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

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

BOLIVIA - EDUCATIONAL MANAGEMENT AND INSTRUCTIONAL DEVELOPMENT

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AID-DLC/P-2036

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

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AID-DLC/P-2036

May 31, 1974

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

**SUBJECT: Bolivia - Educational Management and Instructional
Development**

Attached for your review are the recommendations for authorization of a loan to the Government of Bolivia ("Borrower") in an amount not to exceed nine million six hundred and fifty thousand United States dollars and local currency costs of a project to increase and improve the educational services provided Bolivian students and teachers by improving the efficiency and quality of the Borrower's system for delivery of such services. ("Project")

This loan proposal is scheduled for consideration by the Development Loan Staff Committee on Thursday, June 6, 1974. Also please note your concurrence or objection is due by close of business Tuesday, June 11, 1974. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee
Office of Development
Program Review

Attachments:

Summary and Recommendations
Project Analysis
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May 31, 1974

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BOLIVIA: EDUCATIONAL MANAGEMENT AND INSTRUCTIONAL DEVELOPMENT

SUMMARY AND RECOMMENDATIONS

1. BORROWER: The Government of Bolivia (GOB) will be the Borrower. The executing agency will be the Ministry of Education and Culture (MOE).
2. AMOUNT AND TERMS OF THE LOAN: An amount not to exceed \$9.65 million, repayable over 40 years including a ten year grace period on principal, with interest at 2% per annum during the grace period and 3% per annum thereafter. An estimated 55% of the AID loan will be converted to Bolivian pesos to meet projected local currency requirements.

The disbursement period for the Loan is four years.
3. PURPOSE: The goal of the Project is to help the Bolivian Government create a more efficient and equitable public education system. The specific purpose is to support the implementation of an administrative reform in the Ministry of Education concentrating on (1) strengthening its organization for administration and instructional development, its financial base, and its performance in the areas of information management, budgeting, program and policy planning, and (2) providing a basic decentralized organizational structure required to move key management functions and instructional support services closer to the people served by the education system. Administrative reform of the entire system as well as increasingly decentralized services have been identified as important factors in the carrying out of effective programs for improved rural education.
4. PROJECT DESCRIPTION: Through basic project inputs of grant and loan-funded technical assistance, training, construction, equipment and publications, the Project will focus on increasing and bettering the educational services provided to students and teachers through

the improvement of efficiency and quality of the Ministry's delivery system. The direct recipients of project activities are the administrators of the system, including: school directors and field supervisors who are to play key instructional leadership roles in education; district level personnel who will be separated into and trained either for administrative or technical-pedagogical support functions; and central ministry personnel, who will be trained and supported in improved overall system management - most particularly in the areas of research and planning, policy and program formulation, information and financial management, facilities construction and maintenance, materials production and distribution, and ongoing in-service training for professional and technical personnel.

The Project is best described by project components, according to the functions of educational administration which are being developed or strengthened as a result of project inputs.

- a. District Educational Development Centers - Develop and establish on the District (Department Capital) level a system of services in basic administration and instructional development support required by all teachers and students in any one Department.
- b. Professional Development and Certification for Administrators - Create an ongoing capability in the Ministry to provide training programs for educational administrators. Two Training Institutes for Administrators will be established which will have the responsibility to design, implement, and evaluate training programs for local school directors, field supervisors, district directors and their staff, and central Ministry personnel.
- c. Planning and Evaluation - Strengthen the capacity of the Ministry's Planning Office to: (i) perform overall program planning and analysis; (ii) identify

needs for and conduct policy and financial research and coordinate technical research; (iii) assist in the preparation of program budgets; (iv) administer the Ministry's Planning Information System; and (v) extend evaluation concepts and practices throughout the Ministry. Project activities will concentrate in the provision of grant and loan-funded TA and training in the areas of organization and management, rural education planning, monitoring and evaluation.

d. Research and Analysis - Through the design and execution of research studies identified now as important for management efficiency and future programming, help create an institutional capability for the use of research in both program planning and instructional development activities. Project activities will provide: (i) TA for research design and study management; and (ii) the financing of actual research costs.

e. Information Management - Facilitate the gathering, analysis, delivery and utilization of statistical information. Project activities will provide TA and procure equipment for the design and implementation of an information management system relating to routine management information flows and the application of statistical information to the planning process.

f. Financial Management - Improve the quality and responsiveness of the budgetary process within the Ministry through the design and installation of a program budgeting system in its Finance Office. Project activities will finance the costs of technical assistance, training, and limited system equipment.

g. Curriculum and Instructional Materials - Lay the institutional base for a continuing "relevancy reform" of the substance of education. This includes strengthening the capacity of the Ministry's Curriculum Laboratory to: (i) do research and revise Curriculum; (ii) efficiently design, produce, and distribute a variety of instructional materials, (iii) develop a comprehensive language-arts program, with an orientation to helping the two-thirds of the population who

do not speak Spanish learn the official language more effectively; and (iv) become more familiar with non-formal/non-traditional approaches in Education.

h. Educational Facility Planning - Establish within the Ministry of Education the capability to: (i) coordinate and control school construction; (ii) conduct facility demand analyses; (iii) design and inspect facilities, and maintain educational physical facilities. Project activities will provide basic TA to assist the Ministry to develop such functional capabilities.

To accomplish the activities described above the Project will finance: (1) the construction of nine District Centers and renovation and additional construction for two Training Institutes for Administrators; (2) **vehicles and office, education, and technical** equipment for the Centers, Training Institutes and for comprehensive information and financial management systems; (3) technical assistance for research, specialized office organization and management, and information and financial systems development and implementation; (4) in country, U.S. and third country training for all personnel affected by administrative reform activities; (5) publication costs of administrative and other training manuals, pilot project materials, new textbooks and teachers' guides, and lower-cost educational materials.

5. FINANCIAL PLAN: The approximate cost of the total Project is estimated at \$16.6 million with a GOB input (including community contributions) of \$5.4 million representing 32.5% of the total cost; an AID Loan of \$9.65 million or 58% of the project value; and an AID grant of \$1.5 million representing approximately 9.5% of the total project. During the disbursement period of the Loan, other donors will contribute approximately \$450,000 worth of technical assistance to the Ministry in the area of educational planning particular for the rural area. This financing has not been included as part of the Project costs.

a. Proposed use of Loan Funds -It is estimated that 45% of the Loan will be used for foreign exchange expenditures for construction materials, equipment, vehicles, U.S. and third country training, and technical assistance which will largely be from the U.S.

An estimated 55% of Loan funds will be spent to finance the local currency costs of the project. These funds will be disbursed for locally produced construction materials, engineering design and supervisory services, production costs of training manuals, textbooks and teachers' guides, and lower cost materials, in-country training and Bolivian technical assistance. In addition, some off-the-shelf purchases in accordance with AID procurement regulations may be made.

The GOB's input into the project includes the land for construction, operational costs for the implementation of project activities, some in-country training expenses, counterpart costs to technical assistance, the financing of motorcycles, furniture and equipment, and a major contribution of \$593,000 to a special textbook fund, which will be established as part of the Project. This latter contribution is largely covered by local school "user fees". Of the total local contribution of \$5.4 million, approximately 9% represents local school contributions, 17% represents the GOB in-kind contribution, 51% represents on-going budgetted cash, and 23% represents new cash.

b. Tabular Summary of Financial Plan - The following table shows the project cost breakdown by components and sources of financing.

SUMMARY FINANCIAL PLAN AND COST ESTIMATE

<u>Utilization of Project Funds</u>	(US\$ 000)				
	<u>AID Loan</u>	<u>AID Grant</u>	<u>Local Contrib.</u>	<u>Total</u>	<u>Other Donors</u>
1. District Centers	6,092	259	1,022	7,373	-
2. Professional Development, Admin. Institutes	760	152	232	1,144	-
3. Planning and Evaluation	150	338	14	502	450
4. Research and Analysis	354	149	81	584	-
5. Information Management	587	152	130	869	-
6. Financial Management	158	123	67	348	-
7. Curriculum and Instruc. Materials	1,451	107	470	2,028	-
8. Educational Facility	98	21	14	133	-
9. Project Administration and Implementation	-	228	3,383	3,611	-
TOTAL	9,650	1,529	5,413	16,592	450

6. SUMMARY OF BENEFITS: Although this Project does not lend itself to easy quantification of outputs or a traditional benefit/cost analysis, various anticipated improved administrative outputs are outlined in Section II.D. An analysis of benefits against costs, as a result of project activities, is set forth in Section III.B.2. The results indicate a ratio of benefits to costs of 1.54, at an opportunity cost of capital of 12%.

7. PROJECT ADMINISTRATION

a. Implementation Responsibility:

The Ministry of Education has designated the Consejo de Racionalización Administrativa (CRA) as the

Ministerial unit responsible for Project implementation and coordination. This Consejo is a group of administrative experts originally contracted by the Ministry in February 1972 to study and design an Administrative Reform plan for the MOE. CRA has now been established as a semi-autonomous unit within the Ministry, with the explicit purpose of implementing the Reform.

During the disbursement period of the Loan approximately 36 man-months of grant-funded technical assistance (one full-time advisor) will be afforded CRA for the purposes of overall project implementation and coordination of all grant and loan-financed TA to the Project.

b. Coordination with Grant-Funded Program -

USAID is proposing, in addition to the Loan, a \$1,530,000 grant as a part of total project financing. The activities financed by the grant, which are an integral part of project execution, include: (1) up to 6 short term consultants during FY 1975 whose specific expertise is relevant to initial implementation of the Loan; (2) at least 10 long-term advisors (6months and over) during the life of the Project, for both the purposes of the reform and for the provision of expertise required to lay the base for the multi-year effort in rural education; and (3) short-term participant training as it relates to USAID's longer-term interest in rural education. The A.I.D. Loan will finance all short-term consultants (under six months) during FY 1976-78, as well as short-term consultants not immediately required in FY 1975 and all foreign short-term and academic training required for the administrative reform.

It is planned that the AID grant-financed advisor, attached to CFA, will be a point of coordination for all grant and Loan financed technical assistance. The Mission plans to utilize to the extent possible the same contractor(s) for both types of financing.

8. BACKGROUND: Although the Ministry's budget is the equivalent of \$66.1 million in 1974, approximately 25.4% of the Central Government Budget, it services

only approximately 66% of primary school age children, ages 6-12. Additionally, the allocation of its resources illustrates great disparities between rural and urban educational opportunities. The average annual expenditure per pupil for primary school students in 1971 was \$33 in the rural areas and \$50 in the urban areas. Fifty-eight percent of those who begin, complete primary school in the urban areas, while only 5% do so in rural schools. Except for rural normal schools, and a very few (26) rural secondary level schools (both public and private), no educational services are provided in the rural areas beyond the fifth grade. At least 85% of rural students drop-out before finishing third grade.

In 1968/69 the Ohio State University conducted a Human Resource Study for Bolivia. It specifically described the inefficient administrative structure as a major bottleneck in educational development. Though recommendations were made for training and a decentralization of functions, little occurred until the change of Government in August 1971. Finally, with this change, a renewed emphasis of general administrative reform and decentralization of all government activities was begun, as reflected in the Decree Law 10460 of September 1972 and the National Plan of Administrative Reform 1973-1977. Within the education sector itself, A.I.D. grant financed a contract between San José State University and the GOB for a group of experts to work with the Ministry on the design of a new administrative system. At the same time, the Ministry contracted a group of Bolivian administrative technicians (The Consejo de Racionalización Administrativa - CRA) to design, and help implement an administrative reform of the Ministry.

