 1974 pesos)

	(1)	(2)	(3)	(4)	(5)
		x 22.820		(2)x(3)	(2)+(4)
	No. of	Annual Cost	Percentage	Other	Total
	Teachers	of Teachers	other	Expenditures	Recurrent
			Expenditures		Expenditures
1971	347	7,918.5	0.070	554.3	8,472.8
1972	397	9,059.5	0.065	588.9	9,648.4
1973	434	9,903.9	0.060	594.2	10,498.1
1974	452	10,314.6	0.055	567.3	10,881.9
1975	470	10,725.4	0.050	536.3	11,261.7
1976	488	11,136.2	0.06	668.2	11,804.4
1977	507	11,569.7	0.07	809.9	12,379.6
1978	525	11,980.5	0.08	958.4	12,938.9
1979	543	12,391.3	0.09	1,115.2	13,506.5
1980	561	12,802.0	0.10	1,280.2	14,082.2
1981	579	13,212.8	0.11	1,453.4	14,666.2
1982	598	13,646.5	0.12	1,637.6	15,284.0
1983	616	14,057.1	0.13	1,827.4	15,884.5
1984	634	14,467.9	0.14	2,025.5	16,493.4
1985	652	14,878.6	0.15	2,231.8	17,110.4
1986	670	15,289.4	0.15	2,293.4	17,582.8
1987	688	15,700.2	0.15	2,355.0	18,055.2
1988	707	16,133.7	0.15	2,420.1	18,553.8
1989	725	16,544.5	0.15	2,481.7	19,026.2
1990	743	16,955.3	0.15	2,543.3	19,498.6
R*	1,238	28,251.2	0.15	4,237.7	32,488.9

* Remnant of cohorts entering up to 1990.

TABLE 6

DEVELOPMENT COSTS OF PROJECTS
(in 000 dollars)

	<u>FY</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>Rural Educ. I</u>								
Loan		2,457	1,791	776				
Grant		306	416	304	300	262		
GOB		<u>983</u>	<u>1,003</u>	<u>471</u>	<u>439</u>	<u>310</u>		
TOTAL		<u>3,746</u>	<u>3,210</u>	<u>1,551</u>	<u>739</u>	<u>572</u>		
(in 000 \$b)		<u>74,920</u>	<u>64,200</u>	<u>31,020</u>	<u>14,780</u>	<u>11,440</u>		
<u>Rural Educ. II & III</u>								
Loan			1,050	5,388	6,626	3,033		
Grant			360	1,060	760	400		
GOB			<u>1,230</u>	<u>3,335</u>	<u>3,408</u>	<u>1,448</u>	<u>550</u>	<u>500</u>
TOTAL			<u>2,640</u>	<u>9,783</u>	<u>11,760</u>	<u>5,848</u>	<u>550</u>	<u>500</u>
(in 000 \$b)			<u>52,800</u>	<u>195,660</u>	<u>235,200</u>	<u>116,960</u>	<u>11,000</u>	<u>10,000</u>
<u>Total Rural Educ.</u> <u>I, II, III</u>								
Loan		2,457	2,841	1,164	6,626	3,033		
Grant		306	776	1,364	1,060	662		
GOB		<u>983</u>	<u>2,233</u>	<u>3,806</u>	<u>3,847</u>	<u>1,758</u>	<u>550</u>	<u>500</u>
TOTAL		<u>3,746</u>	<u>5,850</u>	<u>11,334</u>	<u>11,533</u>	<u>5,453</u>	<u>550</u>	<u>500</u>
(in 000 \$b)		<u>74,920</u>	<u>117,000</u>	<u>226,680</u>	<u>230,660</u>	<u>109,060</u>	<u>11,000</u>	<u>10,000</u>

T A B L E 7

Number of farmers that use fertilizers by size of farm and by level of education

Size of Farms	Y e a r s o f E d u c a t i o n									
	<u>0</u>		<u>1-3</u>		<u>4-6</u>		<u>7 or more</u>		<u>Total</u>	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Less than 1.0 Ha</u>										
Total in sample	38		43		46		4		131	
Used fertilizers	6	15.8	11	25.6	21	45.7	3	75.0	41	31.3
<u>1.0 to 1.5 Ha.</u>										
Total in sample	57		103		151		12		323	
Used fertilizers	17	29.8	34	33.0	78	51.7	9	75.0	138	42.7
<u>5.1 to 10 Ha.</u>										
Total in sample	29		36		53		5		123	
Used fertilizers	5	17.2	17	47.2	26	49.1	2	40.0	50	40.7
<u>10.1 to 20 Ha.</u>										
Total in sample	11		36		62		7		116	
Used fertilizers	1	9.1	9	25.0	23	37.1	5	71.4	38	32.8
<u>20.1 to 50 Ha.</u>										
Total in sample	21		41		100		25		187	
Used fertilizers	3	14.3	2	4.9	21	21.0	9	36.0	35	18.7
<u>50 Ha. and more</u>										
Total in sample	13		22		89		51		175	
Used fertilizers	--	0.0	5	22.7	22	24.7	28	54.9	55	31.4
<u>Total Farms</u>										
Total in sample	169		281		501		104		1.055	
Used fertilizers	32	18.9	78	27.8	191	38.1	56	53.8	357	33.8

Source: Michael Finn: "Análisis de la Metodología Utilizada en el Plan de Recursos Humanos de Ecuador de 1970," op. cit., Table 3.2, pp. 87

TABLE B (A B C)

- (1) Projection of economic returns of education by year (discounted productivity increases imputed to pupils reaching their highest attainment in the year) under program alternatives A, B, C.
- (2) Projection of economic returns imputed to project sequences A, B, and value of returns discounted at 10% to 1974.

(Values in 000 pesos)

	A.		B. Rural Education I, II, III		C. Alternate Sequence			
	No Project	Returns to Education	Returns to Education	Returns to Project	Returns Discounted to 1974	Returns to Education	Returns to Project	Returns Discounted to 1974
1978	102.26		103.24	0.98	0.68	103.05	0.79	0.54
1979	109.83		112.55	2.72	1.69	111.41	1.58	0.98
1980	119.29		126.70	7.41	4.18	125.32	6.03	3.40
1981	130.15		149.98	19.83	8.76	144.16	14.01	7.18
1982	141.50		173.97	32.47	15.16	163.65	22.15	10.34
1983	149.05		193.27	44.22	18.74	184.81	33.76	14.31
1984	158.51		214.43	55.92	21.58	202.24	43.73	16.87
1985	169.83		247.72	77.89	27.26	223.83	54.00	18.90
1986	177.72		279.23	101.51	32.38	245.24	67.52	21.53
1987	185.59		322.59	137.00	39.73	269.36	83.77	24.29
1988	197.72		360.93	183.21	48.18	293.04	95.32	25.07
1989	202.47		405.22	196.75	47.02	322.58	114.11	27.27
1990	221.67		432.31	210.64	45.91	355.84	134.12	29.24
R*	1,019.04		2,207.34	1,118.30	213.89	2,001.66	982.62	176.87
MA**					106.64			88.43
Total					635.78			456.22

TABLE 8 (DE)

- (1) Projection of economic returns of education by year (Discounted productivity increases imputed to pupils reaching their highest attainment in the year).
- (2) Projection of economic returns imputed to project sequences D, E, and value of returns discounted at 10% to 1974.