As a result of the work of CRA and San José State, the Ministry now has an established program of administrative reform, which was approved in February 1973 by Ministerial Resolution. During this past year the Ministry has adjusted some budgetary priorities to take initial steps for implementation of the reform in selected regions of the country and on the National Ministry level.

However, if the job is to be completed within a reasonable period of time and if present momentum is not to be lost, outside resources are required.

9. OTHER SOURCES OF FUNDS: The Export-Import Bank, the World Bank Group (WBG) and the Interamerican Development Bank (IDB) have stated that they are not interested in financing this project.
10. STATUTORY CRITERIA: All statutory requirements have been met (see Annex I, Exhibit C).
11. ISSUES: As indicated by the body of this CAP, the issues raised in the Intensive Review Request and the IRR cable from AID/W have been examined and resolved.
12. RECOMMENDATIONS: On the basis of the conclusions of the Capital Assistance Committee that this project is technically, economically and financially sound, it is recommended that a loan be authorized to the Government of Bolivia in an amount not to exceed \$9.65 million, subject to the following terms and conditions:
 - a. Interest and Terms of Repayment - The 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 not to exceed ten (10) years. Borrower shall pay to A.I.D. in United States dollars on the outstanding balance of the loan interest at the rate of two percent (2%) per annum during the grace period and three percent (3%) per annum thereafter.
 - b. Other Terms and Conditions - In addition to the standard conditions and covenants of A.I.D. lending, the Loan Agreement should include the following:
 - 1) Conditions
 - a. 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.:

- (i) A Project Implementation and Evaluation Plan satisfactory to A.I.D., which will include among other things: (a) a global reform plan, describing all Ministry Offices to be affected by the Reform, the projected staffing patterns and projected budgetary allocations of these offices; (b) a financial plan for the project approved by the Minister of Finance during the disbursement period of the Loan; (c) a time-phased plan for implementation of each project element; and (d) all required legal documentation for the orderly accomplishment of the purpose of the Loan, including Ministerial Resolutions covering: the reassignment to CRA of all positions originally designated to it, the structure and responsibilities of the new District Educational Development Center, and the use of bilingual materials in the classroom.
 - (ii) The appointment of all qualified personnel to CRA, in accordance with a staffing pattern agreed upon by Borrower and A.I.D., for the effective implementation of all Project activities.
- b. The Loan Agreement shall require as conditions prior to specific disbursement:
- (i) Prior to disbursement for the Construction of each Center and of each Institute CRA will submit: (i) evidence showing that the Ministry of Education has free and clear title to the construction site; (ii) a plan and detailed schedule for all construction work and satisfactory final plans, specifications, and bidding documents for that particular construction; and (iii) a maintenance plan for that Center or Institute.
 - (ii) Prior to disbursement for specific research activities, CRA will submit to A.I.D. a detailed research plan covering the basic designs, timing, and personnel requirements for the study.

- (iii) Prior to disbursement for long-term foreign training, CRA will submit a staff development plan for all participants of this program, describing among other things the contractual relationships the Ministry will enter into with these individuals to assure their participation in Bolivian Education following training.
- (iv) Prior to disbursement for the procurement of vehicles under the Loan CRA will submit a plan for vehicle maintenance and replacement.
- (v) Prior to disbursement for the up-grading of the Ministry of Education's printing capability, CRA will submit (i) satisfactory evidence as to the reorganization of printing facilities within the Ministry (the plan for which is to be outlined in the Project and Implementation Plan); and (ii) a maintenance plan for the printing machinery.

c. Except as AID may otherwise agree in writing, prior to the disbursement of additional Loan funds after March 1 of each year for any purposes except to pay salaries under existing contracts being financed by the Loan, the GOB will submit satisfactory evidence to A.I.D. that the necessary budgetary allocations required by the Project, and as approved in previous plans submitted to A.I.D. have been made to the Ministry of Education budget.

2) Covenants

Except as AID may otherwise agree in writing, the Borrower shall covenant that:

- (i) The Ministry of Education will support all operating costs of the District Centers during and after the disbursement period of the Loan, and will ensure that the budgetary allocations and the expenditure of funds for the Centers' operations, will be devoted to urban and rural programs so

as to reflect relative needs of school enrollments represented by the urban and rural areas of the District.

- (ii) The Ministry of Education will increase during 1974-1980 the ratio of support costs to salary expenditures, with the intent of creating additional financial resources for investment and operational expenses related to: new programs in their priority areas; this Loan; and other externally financed programs in Education.
- (iii) The Ministry of Education will reduce during 1974-1980 the ratio of administrative/supervisory personnel to teaching staff, consistent with the objectives of the Reform;
- (iv) The Ministry of Education will increase during 1974-1980 the allocation of resources in real terms to rural education, with the long-term goal of having educational expenditures more accurately reflect the proportion, distribution, and needs of the urban and rural populations.
- (v) The Ministry of Education will develop and implement a system for position certifications and salary incentives, such that the salary schedules for key educational administrators at the Central and District levels are competitive with those of similar job qualifications in the public sector; and
- (vi) The Ministry of Education will establish, and begin contributions to in 1975, a special fund for publishing and distributing a variety of instructional materials for formal and non-formal educational activities. The amount of annual contributions to this fund should be, by 1976, the equivalent of the cost of one new textbook per student per year.
- (vii) The Ministry of Education will develop and adopt by September 1975 an Instructional Materials Policy, to the satisfaction of AID, which provides inter alia for a new materials distribution system which assures that any payment requirement with respect to such materials does not interfere with student access to such instructional materials.

B. COMPOSITION OF THE CAPITAL ASSISTANCE COMMITTEE

Catherine A. Balsis	Loan Officer and Coordinator, USAID/Bolivia
E. Clayton Seeley	Education Officer, USAID/Bolivia
Hasan A. Hasan	Deputy General Engineering Officer, USAID/Bolivia
Loc B. Eckersley	Financial Analyst, USAID/Bolivia
Randolph L. Mye	Economist, USAID/Bolivia
Frank W. Brecher	Program Officer, USAID/Bolivia
Ronald Nicholson	Bolivian Desk Officer, AID/W
Gerald Wein	Education Economist, AID/W
Alice H. Palmer	LA/DR Textbook Advisor, AID/W
Raul Oñorc	Chief of Party San José State Team
Eugene Lamb	Campus Coordinator, San José State Team
Norman Williams	Regional Legal Advisor, USAID/Peru

Reviewed by:

Arthur W. Mudge, DD; and
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Approved by:

John R. Oleson, Director
USAID/Bolivia

May 31, 1974

SECTION I - ASSESSMENT OF THE EDUCATION SECTOR

A. Introduction and Summary

1. History, Organization and Content of Formal Education in Bolivia

Up until the 1952 Revolution education was limited primarily 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 an initial purpose by placing a major emphasis on the expansion of educational opportunities in rural areas, it also in later years proved to be a major administrative burden as wasteful duplication of functions increased, and the rural education system grew beyond the management control of the Ministry of Campesino Affairs. In April 1970 these two systems were finally brought together by Presidential decree under the authority of the Ministry of Education. Even with this organizational unification, however, the two systems have persisted with separate administrative units within the one Ministry. This duplication of organization and labor has remained in the field as well, where different district and sub-district offices within the same department have attempted to serve their respective rural and urban supervisors, school directors, and teachers. As illustrated in Annex I, Exhibit A, prior to the most recent administrative reform activities, urban regional and district offices totalled 15; rural regional and district offices totalled 20.

As detailed in the Education Sector Assessment the content of education is of a formal, classical nature, oriented to the primary grade levels, with less attention and resources given to technical vocational and non-formal education. The university system has also emphasized the traditional studies rather than technical subjects which would more directly address national development needs.

The organization of formal public education consists of the pre-primary (2 years), primary (grades 1-5), intermediate

(grades 6-8), and secondary (4 years) levels. In addition the system offers on a small scale a variety of technical and vocational courses on both the secondary and post-secondary level, such as commercial and industrial arts, adult literacy, art and music, and normal school training. Except for rural normal schools and some 26 rural secondary schools, all secondary education activities take place in urban areas.

At the higher education level in Bolivia, there are six urban normal schools (five public and one private), eight public universities, one Catholic university, and a few superior-level military training schools. The public universities are located in eight of the nine Departmental capitals throughout the country. Almost half of all current university enrollments (over 20,000) are in the fields of law, economics and medicine.

The relationship between the various levels and categories of formal educational programs are complex, as illustrated in the diagram contained in Annex I, Exhibit B. As shown, there are many programs which, if entered, do not permit access to any further education or, at best, permit access to a specific and limited number of further educational programs. Compared to the schooling systems of many other countries, the Bolivian system is relatively rigid and inflexible. Children who fail to follow the academic track, or fail to find access to general secondary education, are effectively excluded in almost all cases from changing programs or from entering into higher education.

2. Management of the Sector

By the Law of Administrative Organization of the Executive Power (D.L. No. 10460) of September 12, 1972, the Ministry of Education and Culture is given responsibility for "the formulation, direction and execution of the educational policy of the country" and for "the promotion, administration and supervision of a unified and democratic" educational system. This responsibility extends to all primary and secondary education in Bolivia, which generally can be illustrated by the number of schools and school enrollment in 1970 (see Tables I-1 and I-2, Annex III, Exhibit A). Generally, these tables show that of 881,359 students enrolled at the primary and secondary levels, three-quarters are enrolled in public schools, with the remaining one-quarter enrolled in private schools; sixty percent of the total are attending urban schools

and forty percent are in rural schools.

In reality, the Ministry of Education does not take direct responsibility for all of these students, but rather exerts only a nominal control over private schools and certain largely independent public schools. This latter group of schools is operated and managed by the state mining and petroleum enterprises (COMIBOL and YPFB), who under the Education Code of 1955 were obligated to provide basic educational services to the dependents of their employees. The COMIBOL schools presently have approximately 52,000 students and the YPFB schools enroll about 5,500 students. These public education systems include pre-primary, primary, secondary, vocational and adult literacy programs.

One-third of urban primary students and one-fifth of rural primary students attend private schools. At the secondary level the proportion continues at one-fifth for the insignificant number of rural secondary students and one-third for urban secondary students who attend private schools. These schools are operated by the Catholic Church, various other churches, and by non-church related private groups. In the principal cities, a few are sponsored by the foreign community.

Of the total number of students attending primary and secondary school, approximately 700,000 in 1974 were estimated to be in schools under the direct control of the Ministry of Education.^{1/}

1973 National Budget figures indicate that in order to service the 700,000 students discussed above Ministry operations have required a little more than 5,000 administrative personnel in addition to approximately 36,570 teachers. The impact of this size of an administrative/teaching staff on budgetary allocations in education is great. Since 1960 the budget for the Ministry of Education has risen from 19.4% to 25.4% of the Central Government Budget, after reaching 30% in 1970. The Ministry's 1974 budget is the equivalent of US\$66.1 million.^{2/} However, even

^{1/} 1974 Enrollment Statistics, National Planning Office, Ministry of Education.

^{2/} This amount does not include public educational expenditures for other Ministries, decentralized agencies, and Universities. See Annex III, Exhibit B which illustrates the level of educational expenditures as a part of Gross Domestic Product.

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with this large percentage of the national budget, approximately 95% of the Ministry's budget is earmarked for salaries, almost 4% for transfers to private schools and universities, leaving about 1% for teaching equipment, books, supplies, maintenance, as well as other items such as research and innovative pilot testing of educational programs. This allocation of resources within the Ministry of Education is illustrated in general terms below.

TABLE I - 3

MINISTRY OF EDUCATION AND CULTURE
BUDGETS 1972 & 1973
(In millions of Bolivian Pesos)

Personnel Services	<u>1972</u> 484.9	<u>1973</u> 649.6
Non-personal Services (rent, transportation, etc.)	2.5	5.3
Materials and Supplies	.4	1.0
Fixed Assets	.4	.7
Reserves		.2
Transfers (Scholarships and contribution to universities)	<u>40.3</u>	<u>61.0</u>
Total	528.6	717.8

Source: Presupuesto General del Sector Público,
1973 - Vol. 1 Administración General

3. Deficiencies in the Education System

The most basic problems of the educational sector are determined by reviewing the outputs that the system produces for the society, and the efficiency with which it produces its outputs.

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As analyzed in the Sector Assessment the output is believed to be highly deficient in both quality and quantity and the benefits are inequitably distributed among different groups in the society. These deficiencies are the result of a shortage of resources within the educational system and the inefficient utilization of resources it does have.

For both economic and socio-cultural reasons it is desirable that all Bolivian children receive at least a primary school education which would enable them to lead fuller and more productive lives, communicate freely with one another, and to participate more actively in community and national development. The educational system is a long way from accomplishing this objective. Data for 1971 show that nationally about a third of the children in the 6-12 age group are not in school; in rural areas the out-of-school proportion rises to about 58%.^{3/} The inequity between urban and rural areas is compounded by the fact that about 50% more is spent annually on an urban student than a rural student. The quantitative output of the system is much lower than the enrollment figures indicate; the percentage of children continuing beyond fifth grade is only about 58% in urban areas and only 5% in rural areas.

Both compounding and contributing to this quantitative deficiency is the low quality of the system. The children's progress in learning the most basic facts about their environment and the most essential communicative, analytical, and learning skills is painfully slow. Using illiteracy as an indicator, this rate for those 14 years of age or older is approximately 60% nationally, 15% in the urban areas, and about 85% in the rural areas. This low output reflects the low quality and quantity of the inputs into the system. For example, teachers are poorly trained or untrained (40%), and in rural areas they often must teach three classes at once. School directors and district supervisors lack the training and technical backstopping to support the teachers. The teacher and pupil have few books or other teaching materials, leaving rote memorization as the only possible method of instruction. The classroom, particularly in rural areas, is generally a barren, poorly lighted and ventilated room where three classes may be crowded together.

^{3/} See Annex III, Exhibits C thru F for education statistics on sector expenditures, school enrollments, cost per student, and wastage rates.

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The curriculum, which is designed to prepare children for additional formal education and life in urban centers, is relevant to the future lives of a small minority of the students.

These qualitative problems mean that the average child who completes 5-8 years of education is far less equipped to meet the challenges which face him than should be expected for the investment made. Further, the low value of the education gained coupled with the fees and indirect costs which the child's family must bare, adds to a list of various factors which cause a large number of children to drop-out after one or two years of schooling. Thus, the qualitative deficiencies both lower the value and reduce the quantity of output. As a result the efficiency of the system, the value of the human resource development which occurs as a result of the expenditure of scarce resources, is very low.

Secondary education is available only for a small minority (about 21-23%) of the appropriate school age population. As the system currently produces only about 15,000 graduates/year for a country with some 5.2 million people, the output is not sufficient to provide candidates both for higher education and training and for needed middle level manpower positions. Thus the present output is insufficient for the needs of economic growth. Additionally, secondary education faces many of the same qualitative problems found on the primary level, such as inadequate facilities, limited teacher training, and minimal technical backstopping to teachers.

The efficiency of the secondary system is constrained by several factors. The academic nature of the program and the qualitative problems mentioned above decrease the value of the graduates to society. The internal efficiency is reduced by the 41% dropout rate and by the small size of most secondary level schools.

Technical education is an area of particular shortage.

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The Government has not yet joined forces with private industry to determine the areas of most critical need and the respective roles of the public and private sector in filling those needs.

With respect to university level education a significant step forward was made with the creation of the Council for Higher Education. However, lack of coordination between universities and lack of any serious attempt to adjust outputs to the effective demand in the Bolivian economy continues to permit over-production in some fields and continued shortages in others. Over-production often leads to the under-employment of the graduate or to his emigration to other countries. There are also signs of internal inefficiency resulting from the needless proliferation of specialized faculties and the loss thereby of economies of scale.

Underlying all of these inefficiencies is the poor utilization of resource inputs which are, as illustrated in section 2 above, mainly personnel. The GOB Education Sector Diagnosis, which assesses all non-university level education, clearly pinpoints the administrative system for education as a major weakness in achieving technical-pedagogical goals. It is not a technical organization. Controls over professional development and certification, instructional quality, and administrative behavior are bureaucratic rather than professional. The structure of educational administration itself is geared to system maintenance rather than to change. It is, in sum, a closed system, with no diffusion of power or decision-making, no capacity to respond to differences among clients or geographical regions, and no real flow of data and information which might suggest the need for change.

B. The GOB Sector Strategy

1. Summary

During the past few years the GOB has put an increasing emphasis on the effective use of the educational system as a means to assist its people become more productive members of the Bolivian society. This emphasis is best illustrated by (1) their efforts to rationalize their administrative structure and thus stimulate a more efficient utilization of system inputs; (2) the sector Diagnostico, which is one of the Ministry's first major efforts in

understanding the relationships and implications of the Bolivian education system; and (3) the development of a five-year National Education Plan, which is scheduled for formal adoption in late 1974.

The sixteen volume diagnostico, which is now published, provides the basis for the 5-year Plan. Though the Plan itself is not yet published, extensive communications (as well as presentations) between USAID and the Ministry of Education establish the goals, direction, and orientation of GOB future plans in Education. The most illustrative of these documents is a special report from the National Director of Education Planning, which is contained as an attachment to the USAID's Sector Assessment.

In terms of an overview of the sector, the Ministry has named several major problem areas:

- a) The irrelevance of education to the social, economic, and cultural realities of the country.
- b) Structural problems in the system, such as the lack of communication between levels of the system as well as between the public and private sectors.
- c) The basic lack of a realistic analysis of education problems as the basis for decision making.
- d) The low productivity of the system, particularly as it relates to rural areas.
- e) The inability of students to move within the system, as illustrated by general matriculation and those who actually finish secondary school, move into technical/vocational schools, or enter the job market.
- f) Discrepancy between the educational needs of the working force and actual educational achievement of the same.
- g) Budgetary problems, most notably illustrated by the ratio of operating vs. investment costs.
- h) The lack of a defined administrative structure which fully supports the technical pedagogical process, as it relates to overall goal-setting, planning, and budgeting, and to the delivery of instructional

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support such as classroom materials, technically-oriented supervision, and facility maintenance.

2. Orientation in Future Programming

Based on an analysis of these problems the Ministry of Education has established two major goals for educational programming:

- a) Expand the national education service, with priority to (i) basic and intermediate rural education, (ii) technical education, and (iii) adult education, with the objective of satisfying the actual human resource needs for national development.
- b) Effect a qualitative improvement in the content of education, in accordance with the needs, aspirations, and socio-cultural patterns of the country, including technological applications to methods of instruction.

The Ministry of Education has named nine priority program areas, which are outlined in the Sector Assessment. The first two of these priorities are: (1) effecting qualitative and quantitative improvements in rural education; and (2) completing the administrative reform of the Ministry. As reflected in the GOB Letter of Application for the present loan proposal (Annex I, Exhibit B) the Government of Bolivia stands ready now to make certain specific commitments to improving the overall effectiveness of system administration, particularly as it relates to rural education. As outlined in Section IV.4 of this paper, the GOB will, among other things, improve the budgetary ratio between support costs and salary costs, increase in real terms the allocation of resources to rural education, and make annual contributions to a special fund for the production and distribution of instructional materials.

C. AID Strategy for Education and Rationale for the Loan

1. Justification for Concentration in Rural Education

The Mission in the FY 1975 DAP identified rural education as one of three areas of program concentration for AID assistance

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to Bolivia in the period FY 1975 through FY 1977.

As described in detail in Section VII of the Sector Assessment, the Mission's Analysis of the Ministry of Education's Diagnosis and the draft National Educational Development Plan confirm the basis for priority attention to rural education. It is the shared conviction of the U. S. Country Team and the Bolivian Government that Bolivia's long term viability cannot be assured until the great mass of its rural citizens feel that they have a stake in the future of the nation. The modern sector of Bolivia's dual economy must be expanded to include the marginal and subsistence farmer. Rural education must be made both more relevant and accessible to the rural Bolivian who at present receives only 10% of the Ministry's operating expenses for the post-primary grades and none of its capital expenditures. The fundamental fact describing the status of rural education is that there is an absence of educational offerings beyond the early grades, eliminating an important mechanism for raising the performance of the rural populace in the economic and social life of the nation. Just on grounds of equity substantially increased attention should be paid to the education of the rural populace.

This concentration is responsive to GOB desires for U.S. assistance, supportive of our on-going and planned new programs in rural health and agriculture, and completely consonant with the letter and intent of the Foreign Assistance Act.

2. The Target Group for Sector Programming

The standard of living of Bolivia's rural dwellers (70% of total population) is markedly lower than those living in the urban centers. Two thirds of Bolivia's total labor force is in the agricultural sector, the vast majority of whom are in the subsistence category. They accounted only for 16% of GDP in 1971. Per capita income among the estimated 3.2 million subsistence farmers is thought to average about \$45 a year.

The health of this group is also poor. Bolivia has an estimated mortality rate of 19% one of the highest in Latin America. Eradicable mortality represents about 20% of recorded

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deaths, reducible mortality nearly 50%. The most affected by the eradicable and reducible mortality are those living in the rural areas. Malnutrition accounts for a high proportion - 40 percent - of children's deaths. The actual rate of infant mortality in rural areas may be as high as 300 per thousand live births.

As illustrated in Section I. A, the educational prospects for rural children are also dim, where about 58% of the school age population are not in school, and of those that do start only 5% continue beyond the fifth grade. The illiteracy rate for those 14 years of age or older in the rural areas is approximately 85%.

3. A.I.D. Assistance Strategy in Education

To attain the objective of improved rural education, the Mission has adopted the following sectoral strategy:

a. Continue and in early FY 75 (July 1974-June 1975) expand AID financial and technical support to the Administrative Reform program of the Ministry of Education as a means to:

- i) Raise the overall efficiency of the Ministry thus freeing additional resources for substantive improvements in education.
- ii) Decentralize administrative support and substantive program control to make the system more responsive to the needs of the district and local educator and student.
- iii) Improve the technical qualifications of supervisors and teachers.
- iv) Provide improved channels and systems for the flow and evaluation of data which will illuminate the educational needs of children and permit rational planning and program budgeting to meet those needs.
- v) Increase the relevancy and acceptability of curriculum content and delivery systems through

carefully directed research and pilot programs.

b. During the implementation and institutionalization of Administrative Reform the Mission will work with the Ministry in the preparation of Loan programs during FY 1975-1977 to achieve the qualitative improvement and quantitative expansion of rural education in Bolivia (for details on AID programming in rural education see Section VII of the Sector Assessment). The focus of this work will be on the problems of:

- i) The lack of relevancy in curricula related to rural development;
- ii) The need to develop the means -- including instructional development and low-cost technology -- to deliver subject matter more relevant to the rural areas;
- iii) The inadequacy of infrastructure and technical/financial resources to meet primary school demand beyond grade 3; and
- iv) The need to make the rural school an integral resource of the various development efforts of the GOB. This last element is particularly important to achieving the practical cost to education which is being sought as well as to the interpretation of efforts of education, agriculture and health in the rural sector.