(Values in 000 pesos)

	D. <u>No project</u>	E. <u>Rural Education I</u>		
	Returns to Education	Returns to Education	Returns to Project	Returns Discounted to 1974
78	3,928	4,179	251	171
79	4,307	4,674	367	228
80	4,687	5,280	593	334
81	5,107	6,083	976	501
82	5,528	6,785	1,257	587
83	5,915	7,670	1,755	744
84	6,299	8,709	2,410	930
85	6,710	9,961	3,251	1,138
86	7,098	11,263	4,165	1,329
87	7,532	12,729	5,197	1,507
88	8,003	14,452	6,449	1,696
89	8,463	16,288	7,825	1,870
90	8,946	18,054	9,108	1,986
R*	47,035	102,170	55,135	9,924
TOTAL	129,558	228,897	98,739	22,945

* Expected additional return from cohorts entering after 1990.

RURAL EDUCATION I
COSTING AND TIMING OF PROJECT
OUTPUTS / INPUTS

<u>Project Outputs</u>	<u>Curriculum Expansion and Learning Materials</u>					<u>Total</u>
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	
<u>Project Inputs</u>						
I. <u>AID</u>						
a. <u>Loan</u>						
1. Land and Construction						
2. Equipment and Materials	33	24	22			79
3. Vehicles						
4. Training	223	159	179			561
5. Technical Assistance						
6. Publications	30	38	92			160
7. Research	70	70				140
8. Project Administration and Implementation	40	23	24			87
b. <u>Grant</u>						
1. Equipment and Materials						
2. Technical Assistance	150	37	150	150	112	599
3. Research						
4. Project Administration and Implementation						
II. <u>HOST COUNTRY</u>						
1. Land and Construction						
2. Equipment and Materials			2			2
3. Training	150	150				300
4. Research						
5. Project Administration and Implementation	70	43	43	44		200
	<u>766</u>	<u>544</u>	<u>512</u>	<u>194</u>	<u>112</u>	<u>2,128</u>

RURAL EDUCATION I
COSTING AND TIMING OF PROJECT
OUTPUTS / INPUTS

<u>Project Outputs</u>	<u>Teacher Training</u>					<u>Total</u>
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	

Project Inputs

AID

a. Loan

1. Land and Construction						1,449
2. Equipment and Materials	645	570	234			30
3. Vehicles	30					
4. Training						350
5. Technical Assistance	81	90	179			
6. Publications						
7. Research						
8. Project Administration and Implementation						

b. Grant

1. Equipment and Materials						675
2. Technical Assistance	150	300	75	75	75	
3. Research						
4. Project Administration and Implementation						

II. HOST COUNTRY

1. Land and Construction						300
2. Equipment and Materials	185	47	24	22	22	
3. Training						
4. Research						
5. Project Administration and Implementation	228	293	293	287	288	1,389
	<u>1,319</u>	<u>1,300</u>	<u>805</u>	<u>384</u>	<u>385</u>	<u>4,193</u>

RURAL EDUCATION I
COSTING AND TIMING OF PROJECT
OUTPUTS / INPUTS

<u>Project Outputs</u>	Non-Formal Education					<u>Total</u>
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	
<u>Project Inputs</u>						
I. <u>AID</u>						
a. <u>Loan</u>						
1. Land and Construction						
2. Equipment and Materials	31	2	1			34
3. Vehicles	24					24
4. Training	50	30	31			111
5. Technical Assistance						
6. Publications	2	2				4
7. Research	7	7	7			21
8. Project Administration and Implementation	33	33	34			100
b. <u>Grant</u>						
1. Equipment and Materials	2					2
2. Technical Assistance		75	50	75	75	300
3. Research	4	4	4			12
4. Project Administration and Implementation						
II. <u>HOST COUNTRY</u>						
1. Land and Construction						
2. Equipment and Materials	7	7	5	5		24
3. Training	80	80	81	81		322
4. Research	2	2	3			7
5. Project Administration and Implementation	18	19	20			57
	<u>260</u>	<u>261</u>	<u>261</u>		<u>75</u>	<u>1,018</u>

RURAL EDUCATION I
COSTING AND TIMING OF PROJECT
OUTPUTS / INPUTS

<u>Project Outputs</u>	<u>Teacher Training</u>					<u>Total</u>
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	
<u>Project Inputs</u>						
<u>AID</u>						
a. <u>Loan</u>						
1. Land and Construction						
2. Equipment and Materials	645	570	234			1,449
3. Vehicles	30					30
4. Training						
5. Technical Assistance	81	90	179			350
6. Publications						
7. Research						
8. Project Administration and Implementation						
b. <u>Grant</u>						
1. Equipment and Materials						
2. Technical Assistance	150	300	75	75	75	675
3. Research						
4. Project Administration and Implementation						
II. <u>HOST COUNTRY</u>						
1. Land and Construction						
2. Equipment and Materials	185	47	24	22	22	300
3. Training						
4. Research						
5. Project Administration and Implementation	228	293	293	287	288	1,389
	<u>1,319</u>	<u>1,300</u>	<u>805</u>	<u>384</u>	<u>385</u>	<u>4,193</u>

RURAL EDUCATION I
COSTING AND TIMING OF PROJECT
OUTPUTS / INPUTS

<u>Project Outputs</u>	<u>Non-Formal Education</u>					<u>Total</u>
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	
<u>Project Inputs</u>						
I. <u>AID</u>						
a. <u>Loan</u>						
1. Land and Construction						
2. Equipment and Materials	31	2	1			34
3. Vehicles	24					24
4. Training	50	30	31			111
5. Technical Assistance						
6. Publications	2	2				4
7. Research	7	7	7			21
8. Project Administration and Implementation	33	33	34			100
b. <u>Grant</u>						
1. Equipment and Materials	2					2
2. Technical Assistance		75	50	75	75	300
3. Research	4	4	4			12
4. Project Administration and Implementation						
II. <u>HOST COUNTRY</u>						
1. Land and Construction						
2. Equipment and Materials	7	7	5	5		24
3. Training	80	80	81	81		322
4. Research	2	2	3			7
5. Project Administration and Implementation	18	19	20			57
	<u>260</u>	<u>261</u>	<u>261</u>		<u>75</u>	<u>1,018</u>

RURAL EDUCATION I
COSTING AND TIMING OF PROJECT
OUTPUTS / INPUTS

<u>Project Outputs</u>	<u>School Construction and Remodeling</u>					<u>Total</u>	<u>Project Total</u>
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>		
<u>Project Inputs</u>							
<u>I. AID</u>							
<u>a. Loan</u>							
1. Land and Construction	1,274	600				1,874	1,874
2. Equipment and Materials							1,562
3. Vehicles							54
4. Training							672
5. Technical Assistance							350
6. Publications							164
7. Research							161
8. Project Administration and Implementation							187
<u>b. Grant</u>							
1. Equipment and Materials							2
2. Technical Assistance							1,574
3. Research							12
4. Project Administration and Implementation							
<u>II. HOST COUNTRY</u>							
1. Land and Construction	347	258				605	605
2. Equipment and Materials							326
3. Training							622
4. Research							7
5. Project Administration and Implementation							1,646
	<u>1,621</u>	<u>858</u>				<u>2,479</u>	<u>9,818</u>

RURAL EDUCATION I
SUMMARY FINANCIAL PLAN
 (US\$ 000)

	<u>AID Loan</u>	<u>AID Grant</u>	<u>GOB & Community Contribution</u>	<u>Total</u>
1. Curriculum expansion and Learning materials	2,084	599	502	3,185
2. Teacher Training	1,276	675	1,689	3,640
3. Non-Formal Education	241	314	510	1,065
4. Remodeling and Construc- tion	1,323		274	1,617
	<u>4,924</u>	<u>1,588</u>	<u>2,995</u>	<u>9,507</u>