4. Rationale for the AID Loan

The rationale for placing emphasis first on administrative reform is two-pronged.

First, a more efficient Ministerial administrative system will not only assure a better and more equitable national use of the substantial resources presently being assigned to public education, but also will increase the system's general capacity to absorb the external resources it cannot now handle and the increased domestic resources necessary for system expansion and improvement. For example, at present (1) at least 95-97% of

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Ministerial budgetary resources goes for salaries, leaving almost no room for counterpart financial or technical support to projects which might otherwise be of interest to the international financial assistance institutions; (ii) the Ministry lacks the capacity to develop educational policies supported by related research and analysis which would provide a basis for planning and implementing projects and programs attractive for domestic and external financing; and (iii) the present over-centralization in the Ministry limits its ability to carry out action programs and precludes constructive interaction and dialogue with the field staff. Given these core problems, external donors by and large have not been attracted to extending financial assistance to the separate components of the educational system, nor has the Ministry itself possessed the capability to respond to the Sector's problems. Any hope for sustained improvement in the public educational system will require major improvements in its organizational management.

Second, the Reform is an activity to which the Ministry has devoted considerable time, personnel, money and effort for its design and initial implementation. It is clear to USAID, however, that if the job is to be completed within a reasonable period of time, particularly in producing the expected increased efficiency of the system, outside resources are required.

Though emphasis in the Mission's multi-year sector strategy is on the rural student, the qualitative and efficiency improvements realized by the Reform (i.e. activities under this Loan proposal) will benefit both rural and urban students. The Mission views this as both necessary and desirable. Necessary, because greater overall efficiency is essential to increased support for the rural sector; desirable, because it will raise national education achievement. After this initial and prerequisite state is launched, on-going AID assistance will be much more narrowly focused on rural education. For a full discussion of the specific numbers and types of students to be affected as a result of the Mission's proposed sector program in Education, see Goals under Section VII, part B.2 of the Sector Assessment.

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D. Background to the AID Loan

1. Definition of the Problem

The management of the public education system is highly centralized and duplicative in its operation and structure, unequal in terms of resources provided to urban and rural education, lacking functional facilities and adequate materials for instruction, and piecemeal in its approach to planning, budgeting, and program evaluation. As has been highlighted earlier, these deficiencies become particularly important when viewed in light of their adverse effect on the quality and efficiency of education. The relationship between system administration and education development was discussed in the 1968/1969 Ohio State Human Resource Study.^{4/} This study clearly pinpoints administrative development, curriculum development, instructional strategies and teacher education, and maintenance and repair of school facilities as priority areas for any effort to improve the overall efficiency of the system. Administrative reform and development was targetted largely because of the inability of the centralized Ministry to make effective programming decisions relevant to the needs of individual schools. It was in this context that the theme of decentralization, i.e., the movement of authority and of available instructional resources to local administrators, was first emphasized in the Ohio State Study as one of the more important instruments needed to induce changes in Bolivian educational programs.

The specific recommendations of the Ohio State Study for improved educational administration did not result in concrete action by the Bolivian authorities until late 1971 and the advent of the Banzer government. The new government, indicating its concern with general administrative reform and decentralization of all government agencies, promulgated two legal documents - the Law of Administrative Organization of the Executive Branch in September 1972, and the National Plan of Administrative Reform 1973-1977. The basic premise of the Plan was that if the Government was to become more responsive to the varying development needs of the entire country it had to find more efficient ways of utilizing its scarce financial and human resources as well as place some administrative functions and respon-

^{4/} The Center for Human Resource Research, The Ohio State University National Plan for Human Resource Development 1969-1980. A Preliminary Draft, April 1969.

sibilities on levels which were closer to target development areas.^{5/}

The mandate in administrative reform had been adopted at an early stage by the Minister of Education who, in January 1972, signed an A.I.D. grant-financed contract with the San Jose State University for a group of experts to work on the design of a new administrative system. By February of the same year the Ministry also contracted a group of Bolivian administrative technicians (The Consejo de Racionalización Administrativa - CRA) to work with San Jose State in the study and design of the Ministry's reform.

During initial work stages the CRA-San Jose State Group agreed that the reform effort from the beginning had to be designed to cope effectively with the substantive problems of the educational system. Thus they defined Educational Administration^{6/} (i.e. the scope of their activity) as the organizational arrangement responsible for the planning and allocation of the human, financial, and physical resources required for the teaching/learning process of public education. This breadth of responsibility included all organizational requirements relating to policy formulation, research and planning, program implementation, and evaluation. In its broadest sense the reform was to encompass both formal and non-formal education; but in terms of priorities the group placed greatest emphasis on formal education, since that is the part of the system which receives the majority of the government's resources.

5/ The creation of the National Urban Development Service (SENDU) in March 1972 is one of the first major outgrowths of the GOB's effort in administrative reform. The purpose of this new organization is to help local government administration mobilize and efficiently use their own resources for local development activities. SENDU's major activities include technical assistance to local government entities, training of municipal employees, and financial assistance for local public work projects. A.I.D. loan 511-L-047 (SENDU), authorized in June 1973, is in direct support of these efforts in strengthening decentralized administration units.

6/ It is noted here that the terms "Educational Administration" and "Management" are used interchangeably, and are intended to convey the broadest coverage of responsibility.

It is within this context that the major administrative problems of the system are identified and analyzed below.^{7/} The breakdown of problems refers to various functional capabilities of the system and are in fact interrelated in terms of their effect on each other's capability to efficiently serve the system.

Planning

The Ministry of Education does not, at this time, have comprehensive planning capability. Specifically, no agency within or without the Ministry is both mandated and equipped to:

- Determine the intermediate and quantifiable objectives of Bolivian education;
- Develop systems (instruments) for the analysis of alternative options, in both the areas of resource utilization and resource mobilization (financing);
- Assist, develop and manage a program-budgeting system for the Ministry;
- Collect and analyze data from general information systems of the Ministry and related agencies, from special surveys, and from the technical literature, and thus strengthen the empirical knowledge required for successful planning;
- Prepare education development plans, including resource-utilization and financing plans, using alternate sets of objectives; and
- Conduct special cost-benefit studies of program or policy options within limited areas.

Information and Financial Management

These two aspects of administration are broad-based in that they relate to both the routine management of system operations and to the quality of program planning and program implementation. Taking

^{7/} The problems to be discussed are based on a 2-volume Diagnostic of the Ministry's administrative capability, produced by CRA in July, 1972. The document is voluminous, however a free translation of some of its conclusions is contained in Annex II. Exhibit D.

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information management first, it is seen that the system presently makes almost all decisions on the national level on the basis of little, faulty, or no information. Data collection, processing, storage, and retrieval are primitive and ineffective. In essence the Ministry has a faulty memory.

In the area of routine management, information flows are both inadequate in substance (i.e. number of classrooms, schools, teachers, materials, costs, etc.) and duplicative in terms of the number of separate ministerial units attempting to collect statistics.

The utilization of statistical information in global and program planning and design is practically non-existent resulting in a lack of clear problem definition and analysis. There is an overall preference to do nothing rather than to attempt change in a system which is not understood. Planning decisions, when made, are based on minimal understanding of the educational environment as well as of the variation in the environment.

Even if better planning were available to the Education Ministry, its benefits largely would be neutralized as a result of deficiencies in the budgetary process. The position of education in the annual budgetary competition is weak as a result of the Ministry's inability to gather sufficient evidence concerning the performance of the system - especially concerning the relation of performance to the resources applied. The absence of any sort of program budgeting within the Ministry (to the point that resources expended by level of education or region cannot be accurately calculated) is one factor contributing to its incredibly low expenditures in new programs (less than 1% of its budget).

Prevalent in the budget formulation and approval process is the Education Ministry budget being adjusted from one year to the next by making allowances for (a) the employment of new graduates from normal schools, and (b) inflation in the cost of materials and services including teacher salaries. Some variation from this pattern may be negotiated between the Education and Finance Ministries. Not only does this process close the door to any rational shift in resource use on the part of the Education Ministry, but it generates undesirable shifts of its own since the rise in the price of supplies and non-contracted services generally is underestimated, with the result that their share of the budget keeps declining in real terms.

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In the case of such decentralized agencies as CONES (school construction) and CNES (University Education), budgeting again fails to include any kind of rational comparison of alternatives. The size of CONES' resources, and thus the level of construction achievable in any year, is determined by the proceeds of an earmarked tax on earned income and an earmarked percentage of local government taxes (which "prefecturas" and municipalities fail to turn over to the agency).

Research and Evaluation

There is almost no ongoing research and evaluation of present system activities. Thus there is little understanding of what the system is or is not accomplishing, only superficial analysis of problems, and rather ad-hoc setting of new goals and priorities. The absence of this functional capability is pervasive and ranges from the lack of student performance evaluation against clear instructional standards to not specifically knowing why the majority of rural children drop-out of school by the end of grade 2.

Patterns of Organization and Communication

Geographical isolation and poor communications have made highly centralized management from the national level nearly impossible in terms of effective action. The result of this extreme centralization in decision-making and planning has been a formal curriculum and a single set of educational goals which do not respond either to the varying socio-cultural-economic realities of Bolivia's heterogeneous society, or to the varying educational needs of the Bolivian schoolchild. Furthermore, authority, responsibility, and resources have been maintained on the national level with no flow of two-way communication to stimulate district and local level inputs into planning and decisions relevant to their particular needs. Neither have the district levels had authority to make routine management decisions.

In addition to the ineffectiveness of centralized administration, inefficient patterns of organization have been repeated on both the national and district levels. The separation and therefore duplication of routine management functions for urban and rural education has created a division between the two systems, with priorities in financial and human resource allocation being given to urban education. Consistently, rural administrative and teaching staffs have had lower job qualifications, and rural administrative facilities have been even more inadequate. Instructional and communication

support services for both urban and rural supervisors are generally limited; however, the problem has been more acute for rural supervisors who are confronted with very specialized learning needs, cultural differences in the populations being served, and transportation difficulties.

There is also a general diffusion and mix of administrative vs. technical-pedagogical functions throughout the system which has seriously hampered the development of strong instructional leadership in the system. Pedagogical personnel such as teachers, school directors, and field supervisors, as well as national supervisory and curriculum people, have all been too heavily involved in cumbersome administrative duties. Their jobs have not been clearly defined in terms of role as in the instructional functions of the system, nor has any real emphasis been placed on the process of instructional development as a part of the responsibility of educational administration.

Professional-Technical Expertise

The above patterns of organization point to some of the deficiencies in personnel qualifications and preparation. At the heart of the problem is the fact that the Ministry offers no systematic pre-service or in-service training programs for administrators and has not established certification standards for them. Job-function-task descriptions have not, until the reform, been well defined and personnel practices have tended more towards centralized appointment of individuals on political rather than technical considerations. For both administrators and teachers there has been little emphasis on job orientation, in-service training, and ongoing evaluations of personnel performance. The absence of a comprehensive approach to personnel administration is one of several key weaknesses preventing the system from providing required support services to the educational process.

Instructional Materials

The Ministry has not institutionalized the design, reproduction, and distribution of instructional materials. Few textbooks and teachers guides are utilized in the educational system and the content of the books used is not responsive to differentiated learning needs. Experimentation with lower cost curriculum materials has been non-existent. Curriculum materials therefore, are not used as a classroom tool, almost eliminating learning through the conceptualization of ideas, and reinforcing rote memorization in the predominant method of instruction. Coupled with the problem of supply and content of materials is the lack of bilingual instructional

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materials, where approximately 60% of the school environments are non-Spanish speaking.

The inadequate provision of instructional materials has been caused by several factors. The curriculum laboratory receives no research and planning inputs to help it define differentiated instructional needs. The financing and distribution of textbooks and other materials at best has been haphazard with no institutionalized program of book finance.

Facility Planning and Maintenance

The organization for the design, construction, and maintenance of schools and other physical facilities is loosely controlled and financed. There is little planning related to actual school construction needs. Inspection and maintenance is haphazard, with little money allocated to this activity. The result is physically poor learning environments, over-crowded classrooms, and many times the need to rotate daily two or three sessions through one-room schools.

2. Past AID Efforts In and GOB Commitment to Administrative Reform in Education

GOB efforts in administrative reform have been supported through the aforementioned AID grant-financed San Jose State Contract, which is scheduled to terminate June 1974. During the past two years the San Jose State Team has worked with the Ministry in studying its administrative system, and has assisted CRA to design the reform program, to write job-function-task descriptions for national and district management positions, and to lay the groundwork for the immediate implementation of the integrated administrative units (SIDA) in four of the nine departments scheduled for assistance under this Loan. Training for some SIDA personnel began in April and was conducted by the Bolivian Public Administration training institute ISAP. Additionally, the Team has conducted training programs for 450 administrative personnel in the Ministry of Education, made data processing studies and designed an administrative data system, developed the plan for a central Division of Administration on the national level, and assisted the USAID in the formulation of this loan proposal on Educational Management. A draft PAR on this grant program is being completed. Preliminary reviews show that the major objectives of the program have been accomplished.

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The Government of Bolivia, most particularly the Ministry of Education, has consistently supported the activities of the administrative reform through the creation of CRA, the provision of office space, equipment and supplies to the CRA-San Jose State Group, and the payment of travel, per diem, and some costs of seminars and training for GOB personnel. The GOB has contributed approximately \$200,000 to the reform project.

Perhaps more important, given the nature of the Project, has been the ministerial support afforded by the reform. The work of CRA and the San Jose State Team has existed through the tenure of four Ministers. In each case the Ministers have fully endorsed the basic concepts and objectives of the program and in the case of the latter two, have taken an active interest in implementation activities. One of the most effective actions taken by the Ministers has been continuous visits to the field with CRA and San Jose State people to discuss reform-related concerns with district administrative personnel and teachers. Additionally, CRA has been given full support by the present Minister of Education in the development of this Loan proposal for Educational Management. This has been most notable by the naming of the Head of CRA to chair a high level intra-Ministerial Coordinating Committee for the implementation of the Reform and this Loan.

3. Relationship of Loan Proposal to 1974 Congressional Presentation

The Educational Administration Loan suggested in the FY 1974 Congressional Presentation is the basis for the present loan proposal. As stated in the earlier document the purpose of the Loan was to support and augment basic organizational and structural reforms of the Bolivian education system through qualitative innovations and improvements in priority areas. As reflected in the project description section that follows, the priority areas have remained the same, i. e., training for administrators and other educational personnel; collection, storage, processing, and use of education data; research and technological applications for the improved efficiency of the system; and instructional materials. Whereas slight changes in emphasis have occurred during the last year as a result of a maturation of ideas and concepts, changes in economic conditions (e.g. inflation), and specific program planning exercises, the substance of the present Loan remains consistent with the purpose and intent of the Congressional Presentation proposal.

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SECTION II - DESCRIPTION OF THE PROJECT

A. Introduction and Summary

1. Objectives and Orientation of the Reform

During the initial study phase of the CRA-San Jose State work three basic organizational needs emerged, which eventually were translated into the objectives which guided each aspect of the reform design. These objectives are decentralization, integration, and rationalization.

The objective of decentralization is the reallocation of key administrative and instructional functions to district (Department Capitais) and to local levels of the system and the development of the capability of district and local personnel to carry-out these responsibilities. The reform design seeks to decentralize those responsibilities and functions which are in most direct support of the teachers and children, while still maintaining the integrity and overall authority of the national Ministry.

Integration is the unification of those administrative and instructional support services duplicated throughout the system. The major outgrowth of this orientation has been the unification of such services for urban and rural education through the establishment of a Central Administration Division on the national level and the creation of a new administrative unit called the Integrated District Administration Service (SIDA). This latter unit services both rural and urban schools on the district level. Recognizing the varying economic and socio-cultural variables in the urban and rural schools, the reform design dealt with integration from a strict administrative viewpoint, striving for better organizational efficiency rather than a melting-pot approach to student development.

The third objective of the reform, rationalization, is directed at improving techniques and procedures for the more efficient utilization of resources. It implies changes in both organizational patterns and organizational processes. Most notable in the area of organizational pattern changes is the separation of routine administrative functions from technical-pedagogical functions. In terms of organizational processes the reform addresses problems concerning communication and information flows, instructional leadership and supervision, personnel administration, general and fiscal management, organizational development, and in-service training.

2. Goal, Purpose, and Focus of the Project

The goal of the Loan is to help the Bolivian Government create a more efficient and equitable public education system. The specific purpose of the Project (including both Loan and Grant financing) is to support the implementation of an administrative reform in the Ministry of Education concentrating on: (1) strengthening its organization for administration and instructional development, its financial base, and its performance in the areas of research, information management, budgeting, program and policy planning, and (2) providing a basic decentralized organizational structure required to move key management functions and instructional support services closer to the people served by the education system. Administrative reform of the entire system as well as increasingly decentralized services have been identified earlier as necessary pre-conditions to the carrying-out of effective programs for improved rural education.

Through basic project inputs of technical assistance, training, construction/renovation, equipment, and publications the Project will focus on increasing and bettering the educational services provided to students and teachers through the improvement of efficiency and quality of the delivery system. This focus on the delivery of services to the teaching/learning environment is illustrated in the diagram contained in Annex II, Exhibit F. For illustrative purposes the delivery system is grouped into three categories: routine administration, policy and program planning and analysis; and instructional (including materials) support. It depicts the flows of communication and organizational processes between the classroom and the National Ministry, as well as the intermediate levels of organizational activity which augment the system's capacity to communicate from top-to-bottom and bottom-to-top.

The direct recipients of project activities are the administrators of the system, including: school directors and field supervisors who are to play key instructional leadership roles in education; district level personnel who will be separated into and trained either for administrative or technical-pedagogical support functions; and central ministry personnel, whose orientation will be toward overall system management, most particularly in the areas of research and planning, policy and program formulation, information and financial management, facilities construction and maintenance, materials' production and distribution, and ongoing in-service training for professional and technical personnel.

Project activities will be oriented to improving the efficiency and quality of system operations at each level as well as to dealing directly with the inequalities between rural and urban education. This latter point will be addressed by providing equal administrative services on the district level, sorely needed instructional and transportation

facilities for rural supervision, specialized development programs for the upgrading of skills required to work effectively with the instructional needs of rural teachers and children, and specific research and pilot testing related to future programs in rural education. As described in detail below, the activities of the Project will: (i) establish nine District Educational Development Centers for the direct provision of key administrative and instructional support services to teachers and children; (ii) support the institutionalization of Professional Development Programs for personnel at all levels in educational administration; (iii) develop and implement broad-based systems for Planning, Information and Financial Management; (iv) cover the costs of Research and Evaluation activities in selective areas of the educational system, as well as help create an ongoing capacity in the administrative structure for such activities; (v) create an ongoing capacity for the development and production of Textbooks, other Instructional Materials, and Administrative publications; and (vi) strengthen the capacity of the Ministry to coordinate and control the design and supervision of Educational Facilities construction and maintenance.

3. Location and Size of the Project

As mentioned above, project activities will be carried out on three levels of the system: national, district, and local. In contrast to the description of activities in the Intensive Review Request (IRR), it is now proposed to implement the reform project in all nine departments, rather than splitting district implementation into two loan phases. During the intensive review it was determined that the Ministry is institutionally and technically ready to implement the reform program on a national basis. Except for capital inputs into the Project, the Ministry felt that the personnel resources required to implement the program nationally were the same for partial implementation. Also, given the orientation of future programming in rural education it was decided that one Loan, with a four-year disbursement period, was more desirable than two loans spread over a longer period of time. By consolidating the entire reform activity into one four-year loan package, overall implementation of the program has been reduced by one year.

Time phasing is still contemplated for the establishment of the District Centers. As now contemplated, initial construction activities will be in those departments designated by the Ministry to receive priority assistance in rural education from USAID and other Agencies (see Section VII of the Sector Assessment). These departments are Cochabamba, Santa Cruz, Sucre, Oruro, and Potosí. During this initial implementation stage CRA also will organizationally prepare the remaining four departments (Beni, La Paz, Pando and Tarija)

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for the reform, by working with the administrative people in the establishment of SIDA and with the District Directors in the formulation of the instructional support units to be established in the Centers.

The size of the Loan has been increased to \$9.65 million, the proposed Grant-funded project is \$1.5 million. There has been a concomitant increase in the GOB and community contribution to the Project now totalling \$5.4 million. The expansion in the size of the Project (from \$8.3 million to \$16.6 million) is due to (1) the enlarged geographical scope of reform implementation, (2) an increased emphasis on the Research and Analysis component of the Project, and (3) revised cost estimates.

As explained above, implementation of the reform to district and local levels has been expanded to include all nine Departments, which has implied related increases in construction, certain equipment and vehicles, and training. The purpose of enlarging the Research and Analysis component was to accelerate these activities now, particularly as necessary research relates to future programming in rural education. Revised cost estimates for the Project have been most notable for the production of textbooks and other materials, and for the price calculations on technical assistance. The increases in the latter category do not reflect a significant increase in the original amount of man-months proposed in the IRR, but rather a miscalculation of over-head and in-country costs of the required TA. A complete discussion of the size and financing of the Project is contained in Section III. E of the paper and its respective annexes.

B. Major Project Elements

The Project is best described, categorically, according to the functional capabilities of educational administration which are being developed or strengthened as a result of project inputs.

1. District Educational Development Centers

The specific objective of this project activity is to develop and place on the district level a system of basic administrative services and instructional development support functions required for the proper servicing of all teachers and children in any one department. The mechanism to be utilized is the District Educational Development Center, which will house (a) an Integrated District Administration Service (SIDA); (b) Instructional Support Services (referred to as SAED) for rural and urban supervisors, school directors, and teachers; (c) the District Directors for urban and rural education; and (d) the District

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Consejo Técnico, composed of the two District Directors and the Head of SIDA operations (see Annex II. Exhibit E for an organizational chart of these Centers).

a. Integrated Administrative Services (SIDA)

The operations of SIDA combine into one management system previously separated administrative functions for urban and rural education. The functional areas, which will receive project support, are three: (a) finance (accounting, program budgeting, and purchasing); (b) personnel (in-service promotions, assisting services, and certificates for ratings); (c) general services (statistics, student services, and auxiliary services such as vehicle and school maintenance). In general SIDA will process all actions relating to teacher/student services, such as in-service promotions, sick leave and salary problems, social security, student scholarships and grade certifications, teacher licensing and transfers, implementation of the civil service law for all district personnel, payroll materials and payment disbursements, and personnel records. The district administration units will also make specific recommendations to the National Administration Office for school budgetary requirements and the hiring and placement of teachers. These functions have, heretofore, been conducted only on the national level.

b. Instructional Support Services (SAED)

Instructional development is the systematic process whereby instructional content, methods, and materials are planned, designed, produced, implemented, evaluated, and adapted as needs require. Whereas the process of instructional development has implications for all levels of educational administration, there are specific objectives and functional reasons for creating an instructional development capability on the district level. The instructional support services unit (SAED) in each district center is designed to serve two purposes: (1) be a focal point for inputs and outputs to and from the National level and the classroom for development of educational goals and programs and (2) provide the technical knowledge and instructional resources required by field supervisors, school directors, and teachers in curriculum adaptation and resolution of specialized problems in the teaching/learning process. The orientation of these units and staffing with instructional technologies will be tailored to the educational needs of each District. However the following core of functions will be required at each Center:

- (i) Program Planning and Evaluation: Provide staff assistance to the District Directors in setting educational objectives for the District; in collaboration with the Financial Management

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Department of SIDA prepare a program budget for use in managing local resources and for inclusion in the Ministry global program budget, compile and organize statistics and information required for local program management and needed by Central Ministry offices; perform continuous and ad-hoc evaluations on attainment of national and local educational objectives, and identify needs for specialized research as well as assist in special studies conducted by Central Ministry units.