RURAL EDUCATION I
ANALYSIS OF FOREIGN AND LOCAL CURRENCY COMPONENTS
(US\$ 000)

	<u>US Dollar Costs</u>	<u>Local Currency Costs</u>	<u>Total</u>
<u>AID Loan & Grant</u>	<u>(3,295)</u>	<u>(3,217)</u>	<u>(6,512)</u>
Curriculum and Materials	663	686	1,349
Teacher Training	2,165	1,114	3,279
Non-Formal Education	417	138	555
Remodeling and Construction	50	1,279	1,329
		<u>(2,995)</u>	<u>(2,995)</u>
<u>GOB Contribution</u>			
Curriculum and Materials		502	502
Teacher Training		1,689	1,689
Non-Formal Education		510	510
Remodeling and Construction		294	294
	<u>3,295</u>	<u>6,212</u>	<u>9,507</u>

TABLE

RURAL EDUCATION I

FINANCIAL PLAN
(US\$000)

	AID LOAN		AID GRANT		GOB&Com.	Total
	FX	LC	FX	LC	Contribut. LC	
<u>I. Improved Rural Normal and Primary School Instruction</u>						
1. Participant Training		509				509
2. Technical Assistance	162		675			837
3. Budget Support Staff Salaries		605				
4. Rural Teacher Incentives	162	1114	675		1,389	3,340
<u>II. Curriculum Reform</u>						
1. Participant Training		53				53
2. Curr.Dev.& Mat. Teams		87			200	287
3. Technical Assistance	56	-	599			655
4. Socio-Linguistic Res.		140				140
5. Equip.Mat.& Supplies	8	71			2	81
6. Instr. Materials		160				160
7. Budget Support Staff Salaries					300	300
	64	511	599		502	1,676
<u>III. Non-Formal Education</u>						
1. Equip.Mat. & Supplies	31	7	2		24	64
2. Technical Assistance	72		300			372
3. Participant Training		110				110
4. Research Op.&Evaluation		21	12		7	40
5. Support to Comm.& Pr.					150	150
6. Budget Supp.to Comm.& Pr.					329	329
	103	138	314		510	1,065
<u>IV. Improved Facilities</u>						
<u>A. Vicos Normal School</u>						
1. Building Improv.&Constr.	18	662			53	733
2. Equip.Mat.& Supplies	260				90	350
3. Land					5	5
	278	662			148	1088
<u>B. Central Schools (20)</u>						
1. Building Refurbishments & constr.of new fac.	10	110			156	176
2. Equip.Mat.& Supplies	584	131			90	805
3. Land					2	2
	594	241			248	983
<u>C. Sectional Schools (200)</u>						
1. Constr.of new facilities & refurbishment of existing classrooms	22	501			171	700
2. Equip.Mat.& Supplies	484	44			120	648
3. Land					7	7
	506	551			298	1355
	1,707	3,217	1,586		2,995	9,507

EDUCATIONAL EXPENDITURES BY LEVEL 1970
(1000 Dollars)

	U R B A N				R U R A L				T O T A L				
	Public	Decent*	Private	Total	Public	Decent*	Private	Total	Public	Decent*	Primary	Total	%
Pre primary & basic Primary	23,192	1,878	2,052	27,122	9,347	-	1,231	10,578	32,539	1,878	3,283	37,700	63
Secondary: General	5,830	603	2,313	8,746	45	-	49	94	5,875	648	2,352	8,840	15
Tech. & Prof.	1,098	101	-	1,200	524	-	-	524	1,622	625	-	1,724	3
Higher: Tech. & Prof.	1,647	-	-	1,647	-	-	-	-	1,647	-	-	1,647	3
Bachelor & Adv. Degree	7,868	-	1,625	9,493	-	-	-	-	7,868	-	1,625	9,493	16
Adult	<u>757</u>	<u>279</u>	<u>-</u>	<u>1,035</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>757</u>	<u>279</u>	<u>-</u>	<u>1,035</u>	<u>02</u>
TOTAL	<u>40,392</u>	<u>2,861</u>	<u>5,990</u>	<u>49,243</u>	<u>9,916</u>	<u>-</u>	<u>1,280</u>	<u>11,196</u>	<u>50,308</u>	<u>2,861</u>	<u>7,270</u>	<u>60,439</u>	<u>121</u>

*Decentralized education refers to education provided by two major public corporations: COMIBOL and Y.P.F.B.

CIVIL WORK SUMMARY

I. RURAL NORMAL SCHOOL (Vacas)

A. New Construction

<u>Item</u>	<u>No.</u>	<u>Unit Area (m2)</u>	<u>Total Area (M2)</u>
Classrooms	4 ea.	70	280
Workshops	4 ea.	80	320
Student Teaching School	1 ea.	800	800
Teacher Housing	20 units	58	1,160
Student Housing	350 students	2.1/Student	<u>735</u>
		Total Area	3,295 M2

B. Repairs

Community Center
 Student Housing (exist)
 Dining Room & Kitchen
 Classroom (exist.)
 Administrative Space
 Utilities

II. CENTRAL SCHOOLS: (Nucleos)

A. New Construction

<u>Item</u>	<u>No.</u>
Workshops	20
Teacher Housing	80
Latrines	20

B. Repairs

None

III. SECTIONAL SCHOOLS:

A. New Construction

<u>Item</u>	<u>No.</u>
Classrooms	40
Teacher Housing	100 units
Latrines	200 units

B. Repairs

Schools	160 ea.
---------	---------

CONSTRUCTION/ENGINEERING COST SUMMARY
 (AID Loan Funds)

I. RURAL NORMAL SCHOOL (Vacas)

A. New Construction

3295 M2 at \$ 132/m2 \$ 434,940

B. Repairs 140,000

TOTAL \$ 574,940

II. CENTRAL SCHOOLS (Nucleos)

A. New Construction

Workshops \$ 106,160

Latrines 14,720

Sub Total 120,880

(-)*Community labor 30,220

TOTAL 90,660

III. SECTIONAL SCHOOLS

A. New Construction

Schools \$ 295,680

Latrines 147,200

Sub Total 442,880

(-)* Community labor 110,720

TOTAL 332,160

B. Repairs (Materials Only) 110,704

Total Sectional Schools 442,864

TOTAL ALL SCHOOLS US\$ 1,108,404
 + Contingencies (10%) 110,840

GRAND TOTAL ALL SCHOOLS US\$ 1,219,244

* Labor is estimated to be 25% of construction cost.