- (ii) Curriculum: Assist supervisory/teaching personnel to adapt and supplement the core curriculum developed at the national level to meet local needs; develop special curriculum materials, training aid manuals, etc. required for specific local needs; carry out continual evaluations of curriculum impact on student achievement; respond to very localized problems regarding curriculum content as discovered through evaluations or supervisory reporting; provide inputs into other departments of the unit (in-service training and instruction media design) for the effective achievement of program implementation, and act as a resource to the national curriculum office in the preparation of new materials and modifications of existing ones.
- (iii) Instructional Media Design: In coordination with the curriculum and in-service training offices, design and construct training aids for curriculum-interpretation training exercises for teachers, design and construct audio visual materials for classroom use; maintain and administer the rotation of training aids and other audio visual materials and equipment.
- (iv) In-Service Training: Develop, conduct, and evaluate in-service training programs for teachers for: interpretation of new and/or adapted curriculum, introduction of new teaching methods, and special teaching problems. In coordination with Normal Schools, it will provide courses required for the updating of teacher certifications. Over the longer run it is anticipated that this office will be utilized by the national level and the Training Institutes for Administrators as a funnel for in-service training of District Personnel.

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- (v) Counselling and Orientation: Assist supervisory/technical personnel to develop and conduct career counselling and orientation programs, act as a resource on special educational problems (slow learners, retarded, psychological problems, etc.) coordinate with other departments as required by these problems, and prepare materials for counselling parents on local and national educational objectives. This office will also promote a wide variety of student activities including clubs, assemblies, social events, inter and intramural recreational programs and sports which involve both students and parents.
- (vi) Non-Formal Education: During the initial stages of the Project the focus will be on inventories of non-formal and non-traditional education activities already underway and on defining research and procedures needed to design integrated pilot-programs. This immediate objective will be to understand what expertise and tested programs exist which can be utilized by the Ministries of Education, Agriculture, Health and National Community Development Service and other government agencies in both formal (degree) and non-formal, technically-oriented education and skill training programs. However, it is also anticipated that center facilities will be a community resource, utilized for non-formal educational activities conducted by other GOB agencies and private businesses. This department would administer the coordination required for the sharing of these resources.

It should be emphasized that the centers are designed with a flexibility factor regarding both the content and methods of instructional support. For instance, additional functional areas such as indigenous education or education for the blind may be added to the Instructional Support Services unit, as dictated by special educational needs. Also, the possible alternative methods of instructional support are many, including the use of mobile units for teacher training and/or specialized laboratories for teaching children reading, science, and math skills. These, as well as other methods, will be elaborated and tested during the initial period of project implementation.

c. District Directors and the Consejo Técnico

The responsibilities of the District Directors lie in four major areas: overall management of the Instructional Support Services unit, including the initial development of this unit as well as the hiring, supervision, and evaluation of its personnel, and the identification of training needs; management of field supervisors; coordination with the head of SIDA in the Consejo Técnico, particularly as it relates to program budgeting, overall personnel decisions for the entire district level, and information management; and coordinate with the National Director General's Office regarding the submission of major educational programs to the national level and the negotiation of financial commitments for the district.

d. Use of Project Funds

To efficiently house and promote the above activities, Project monies will finance the construction and equipping of nine District Centers containing: offices and other basic services for the District Directors, SIDA personnel, instructional technologists, and supervisors; teacher training facilities; a production and reproduction center for instructional materials; conference rooms and book/film libraries, audio visual equipment; school and center maintenance facilities; and a warehouse for distribution and/or rotation of resource materials to schools. A functional schematic drawing of this center is shown in Annex IV. Exhibit C. The engineering details of this construction are discussed in Section III. D of this paper.

As stated in the engineering analysis, the exact size of each center is not yet determined and in fact will vary in accordance with the service functions of each as well as the number of personnel a given district population will require. CRA has completed an extensive study which specifically defines the geographical areas to be served by each center. As viewed, these divisions may cross department boundaries in those cases where outlying areas can be more easily serviced by a Center in a different department capital. Factors such as accessibility and socio/cultural differences and similarities of student populations have been taken into account for selection of district areas. Based on this study the exact number of personnel required by the Centers is being determined. Based on the initial results of this study it is anticipated that no more than the nine centers proposed here will be required for full coverage of the reform.

Besides construction and equipment of the District Centers, other activities requiring project financing are TA^{8/} and training for district personnel, the purchasing of 41 carry-all, jeep, and truck-type vehicles for district center and national level operations (roughly 4 per Center and 5 for the national level), and the establishment of a revolving loan fund for the purchase of motorcycles by field supervisors. Technical assistance and training activities are best described below, according to the areas of: administrative services and personnel, and instructional development services and technologists.

The establishment and organization of SIDA offices has begun and will continue during the life of the Project. by CRA. The Bolivian Institute for Public Administration (ISAP) has started, in coordination with CRA, training programs for SIDA personnel, as well as for people in the central administration unit on the national level which backstops the SIDA units. It is anticipated that ISAP will continue this training for at least the first three years of the Project, until the Ministry of Education will have developed the capability for such pre-service and in-service training of Administrators (see Section 2 below). Project monies will cover the costs of publishing manuals, student per diem, travel and ISAP expenses.

Both long-term and short-term technical assistance will be provided to establish the Instructional Support Service units in each of the District Centers. Areas of expertise required will primarily be in organization and management to: define the structure and special functional needs of each Center, technically define personnel requirements, make recommendations of personnel to fill these positions in instructional technology, and construct a training plan for the instructional technologists. This particular TA will be augmented by short-term assistance in community education, student guidance services, and curriculum and materials development for the purposes of defining functional capability and equipment requirements for this unit, as well as of developing and conducting some in-country job training for these personnel. It is anticipated that this technical assistance will work directly with the Director General's Office on the national level through the specialized offices such as curriculum and planning, and with the District Directors. Short-term US and third country observational training will be provided for District Directors.

8/ Technical Assistance requirements for all project components is described in detail in Annex V. Exhibit B.

The training of instructional technologists will be covered through various mechanisms: short-term courses and seminars provided by technical assistance, in-country university training, and short-term foreign training. In the long-run it is planned to coordinate with Bolivian universities for the provision of in-service training programs in instructional technology.

2. Professional Development and Certification for Administrators

The objective of this project component is to create an ongoing capability in the Ministry to provide pre-service and in-service training programs for educational administrators. In the first instance orientation will be given to the in-service training of school directors, field supervisors, District Directors, and some District staff. Over the long-run there will be a capability to provide in-service training for all SIDA personnel, instructional technologists in general areas, and central ministry administrators. Programs also will be offered on a long-term basis to pre-service students. Training programs will be developed in accordance with the new job-task-function descriptions developed by CRA and be oriented to the implementation of certification standards for administrators.

In coordination with the Instituto Superior de Educación (ISE - a semi-autonomous unit of the Ministry), Project activities will establish two post-graduate Training Institutes for Administrators which will have the responsibility to design, implement, and evaluate all training programs in the areas outlined above. Training needs of the Institutes have been studied and it has been calculated that there are approximately 3,000 administrative personnel at various levels of the system requiring training. The goal is to give sufficient training over a five year period, which would be the equivalent of one-year of training for at least 70% of the total 3,000. It is planned that once these Institutes are in full operation, the Tarija Institute will have the capacity to provide the equivalent of 180 man-years of training per year, and Sucre will provide the equivalent of 350 man-years of training annually.

Courses will be given formally at their facilities, as well as on an ad-hoc basis in the field, responding to specialized or immediate needs. These institutions will offer: Basic Professional and Administrative Studies, such as psychology, the theory and methodology of curriculum, administrative theory, and system processes; and Specialized Studies such as finance management, school administration, instructional leadership, services administration, educational research, student activities, and personnel administration. The long-run goal is that, as these Institutes develop and grow in experience, special-

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ized course offerings will be expanded to cover the post-graduate needs of all administrative professionals on the national, district and local levels.

Project monies will cover the costs of renovation, construction, and equipping of new building wings at the presently existing Normal School in Sucre and the Superior Institute for Rural Education (ISER) in Tarija (see Section III. D for Engineering Details). These additions will provide the required facilities for professors, curriculum planning, and formal course offerings of the Institutes.

Technical assistance will be provided for the purpose of providing during the first two years of the Project: development of course curricula, basic training for the professors of the Institutes, and (in coordination with the professors) initial ad-hoc training of school directors and field supervisors. This technical assistance component will involve one long-term grant financed advisor to assist in the organization of the administration and curricular offerings of the Institutes and approximately 33 man-months of Bolivia's and foreign short-term advisors in the areas of educational program and curriculum planning, techniques, and program evaluation, decision making theory, instructional leadership, personnel management, and school administration. It is also planned to bring a representative from CEMA (Center for Motivation and Advisory Services in Ecuador) to visit CRA and personnel connected with the Institutes during the initial implementation period of the Project. The purpose will be to introduce CEMA's approach in training to the reform program. Follow-up TA may be requested. Presently four staff members for the Institutes are completing graduate study in the U.S. in education administration. Additional staff members will receive short and long-term training abroad under loan funds in accordance with a staff development plan to be developed jointly by AID and the Ministry.

3. Planning and Evaluation

The specific objective of putting project resources into this area is to aid the Ministry's Planning Office to: (a) improve its overall planning and analysis capability; (b) identify needs for and conduct policy and financial research, and coordinate technical research; (c) assist in the preparation of project design and program budgets; (d) administer the Ministry's Management Information System; and (e) extend evaluation concepts and **practices** throughout the Ministry.

Whereas certain project inputs into planning are itemized in the sections below (i.e., information management, financial management, and research), this project element concentrates on the organization and management of the Planning Office to perform its overriding planning and evaluation function for educational administration. Approximately 14 man-months of foreign grant funded technical assistance will be provided to: (1) coordinate with TA groups in other

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specialized areas in elaborating the functional responsibilities of the Planning Office, as well as those of the Planning and Evaluation Offices on the district level; (2) clarify personnel requirements and develop a training program for the personnel of this office; and (3) assist the Director of Planning in overall office management and supervision. Some short-term foreign training for key planning personnel also will be covered with project monies. In response to the need for the ongoing evaluation of program activities, 32 man-months of short-term foreign TA will be provided over the four year disbursement period to design procedures for and train planning personnel in monitoring/auditing/evaluation techniques. The Project will also finance 36 man-months of grant-funded foreign expertise in rural education planning, with the purpose of coordinating various other TA and research efforts oriented to the development of rural education.