IV. MISCELLANEOUS

Pick up trucks (double cabin) 4 ea.	\$ 30,000
Dump truck - 1 ea.	20,000
Construction Supervision	<u>60,000</u>

TOTAL MISC. 110,000

GRAND TOTAL CONSTRUCTION/ENGINEERING \$ 1,329,244

CAPITAL COST & INVESTMENT

(US \$000)

	<u>AID LOAN</u>		<u>GOB</u>	<u>Community Contribution</u>	<u>TOTAL</u>
	<u>FX</u>	<u>LC</u>			
Normal School		632	53	0	685
Central Schools		100	26	30	156
Sectional Schools		487	60	111	658
Vehicles	50				50
Technical Assist. (Constr. & Engr).		60			60
TOTALS	50	1,279	139	141	1,606

TOTAL AID - 1,329 76%
 TOTAL OTHER - 277 19%

CONSTRUCTION COST BREAKDOWN

Escuela Normal Rural de Vacas

Estimated Area: 3,295 m²
July 1975

Work Item	Unit	Qty	Unit Price \$b.	Total in \$b.
1. Mobilization	Lump sum			72,000
2. Excavations	m ³	630	72	45,360
3. Wall Footings	m ³	630	420	264,600
4. Wall sills	m ³	240	640	153,600
5. Adobe walls				298,800
a) 0.40	m ²	1,660	180	501,200
b) 0.20	m ²	3,580	140	66,300
6. Brick partitions	m ²	390	170	58,500
7. Counterforts (stone)	m ³	75	780	336,000
8. Tie beams (reinforced concrete)	m ³	80	4,200	81,000
9. Wooden lintels	m ¹	450	180	
10. Floors:				
a) Tongue and grove wood	m ²	1,830	360	658,800
b) Cement	m ²	1,125	160	180,000
11. Base boards				84,000
a) Wooden	m ¹	1,400	60	30,000
b) Cement	m ²	300	100	294,000
12. Interior plastering	m ²	4,900	60	
13. Roofing including wooden beams	m ²	3,545	540	1,914,300
14. Ceilings	m ²	2,960	180	532,800
				<u>5,571,260</u>

Work Item	Unit	Qty.	Unit Price \$b.	Total in \$b
15. Exterior plastering	m2	2,660	120	319,200
16. Window sills	m1	260	140	36,400
17. Wooden doors	m2	300	600	180,000
18. Windows	m2	310	540	167,400
19. Interior painting	m2	7,360	36	282,960
20. Glasses	m2	277	240	66,480
21. Door locks				
a) Interior	ea.	137	360	49,320
b) Exterior	ea.	22	600	13,200
22. Hardware	Lump sum			48,000
23. Sanitary Fixtures				
a) W.C.	ea.	21	2,400	50,400
b) Wash basins	ea.	21	1,700	35,700
c) Showers	ea.	20	840	16,800
d) Dish washers	Lump sum			24,000
24. Plumbing	Lump sum			63,360
25. Downspouts and gutters Storm drains	Lump sum			31,680
26. Sewerage	Lump sum			773,600
27. Water installation	Lump sum			901,120
28. Floor sanding and polishing	m2	1,830	24	43,920
29. Cleaning	Lump sum			<u>24,000</u>
			Total in \$b.	8,698,800
			Total in US\$	434,940

Price per square meter: $\frac{434,940}{3,295} = 132 \text{ US\$}/\text{m}^2$

CONSTRUCTION COST BREAKDOWN
Teacher's Housing
Central Schools and Sectional Schools
Estimated Area: 50 m2