Other foreign technical assistance afforded to the Planning Office will be from UNESCO, UNICEF, Holland and Germany, each on a long-term basis. UNESCO will continue its present program and provide one man-year of expertise during 1975, oriented to the ongoing development of the National Education Plan. Holland, UNICEF, and Germany will provide approximately 36 man-months of assistance during 1975-1977 in the area of planning for rural education, and coordinate this planning activity with their proposed pilot projects in rural education in the departments of Sucre and Cochabamba. This particular TA will be coordinated closely with the project-funded advisor in rural education planning.

4. Research and Analysis

The objectives of this project element are to: (1) create an institutional capability at both national and district levels of the system for the use of research in both long-term program planning and shorter-term instructional development activities; and (2) conduct short-term research on discrete topics required for program development in priority areas, most notably in rural education.

The orientation of this activity is to build an institutional capability in the Ministry through the design and execution of actual research studies identified now as important for management **efficiency** and future programming. AID Loan and grant funds will provide: (1) technical assistance for research design and study management, and the development of an inventory of competent Bolivian professional resources to carry out education related research; and (2) the financing of certain actual research costs.

An overall plan for research, including a list of study topics, will be required as a part of the Project Implementation and Evaluation Plan which is a Condition Precedent to Initial Disbursement. It is anticipated that this plan will include a listing of study areas related to: (a) overall management efficiency, as related to the activities of this Loan; and (b) future programming in priority areas. Education research is expected to focus on activities which will:

a. Overall Management Efficiency

- (1) Study possible alternative sources of revenue for education and develop coordinated programs of public finance toward an expanded flow of resources to education.
- (2) Study and develop goals and a plan for an adequate teacher/pupil ratio, as related to the efficiency and content of instruction.
- (3) Study and make recommendations for revising "user fees" to defray a portion of total costs of instructional materials and textbooks.
- (4) Conduct a feasibility study of a radio communications network connecting district centers with local school levels.
- (5) Conduct a feasibility study of the use of mobile units for delivering scarce educational services and materials to local school units.
- (6) Explore alternatives in teaching methods, media, and instructional materials for greater cost-effectiveness in the delivery of educational opportunities.
- (7) Evaluate actual school finance requirements of the system, by type of students, type of education, etc., with the specific intent of evaluating the impact of user fees on the drop-out rate.

b. Future Programming Needs

- (8) Collect baseline data regarding actual student performance by grade, make recommendations for specification of instructional goals and a methodology and mechanism to measure student performance.

- (9) Study alternative curriculum design possibilities for the improved relevancy of primary school instruction, according to the major geographic areas of the country, with special emphasis given to the rural sector.
- (10) Conduct a pilot project for the testing of the bilingual approach to teaching Spanish as a foreign language, in conjunction with studying the effectiveness of language usage in the classroom.
- (11) Study in greater detail the specific causes of drop-out rates in Bolivian Education.
- (12) Analyze present activities in non-formal education and make recommendations for Ministry involvement.

One long-term foreign advisor, who will work in the Research Division of the Planning Office, will be provided to help identify research needs and coordinate all studies. Both Bolivian and short-term foreign technical expertise will be channeled, according to subject content of research, through the appropriate Ministry units, such as Planning, Curriculum, and Finance. As the District Centers begin to operate, research efforts will also be extended through them. Each office in the instructional support services unit will coordinate with their respective offices on the national level for localized research required in overall planning and program design.

5. Information Management

The objective of this project component is to facilitate the gathering, processing, analysis, and utilization of statistical information in a form that will best promote the productivity and efficiency of the educational system. For reasons illustrated below, this information-management function will be considered and developed in two distinct parts: the 'Administrative Data System', relating to the routine use of information; and the 'Planning Information Function' relating to the application of statistical information to the planning and evaluation processes of the education system.

As now planned, the organizational mechanism to be responsible for the development and coordination of both parts of the information management function will be a Ministerial Workgroup, under the responsibility of the Planning Office, consisting of the following elements: a representative of CRA; the Chief of the Ministry's Statistics Department, an electronic data processing expert from the GOB and required technical assistance.

Steps required for the development and implementation of the Administrative Data System are well underway. An extensive analysis of present data flows within the educational system, and preliminary, but quite detailed designs of a new system have been accomplished under the San Jose State Contract. The system, as now developed, is based on a central computerized information file, utilizing the new national data-processing capability that CENACO should have operational by mid 1975. Preliminary projections call for district level introduction into the system to be phased over a 3-year period. It should be noted that such introduction to the district level need not wait for the construction and operations of the district centers since SIDA (including their statistical personnel) are already working in Department Capitals.

In contrast to the above, the Planning Information Function has not entered a development stage - project activities will concentrate on the following basic steps: survey and analysis of the present availability and use of educational statistics for planning, development and application of initial computer programs based on existing data; definition of further basic information needed to extend the use of quantitative information in planning, reform of the Statistics office and the development of computer utilization. The purpose of this approach is to introduce the use of quantitative information into the planning function in a deliberate and productive manner.

Project monies will finance the costs of technical assistance, training, system equipment, and computer rental time. As now planned, it is anticipated that TA requirements will include long-term Bolivian technical assistance in computer programming and management, and long-term foreign assistance in information management and educational systems analysis. All training will be conducted in-country.

6. Financial Management

Resources under this project activity are directed at improving the quality and responsiveness of the budgetary process within the Ministry by designing and installing a program budgeting system in its Finance Office. Orientation in the development of this system will be towards: (a) improved resource allocations for educational priorities; (b) improved accounting and control procedures; (c) improved formulation and negotiation of education budgets within the Ministry, as well as the defense of the budget within the global budget process of the Government of Bolivia. As the system is implemented it is anticipated that improvements required in ancillary systems will be identified.

Project monies will finance the costs of technical assistance, training, and limited system equipment for the Finance Office of the Ministry. To the maximum extent possible Bolivian professionals experienced in program budgeting will be contracted to help in setting up the system. Long-term foreign assistance in the area of financial management will be provided, to work on both the national and district levels. All training required will be in-country with the exception of three month courses for 4 participants in the U.S.A. in conjunction with the Berkeley/AID grant for improving education financial management in developing countries.

This activity will be complemented by discrete research studies in educational finance (see Research and Analysis, Section 4 above). USAID also intends to further support the objectives of this project component through the negotiation of GOB commitments relating to increased budgetary allocations for investment and support costs, as well as to priority programming areas (see Conditions and Covenants, Section IV. H).

7. Curriculum and Instructional Materials

As discussed earlier in this paper and in the Sector Assessment the educational system faces a variety of questions regarding the content and methods of its instruction, including concerns with curriculum relevancy, the language of instruction, and the use of print (or the lack thereof) as a means of instruction. The specific objectives of this project element are to lay the institutional base for a continual "relevancy reform" of the substance of education and to promote the framework within which flexible instructional materials, geared to the individualized needs of regions and students, may be designed, produced and distributed. To achieve these objectives activities will be directed at four functional areas of the Ministry's Curriculum Laboratory. Activities are oriented to resolving key short-run concerns as well as to addressing longer-range problems.

a. Research and Curriculum Revision

First, as high-lighted in the Research and Analysis section above, specific research efforts will be devoted to studying the educational needs of each department. This research will be coordinated with Curriculum Laboratory personnel and will provide a direct input into the development of a **basic curricula for all grade**

levels, as well as provide guidelines for local adaptations of curriculum content.

b. Materials Design, Production, Distribution

Secondly, orientation will be given to materials design, production, and distribution. In the first instance, this will involve the costs of producing five textbooks and teachers' guides which are presently ready in the Spanish language. These texts, which were developed by the Ministry's Curriculum Laboratory, are for the following subjects and grades: Social Studies I, Reading II, Language Arts II, Mathematics II, and Science II^{2/}. To promote the individualization of instruction, more flexible teaching methods, and lower unit costs per student, these materials will be published in 32 page units (signatures) at each level. Initially, one complete set of these materials for every two students enrolled at the appropriate grade level will be distributed to rural schools. One set for every three students will be sent to every urban school as many of these units are on double or triple sessions. Considering that such materials will be serviceable for a minimum of four years, an annual "user fee" should help defray re-run and new edition production costs. Additional GOB budgetary contributions should assure the continued development and funding of this program.

It is anticipated that an initial run of 455,000 of these basic textbooks and 75,000 teacher's guides will be reproduced and distributed. These estimates have been based on a ten-year projection of instructional materials needs and an estimate of GOB resource capability to meet this demand. A cash flow analysis of materials needs is contained in Annex V. Exhibit D. Also, as a result of this analysis, the GOB has committed itself to the establishment of a permanent fund for instructional materials production and distribution, and it will allocate on an annual basis a sum equivalent to one dollar for each student enrolled in grades 1-8 in the previous school year. (See Conditions and Covenants, Section IV. H). Re-runs and second edition requirements will be determined as the program progresses and are expected to be financed by the GOB instructional material fund.

A second aspect to the materials design function is the design of instructional materials for the remaining primary grades (3-5), the three intermediate grades (6-8), and the four secondary grades (9-12). The design of these materials will follow the research discussed above and be oriented to the development of "basic curricula" for these grade levels. Project monies will provide technical assistance in the following areas: subject matter specialists in language arts, social studies, mathematics, and science; and specialists in the design of prototype and component instructional materials. It is anticipated that by the end of 1978, such basic curricula will have been developed through grade five.

^{2/} The textbooks were designed under an AID grant-financed project a summary of which is contained as a part of Annex V. Exhibit E.

A third aspect to this project component is the need to experiment with lower-cost materials, such as newspaper educational supplements, special educational materials distributed by international organizations, and radio programs supplemented by newsprint units. At present a local Bolivian newspaper, El Diario, is printing, with considerable success, a special educational supplement entitled "Nuevos Horizontes". The Ministry of Education has begun negotiations with El Diario for large overruns of these supplements, with special vocabularies in Aymara and Quechua. These supplements will be distributed to students in grades 4-8. To expand the potential use of lower-cost materials, loan funds will finance short-term observational training, in countries such as Colombia, and the initial costs of printing the lower-cost supplements.

The fourth and last aspect to the materials design and production function is the development of an in-house capability (on both the national and district levels) to produce some short-run instructional materials. During the Intensive Review of this Loan proposal it was determined that the printing of textbooks and teachers' guides, newspaper supplements, and other teaching units on newsprint or book paper, might be more effectively handled in the private sector.^{10/} However, given the basic printing machinery that the Ministry now has, as well as the instructional media design function to be developed in the District Centers, it has been determined that the system should be capable of handling the production of such materials as: administrative manuals, newsletters, teacher-education materials, instructional materials for pilot projects, learning games, posters and other short-run materials focused on a particular zone or region. Project monies will cover the costs of integrating the Ministry's present printing equipment into one functional unit, special materials production equipment for the District Centers, and specialized short-term TA for the overall modernization of the Ministry's printing capacity.

c. Language-Arts Program

Spanish is the official language of the country and one major educational goal is that the population be literate in the Spanish language. Linguists emphasize that a student who is literate in his native tongue learns a second language faster and more effectively. Based on this concept, project activities will lay the ground-work for the eventual development of a language-arts program in Bolivian education through pilot projects which test bilingual approaches in the educational process. The thrust of the pilot project is first to introduce Spanish at grade one as a second language, using

^{10/} A summary of this analysis is contained as a part of Annex V. Exhibit E.

the native tongue as the base language; and secondly to introduce bilingual subject-content textbooks and materials at grade two. These pilot projects will be run in controlled groups of approximately 100 schools each, in order to evaluate the effectiveness of the bilingual approach, and will be tested over a period of three years. Project monies will cover the costs of pilot project execution, including translation services and materials production, teacher training, and project evaluation. Loan-funded foreign TA in language-arts development will also be provided to the Curriculum Laboratory.

d. Non-Formal-Non-Traditional Education

The precise organizational focus for innovative work in this area has not been firmly fixed in the Ministry. It would appear, however, that there is a shared interest between the Office of Planning, the Curriculum Office and the Adult Education Division, in promoting innovative programs. The latter two are mainly interested in terms of content and delivery alternatives and the former in exploring methods and alternatives for lowering the marginal costs of extending educational coverage. As mentioned previously in the discussion of the District Centers an early task of the non-formal education unit at that level will be to conduct a survey of non-formal programs already underway. It is expected that both the Curriculum Office and the Planning Office will continue in the design and execution of the survey. Technical assistance and observational training will be used to support collaboration in this area and perhaps lay the basis for an eventual institutionalization of a capability to design non-formal programs.