July 1975

Work Item	Unit	Qty.	Unit Price \$b.	Total in \$b.
1. Excavations	m3	10	50	500.00
2. Wall footings	"	10	250	2,500.00
3. Wall sills	"	7	450	3,150.00
4. Adobe walls	m2	90	140	12,600.00
5. Wooden Lintels	m1	9	140	1,260.00
6. Counterforts (stone)	m3	2	500	1,000.00
7. Floors	m2	35	310	10,850.00
a) Wooden	"	4	160	640.00
b) Cement				
8. Base boards	m1	32	40	1,280.00
a) Wooden	"	7	70	490.00
b) Cement				
9. Interior Plastering	m2	98	38	3,724.00
10. Ceilings	m2	39	130	5,070.00
11. Roofing	m2	55	265	14,575.00
12. Exterior plastering	m2	78	80	6,240.00
13. Window sills	m1	6	100	600.00
14. Wooden doors	m2	4	550	2,200.00
15. Windows	m2	5	450	2,250.00
16. Interior plastering	m2	137	18	2,466.00

Work Item	Unit	Qty.	Unit Price \$b.	Total in \$b.
17. Glasses	p2	50	18.00	900.00
18. Door locks				
a) Exterior	ea.	1	500.00	500.00
b) Interior	"	1	300	300.00
19. Hardware	Lump sum			100.00
20. Downspouts and gutters	Lump sum			800.00
21. Storm drains	Lump sum			400.00
22. Floor sanding and polishing	Lump sum			200.00
23. Cleaning	Lump sum			<u>165.00</u>
			Total in \$b.	74,760.00
			Total in US\$	3,738.00

Price per square meter $\frac{3,738}{50} = 74.76$ US\$/m²

MATERIAL COST BREAKDOWN:

Sectional Schools - Existing Schools repairs

No. of Schools to Repair: 160

1. No. of Schools According to Works to be Done: (Items)

a. Roofs	128
b. Cement Floors	96
c. Wooden Floors	32
d. Doors	128
e. Window frames	128
f. Interior Plastering	96
g. Exterior Plastering	80
h. Painting	96
i. Window glasses	144

2. Repair Cost by Items:

Work Item	Unit	Qty.	Unit Price \$b.	Cost of Item	
				\$b.	US\$.
a. Roofs	m2	45	126.00	5,670.00	284.00
b. Cement floors	m2	35	126.00	4,410.00	221.00
c. Wooden floors	m2	35	246.00	8,610.00	431.00
d. Doors	m2	2	444.00	888.00	45.00
e. Window frames	m2	3	360.00	1,080.00	54.00
f. Interior Plastering	m2	107	30.00	3,210.00	161.00
g. Exterior Plastering	m2	75	54.00	4,050.00	203.00
h. Painting	m2	107	14.00	1,498.00	75.00
i. Window glasses	P2	60	18.00	1.080	54.00

3. Total Cost of Repairs:

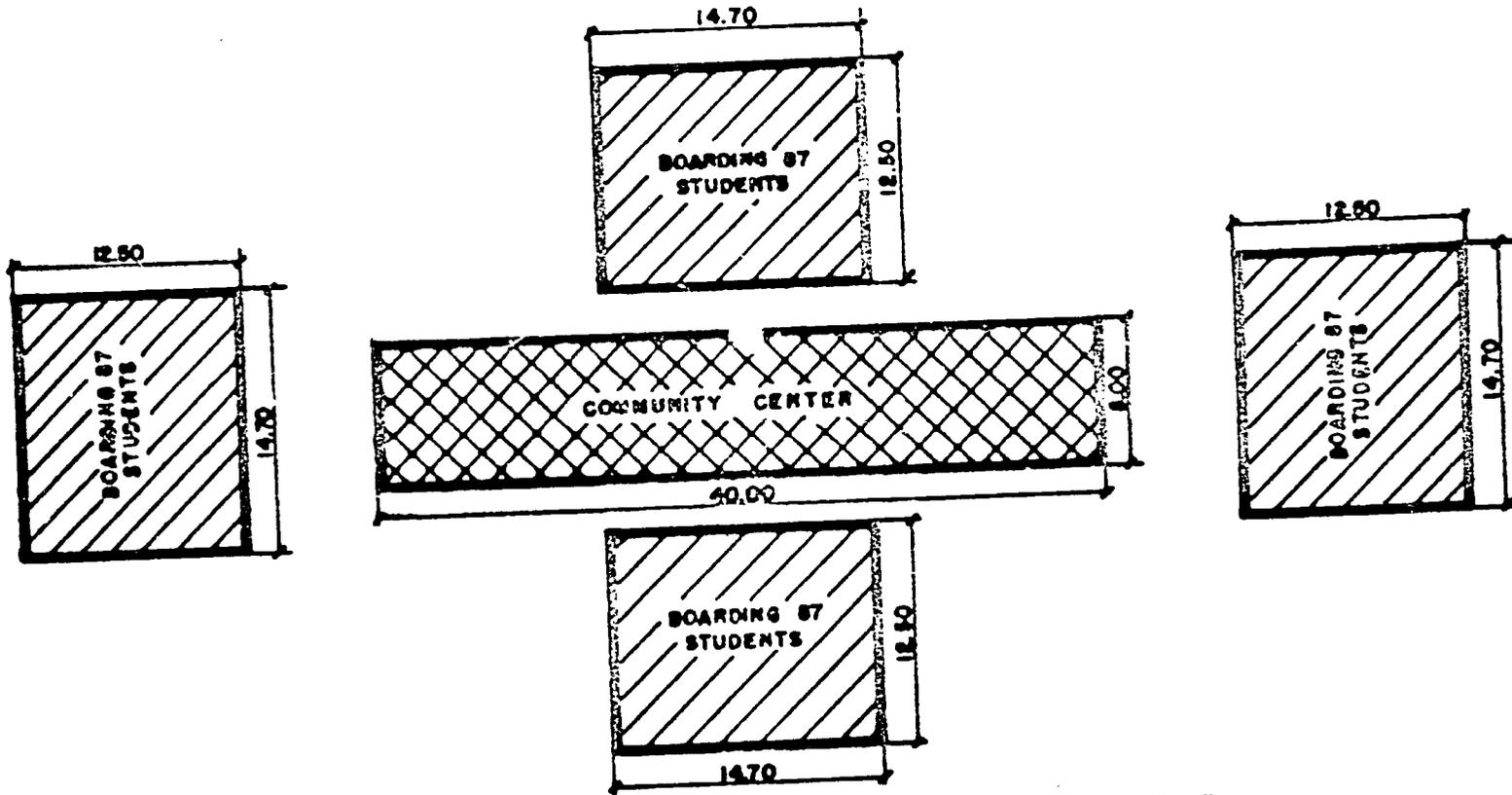
Work Item	No.	US\$	Item Cost US\$
a. Roofs	128	284.00	36,352.00
b. Cement Floors	96	221.00	21,216.00
c. Wooden Floors	32	431.00	13,792.00
d. Doors	128	45.00	5,760.00
e. Window frames	128	54.00	6,912.00
f. Interior Plastering	96	161.00	15,456.00
g. Exterior Plastering	80	203.00	16,240.00
h. Painting	96	75.00	7,200.00
i. Window glasses	144	54.00	7,776.00
TOTAL COST US\$.			130,704.00

Average cost per unit:

$$\frac{130,704}{160} = 816,90 \text{ US$/Unit}$$

$$\quad \quad \quad \checkmark \quad 817.00 \text{ US$/Unit}$$

ESCUELA NORMAL RURAL DE VAGAS
CENTRAL AREA

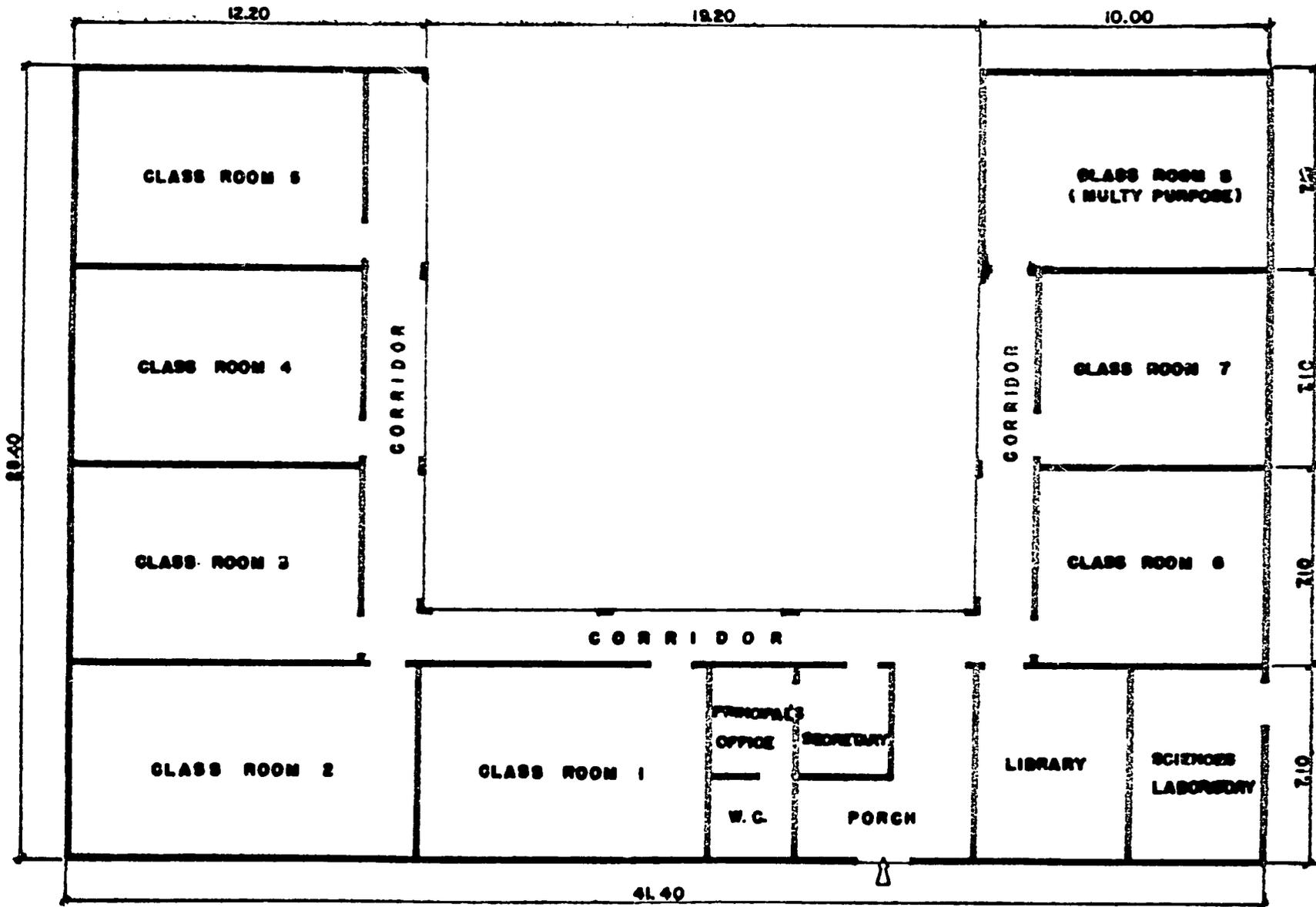


GENERAL PLAN

ESCALA :: 200

-  REPAIR
-  NEW CONSTRUCTION

ESCUELA NORMAL RURAL DE VACAS

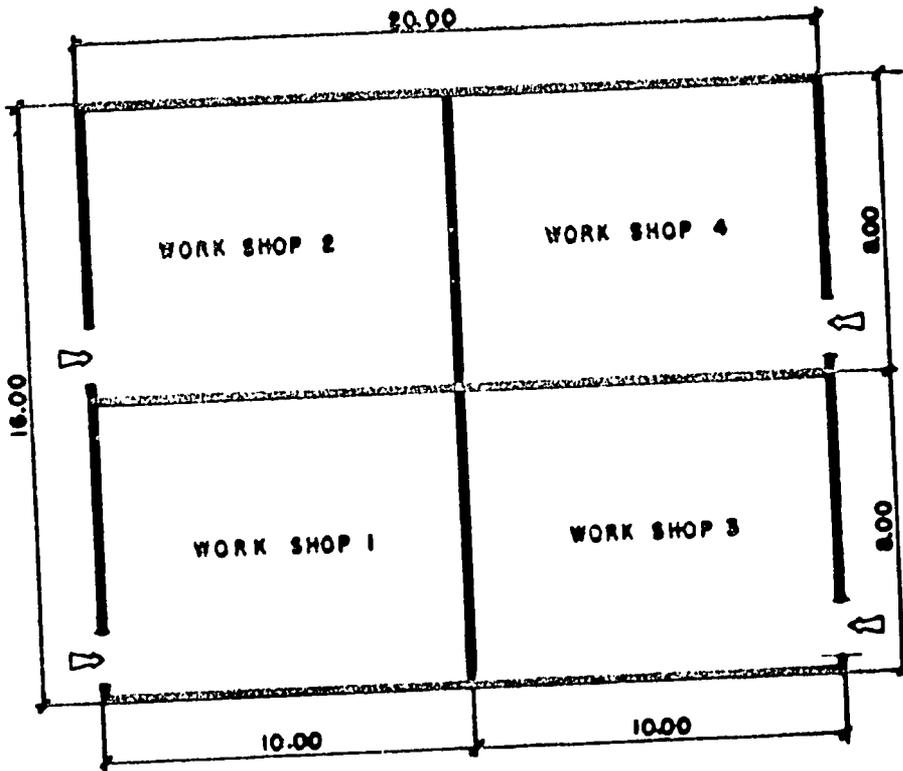


ESCUELA DE APLICACION

ESCALA 1:200

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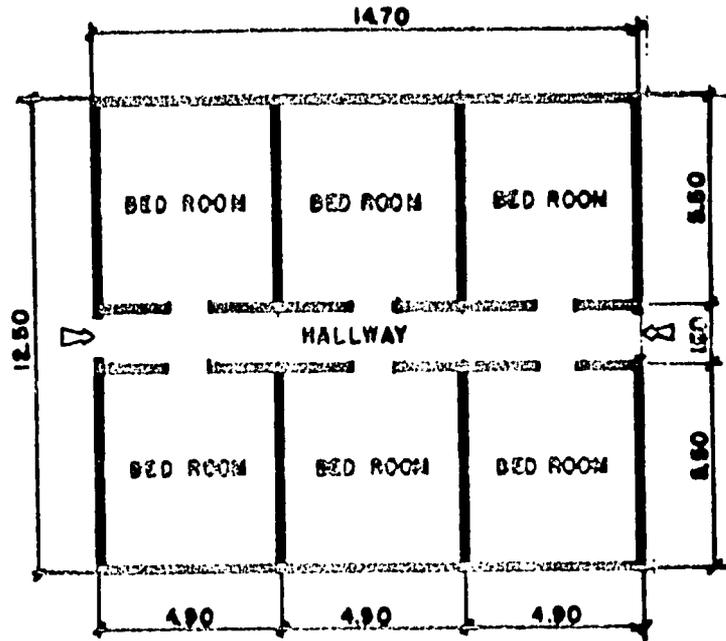
ESCUELA NORMAL RURAL DE VAGAS



WORK SHOPS

ESCALA 1:200

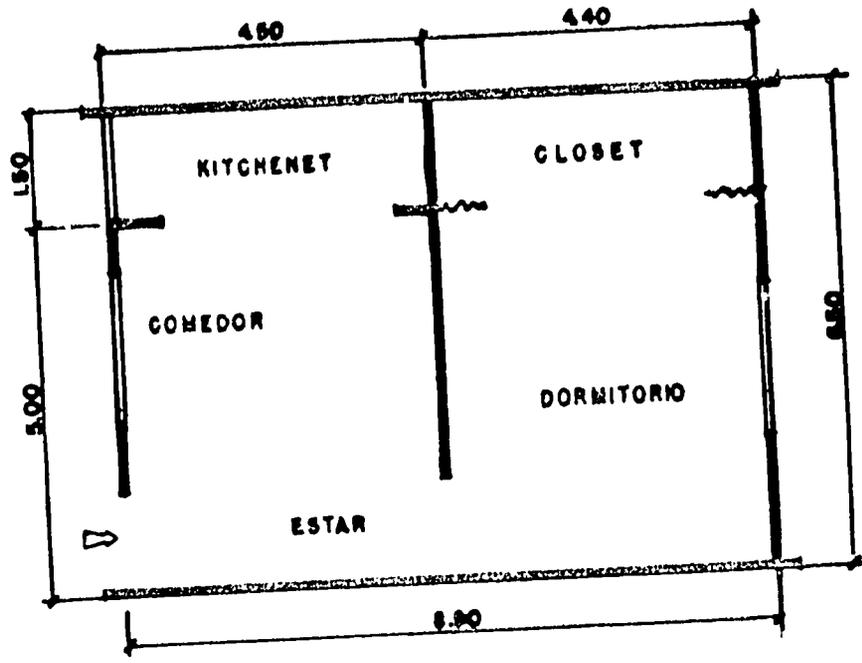
ESCUELA NORMAL RURAL DE VACAS



BOARDING (87 STUDENTS)

ESCALA 1:200

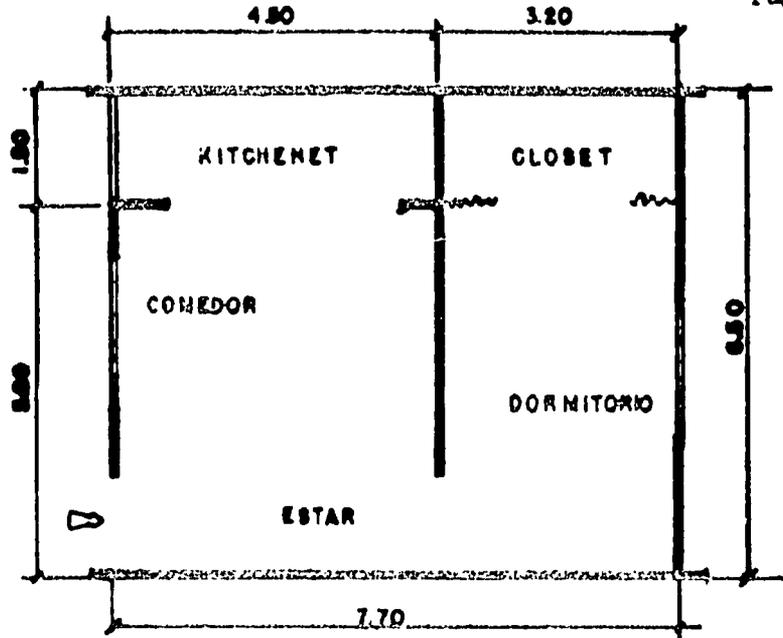
ESCUELA NORMAL RURAL DE VACAS



TEACHER'S HOUSING

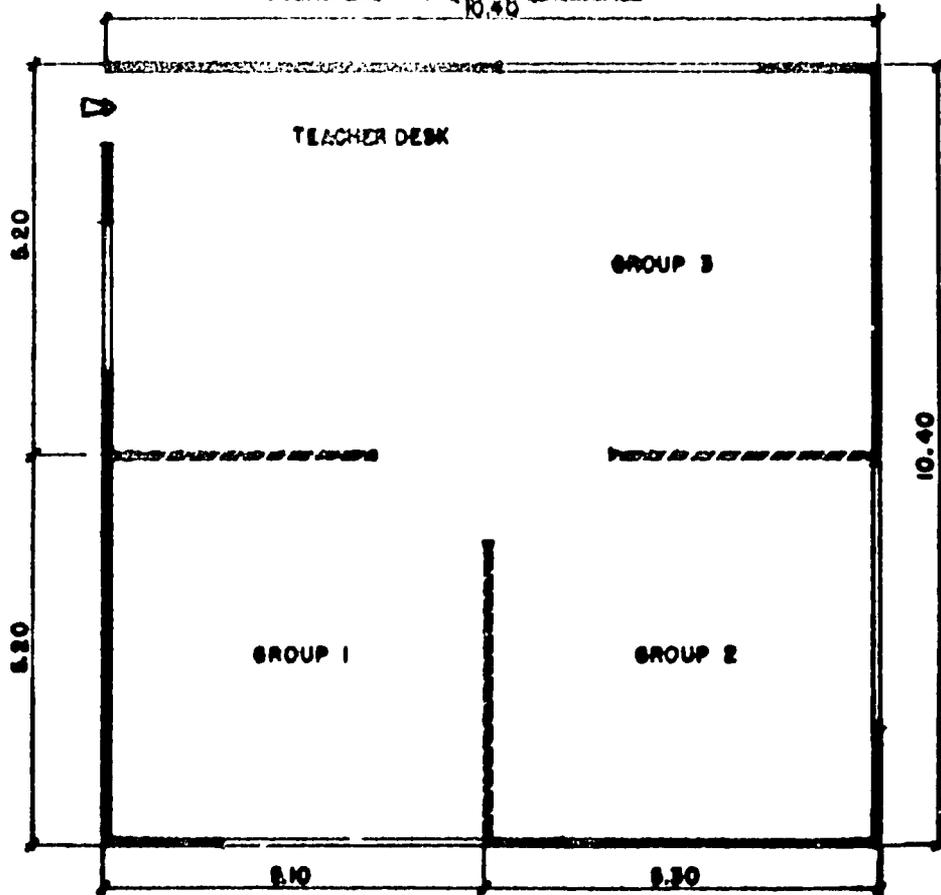
CENTRAL SCHOOLS
SECTIONAL SCHOOLS

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TEACHER'S HOUSING

SECTIONAL SCHOOL

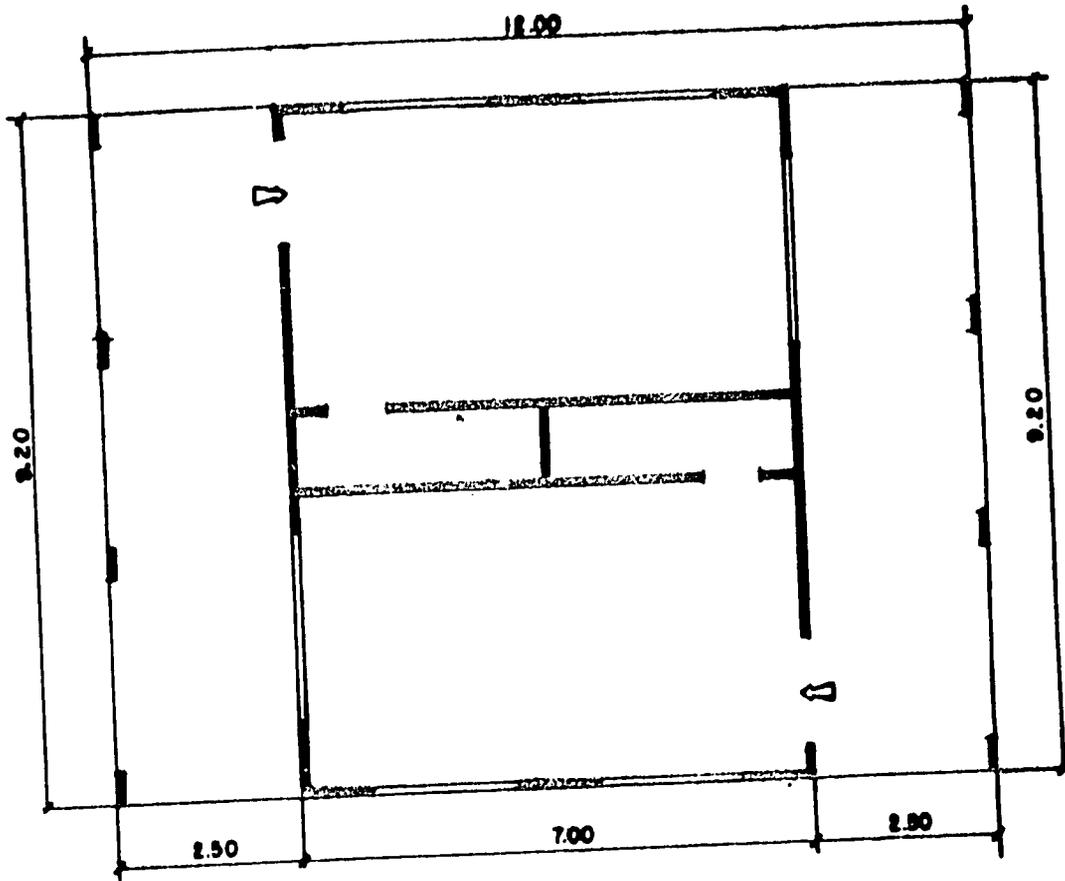


CLASS ROOM

MALE PARTITION WALL

ESCALA 1:100

CENTRAL SCHOOLS



WORK SHOP

ESCALA 1:100

ENVIRONMENTAL ANALYSIS

A. Project Description

A detailed Project description is contained in the text of the Project Paper. For the purpose of this Annex, an abbreviated description of Project construction activities follows:

The physical portion of the Project can be divided into two distinct categories - new construction and repairs to existing facilities. The only construction of significant size is that of the Normal School at Vacas located in an isolated area of the Department of Cochabamba. New construction at the sectional and central schools will not exceed 200 square meters respectively. Repairs will be made to the existing Normal School facilities in Vacas and to 160 of the 200 sectional schools. In addition, sanitary latrines will be constructed at central and sectional schools.

B. Environmental Problems Involved

All aspects harmful to the environment have been investigated. A summary of these aspects follows:

1. Natural Environment

a. Contamination of Water

The only possible source of contamination of water would be from the latrines constructed at the sectional and central schools. In many cases, no sanitary facilities exist, and nearby fields and rivers are used for defecation and urination. The construction of latrines would ameliorate this situation by reducing the incidence of amoebic and other enteric diseases. Latrines will be located away from community potable water sources.

b. Other

The Project contains no element that would contaminate air, erode soil or cause any other deleterious effect upon the natural environment.

2. Human Environment

a. Population

The improved school facilities, with the exception of the

Vacas Normal School would serve the same communities they now serve; consequently, this Project will not cause an increase in population density. The Normal School at Vacas could increase the local population by up to 200 persons during the school term, but as all facilities are separate from those of the community no adverse effect would result from this increase.

b. Beneficial Effects

The Project would produce better trained teachers for the rural schools and an improved atmosphere for teaching and learning. Better education leads to a better life, improved health and increased income for the student.

PRP DAEC REVIEW CABLE

SUBJECT: FY 1975 Rural Education and FY 1976 Rural Teacher Training
Project Review Papers and Amendments to the FY 1974
Education Management and Rural Development Prop.

REF: LA PAZ 1645

1. On February 3, 1975, the DAEC reviewed the Mission's over all approach to an Education sector strategy in Bolivia which is based on the AID Education Sector Assessment and the diagnosis of the sector by the Bolivia Ministry of Education (MEC). The DAEC took into account the proposed sequencing of four separate projects to be scheduled for authorization over four fiscal years, with an implementation period extending over at least six years. USAID strategy calls for a flexible system with feedback and modification from the testing, and evaluation of the various sector package components as they are put in place, and as the Bolivians adopt education reform concepts. The DAEC discussed thoroughly the merits of going forward with the program in FY 1975; or alternatively putting off this Project until 1976 or later when, presumably, all points large and small could be tied down in a neat package and promulgated in a formal Bolivian sector policy statement. The benefits to be gained by proceeding at this juncture, both in the practical sense of significantly influencing the direction of Bolivian Education policy toward a sound rural sector emphasis, and in effectively building on the anticipated results of the FY 1974 Educational Management and Instructional Development Loan appear to justify proceeding now with intensive review of the Rural Education Loan and during FY 1976 with the Rural Teacher Training Loan. Nevertheless, to confirm these judgements, the Project Paper for the FY 1975 Rural Education Loan must contain a detailed PERT-type analysis of the inter-relationships of the various components common to it and the FY 1974, 1976 and 1977 Education Projects. This analysis should show when specific outputs will be available from the FY 1974 project to insure success of the FY 1975 Project, as well as specific results under the FY 1975 Project to be incorporated into the FY 1976 and 1977 projects. (This analysis is further described in paragraph 2 (d), below).

2. Intensive review of the FY 1975 Rural Education Project should include analysis of the following: (A) GOB objectives and commitments: The Project Paper should analyze the GOB's National Education Development Plan in terms of specific GOB objectives and priorities for "improving the quality of Rural Education". Quantified targets should be developed for such things as increasing resource flows to the rural sector; and raising

the average attendance and number of years of schooling received by male and female rural children: and the paper should describe the Mission's strategy and timing for assisting the GOB to achieve these targets. The GOB plan should include specific commitment to the introduction of bilingual education as a rural teaching methodology, and a reasonably specific commitment to a longer range rural secondary education strategy, e.g., converting some Rural Normal Schools into secondary technical or other types of institutions.

(B) Learning needs: (1) The Project Paper should analyze the educational needs of male and female rural school children and rural communities, both nationally and in the geographic area(s) selected for the Project. Based on that analysis, the paper should describe the rationale, projected content, and time required for development, of Project components, e.g., Curriculum Reform; bi-lingual instruction; non-formal education programs; and physical up-grading of rural nuclear schools. These components should be described in terms of their contribution to fulfilling identified learning needs; and as justification for planned selection, construction or renovation, functions, and staffing of the integrated school community centers (ISCC's).

(2) Learning needs should be used to develop a demand analysis which will provide, (A) an estimate of the number and types of teachers and non-formal instructors needed to carry out the FY 1975 Project; and (B) serve as a tool for estimating such demand under the FY 1976 and 1977 projects. The FY 1975 Project should test and refine demand analysis procedures.

(3) AID/W will provide additional information on innovative, cost-effective approaches to Rural Education, (e.g., projects in Colombia, Panama, Guatemala, and El Salvador) for USAID consideration in developing the FY 1975 Project Paper. Some approaches may also be suitable for incorporation into research and development under the FY 1974 project.

(C) Teacher development: The FY 1975 paper should give evidence of GOB commitment to study and rationalize rural teacher pay, benefits, and incentives.

The paper should contain the rationale and content of a revised teacher training (ISER and Normal School) curriculum including specific plans for curriculum design and testing. The paper should specify the roles of the MEC, the DEDC's, ISER, and Normal Schools in developing the teacher curriculum; and the FY 1975 project should test these entities' roles and relationships in curriculum and program development (for both rural normal and nuclear schools) for the nation-wide FY 1976 and 1977 projects.

(D) Program relationships: The PERT-type analysis should break down major components, such as curriculum revision, into smaller units of achievement (e.g., particular courses of study). With their own targets for completion time to completion estimates should be as realistic as possible. The timing of AID and GOB project inputs (e.g., long-term advisors, and training of DEDC staff) should be matched to this PERT analysis, and USAID should plan periodic reviews to assess progress against, and modify sub-component targets. (E) Site selection: the paper should present criteria for selection of the project geographic area(s). Since USAID has indicated that the area(s) should correspond to activation of the DEDC's, consideration should be given to other areas, e.g., Potosi and Sucre, which were scheduled to establish DEDC's simultaneously with Cochabamba.

Site selection criteria should take into account project manageability (i.e., number of schools, teachers, students etc. which can be covered): viability, (i.e., replicability in other rural areas); and GOB acceptance of the target area as truly representative. If coverage of more than one area is selected, care should be taken to insure that efforts and funds will not be too thinly dispersed; and that groups covered fall within targets for future nation-wide application.

(F) GOB contribution: The paper should outline the specific nature and composition of GOB counterpart contribution, in compliance with FAA section 110(A). Contribution may be attributed to the combined loan and increased grant; however it should represent and (1) increased financial support over and above the current operating budgets of participating GOB entities; or (2) attribution of GOB personnel and resources to the Project.

(G) Evaluation: An evaluation plan should be designed to assess the, (1) efficiency of MFC and DEDC managerial/administrative input to the Project; (2) impact of revised curriculum and bi-lingual instruction on student retention rates; (3) effectiveness of non-formal education and ISCC concepts in meeting rural learning needs; (4) impact of new teacher training curriculum and incentives on teacher attitudes and retention; (5) impact on the role of women; and (6) nation-wide applicability of Project components for the FY 1976 and 1977 projects.

3. FY 1975 Project Paper development: The tentative May 15, 1975, submission date should be considered flexible. Submission may be delayed, or the Project changed to FY 1976 funding, depending upon ability to satisfactorily complete the analyses outlined above. The Mission may wish to consider other alternatives, including reducing Project size to place more emphasis on its experimental nature. TDY arrangements for project paper development are discussed in Para 5.

4. FY 1976 intensive review: Intensive review of the FY 1976 rural teacher training project over the next year should address the points outlined in Para 2, with emphasis on identifying specific results and essential inputs developed under the FY 1974 and 1975 project; e.g., development and testing of a prototype teacher training curriculum; revised rural school curriculum and methodologies, including non-formal and bilingual techniques; establishment of a replicable DEDC prototype and pattern for coordinating functional responsibilities of the MEC, DEDC's, ISER, and rural normal schools; A formula and procedure for estimating actual demand for numbers and types of teachers nation-wide as a basis for decisions on physically up-grading, and modifying the curriculum of, other rural normal schools; An initial GOB plan for improving rural teacher pay and incentives over a reasonable period of time; and GOB commitment to convert some rural normal schools into technical schools (or other uses), consistent with an overall strategy of rural secondary education.

5. TDY - This section has been omitted from the cable.

Information on the 20 rural nuclear school systems, Cochabamba Department.

1. Apilla Pampa, Capinota Province, Zone D
Central school: 7 grades, 182 students,
6 classrooms, and
26 hectares of land
Sectional schools: 13 schools with 27 classrooms and
14 living quarters, 24 grades and
514 students
Population of central community: 2,800
Principal crops: wheat, potatoes, barley,
cattle and chickens
2. Boquerón Kasa, Arani Province, Zone I
Central school: 8 grades, 250 students and
9 teachers
Sectional schools: 14 schools, 5 grades, 125 students
and 5 teachers
Principal crops: Potatoes, wheat
3. Cañadas, Arani Province, Zone J
Central school: 5 grades, 127 students and
7 teachers
Sectional schools: 8 schools, 10 grades, 288 students and
11 teachers
Principal crops: Potatoes, faba-beans, barley
4. Candelaria, Alto Chapare Province, Zone A
Central school: 6 grades, 156 students,
6 classrooms, and
10 hectares of land
Sectional schools: 13 schools, 23 grades,
692 students, 12 living quarters, and
17 hectares of land
Population of central community: 2,500
Principal crops: wheat, corn, potatoes, barley,
pigs, cattle and fish

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