8. Educational Facility Planning

The objective of this last activity is to integrate, under the Ministry of Education, a single unit with the responsibility of and capability to coordinate and control construction, conduct demand analyses, design and inspect facilities, and maintain educational physical facilities.

Short-term Project grant funds will finance technical assistance to help the Ministry: a) define legal and administrative authorities required for effective Ministry control over school construction, b) make an inventory of all schools and existing maintenance needs, and establish a maintenance plan; c) project demand for new physical facilities during the next ten years; d) coordinate with other entities regarding future school needs of the country; e) conduct on-the-job training in school design, construction and maintenance supervision; f) define and establish required facility

maintenance functions for the General Services Office in District Centers, and g) project its own and district staffing requirements during the next five years.

This grant-funded TA will be augmented by special TA by the UNESCO Center for School Construction in the Caribbean and Latin America (CONESCAL), which is located in Mexico City.

C. Summary of Project Inputs

To accomplish the objectives and activities described in the Section above, the Project will finance: (1) construction of District Centers and renovation and additional construction for two Training Institutes for Administrators; (2) vehicles and office, educational, and technical equipment for the Centers, Training Institutes, and for information and financial management systems; (3) technical assistance for research, specialized office organization and management, and information and financial systems development and implementation; (4) participant training for personnel affected by administrative reform activities; (5) publication costs of administrative and other training manuals, pilot project materials, new textbooks and teachers' guides, and lower-cost educational materials.

1. Construction/Renovation

The Project calls for construction of District Educational Development Centers in each of the nine Department Capitals in the country. The total cost of this construction, including engineering and contingency items, is \$4.56 million, of which the total amount will be covered by loan funds. Construction and renovation activities for the two Training Institutes for Administrators is estimated at \$255,000. They will also be supported with Loan financing.

The COB will provide all land required at construction sites, the total of which has been estimated at \$792,000 during the intensive review.

2. Equipment, Materials and Vehicles

Office and administrative equipment and materials, vehicles, media production and instructional support equipment, and other technical equipment are required for successful implementation of the Project. Total Project financing for this input is estimated at approximately US\$ 2,475,900, of which the Loan will finance US\$2,085,900.

3. Technical Assistance

The USAID and the Ministry of Education have identified the technical assistance required for the Administrative Reform Program and have made a preliminary estimate of that required to lay the basis for future programs in rural education. In addition to the technical assistance discussed under each project component, grant funds will cover the services of one long-term technician (36 man-months). The purpose of this consultant will be to work with CRA in overall implementation of the Reform and provide guidance and coordination of foreign technical assistance. The requirement detailed in Annex V. Exhibit B calls for a total of 248 man-months of long-term foreign advisors and approximately 211 man-months of short-term foreign advisors spread over the period 1975-1978. The total cost of this program element is estimated at close to \$2,187 million. The Ministry of Education has agreed to finance under the Loan all short-term foreign advisors (under 6 months), except those required initially in FY 1975, and all Bolivian advisors during the life of the Project for a total of US\$658,000.

AID grant funds will cover long-term personnel (Over 6 months) and, during FY 1975, some 6 short-term advisors which are critical to the momentum of the program and/or are needed to contribute to the FY 1975 rural education loan. In addition to the technical advisors financed under the AID Loan and Grant, the Ministry will receive long-term technical assistance from UNESCO, Holland and Germany with an estimated total value of \$450,000.

4. Participant Training

A total of \$328,700 has been included in the Loan for training in the U.S. and third-countries, and the Government of Bolivia has agreed to provide \$196,000 in additional budgetary resources other than salaries to provide \$196,000 in additional budgetary resources other than salaries to cover the costs of in-country training seminars, conferences, etc. About \$348,300 of Loan monies will help cover the costs of in-country training as well. Based on our present knowledge of the Ministry's training requirements we have tentatively earmarked \$200,000 of the Loan monies for long-term training abroad and \$100,000 for short-term training, observational travel, etc. The USAID will collaborate with the Ministry in preparation of a staff development plan -- a pre-condition to disbursements under the Loan for long-term training. Details on training activities, by project component, are contained in Annex V. Exhibit C.

AID grant financing for training will be limited and reserved for short-term training related to our rural education strategy.

5. Publications

Total publication costs for project activities is approximated at \$1,768,000. Based on the analysis of the requirements of an ongoing

textbook program, the Loan will finance \$932,000 for textbooks and teachers' guides, and pilot project materials. \$244,000 of the Loan will support lower-cost materials and administrative manuals. The total loan-funded portion by this input is \$1,032,000. Over the disbursement period of the Loan, the GOB and community contribution to a fund for materials publication will be approximately \$4,044,000, of which \$592,000 is being applied as part of the required 25% government contribution to this particular Loan. See Annex V. Exhibit D for details on this fund.

D. Anticipated Outputs and Evaluation Plan

1. Introduction

Evaluation activities will be concerned with the effect of project activities on two areas of the education system: (a) improved administrative outputs; and (b) impact of improved administration on education (teaching/learning process).

Taking the latter first, it is thought that this impact would be best measured by changes in student achievement levels. Unfortunately the education system does not now have concise information on present student achievement levels, nor does it have precise student evaluation procedures. Thus, in order to collect the necessary baseline data as well as to begin to establish standard procedures on student testing, the Research and Analysis project element (Section II. B. 4 of this paper) includes such a topic. At least 18 months will be needed to collect the baseline data and set-up evaluation procedures. A meaningful measurement of impact probably will not be possible until four years after the Project begins. Clearly, the impact of improved administration on the educational process is a long-range indicator of Project goal achievement, and in fact this indicator will be influenced by factors outside of the immediate activities of this Project, including inputs from future programs in education.

Returning to the more immediate level of project results, the higher level goal to which this Project will contribute is the creation of a more efficient and equitable public education system. The successful achievement of the project purpose will produce ways and means for accelerating the achievement of this overall goal. The major Project results which will serve as verifiable indicators that the Project's anticipated contribution to the overall goal has been realized are the following:

- identification of the causes of the drop-out problem and formulation of action programs aimed at eliminating the causes.
- identification of regional curriculum needs and development of a basic curriculum through grade five and of relevant curriculum adaptation materials responding to those needs.
- increased resource allocations for rural education in absolute and real terms and relative to allocations for urban education, to more nearly reflect the proportion, distribution and needs of the rural and urban populations.
- establishment and functioning of a decentralized administrative and instructional services to the teaching/learning process.
- School Directors, Field Supervisors, District Directors and other District Personnel, and Key Central Ministry personnel in planning, curriculum, financial and information management will be, after in-service training, working with new techniques and methods in instructional development and support, and in policy and program analysis and planning.

The above goal achievement indicators are made up of the series of specific Project outputs or conditions listed in the following sections, by which the progress of the Project will be evaluated. It should be noted that the anticipated completion dates are suggested as starting points at which change or progress should be denoted, but that continued progress will be shown in following years.

2. Outputs and Means of Verification

<u>O U T P U T</u>	<u>Anticipated Completion Dates</u>	<u>V E R I F I C A T I O N</u>
<u>District Centers</u>		<u>District Centers</u>
1. Rural and urban administration functions unified in each of nine district level Centers. ISAP training courses being conducted. More efficient and improved routine administration (for example, fewer delays in salary payments, transfers, and promotions).	6/30/76	1. Rural and urban administrative functions unified in each of nine district-level centers (SIDAs). Teacher groups confirm that there are fewer delays in salary payments, transfers, and other routine administrative matters.
	6/30/76	Determine with ISAP number of courses conducted and number of personnel that have been trained.
	6/30/75	
2. Decentralization to and staffing of instructional support units is completed as planned.	6/30/78	2. 100% of personnel have been assigned to District Centers according to Reform Plan staffing patterns.
3. District Centers are exercising decentralized functions and responsibilities established by the Reform, such that the Centers convey local views on educational policy, curriculum content and budget needs to national planners. District financial needs are expressed in same program budgeting format utilized on the national level.	12/31/78	3. A regular, routinized reporting system which conveys local views on educational policy, curriculum content and budget needs is operational between the district centers and the central Ministry office, which will be verified by an annual survey of this reporting system.
	12/31/75	Mission confirms district budgets are being prepared in proper format through annual evaluation process.

O U T P U T

Dates

V E R I F I C A T I O N

District Centers

District Centers

- | | | |
|--|-----------------|--|
| <p>4. Curriculum modifications which are introduced reflect local needs. Special materials and manuals designed to reflect local needs are produced and distributed.</p> | <p>6/30/78</p> | <p>4. Consultants, school directors, teachers, or others working at the school level confirm that curriculum has greater relevancy to local needs, particularly in rural areas.</p> |
| | <p>12/31/78</p> | <p>Data on enrollment shows retention rates continue to improve, perhaps at an accelerating rate.</p> |
| | <p>6/30/78</p> | <p>Availability of teaching aids and materials reflecting local conditions are available in greater supply in the schools.</p> |
| <p>5. District supervisors increase the number of visits to schools, particularly in rural areas, and offer more technical pedagogical advice.</p> | <p>6/30/77</p> | <p>5. Consultants and annual evaluation procedures confirm that field supervisors are training school Directors through seminars and are making more frequent field visits to school Directors on matters on pedagogical leadership.</p> |
| <p>6. Training and consultation provided for school Directors at District Centers (or by Centers in outlying areas) at an increasing rate.</p> | <p>12/31/78</p> | <p>6. Determine number of school Directors in each district who have received training and/or consultation at district Centers or in the field by Center personnel during period 1974-75.</p> |
| <p>7. Develop career counselling and orientation programs for students. Train school Directors and teachers to provide guidance services and student activity programs.</p> | <p>12/31/77</p> | <p>7. Review number and kind of local level guidance and student activity programs in operation.</p> |
| <p>8. Conduct research on the need for, and assistance to non-formal educational programs in each district. Increase the utilization of existing educational resources in the district to support non-formal programs as needed.</p> | <p>12/31/76</p> | <p>8. Review reports on non-formal education and check plans for utilizing educational resources to improve or expand such programs.</p> |

OUTPUT

VERIFICATION

District Centers

Dates

District Centers

- 9. Teacher performance improves as a result of increased technical backstopping of school directors, field supervisors, and eventually Centers. 12/31/76
- 10. 554 school directors, supervisors, and Center resource personnel trained. 12/31/78

- 9. Teacher performance evaluations reviewed by District Centers for higher level of achievement.
Results of a national survey conducted on an annual basis, of attitudes of teachers and administration.
- 10. Annual evaluation procedures and review of training record.

Professional Development

Professional Development

- 1. Training programs for school administrators and field supervisors designed and prepared for implementation. 12/31/75
- 2. Upon completion of construction the Institutes begin to operate at full capacity: (a) the Institute in Sucre is providing 350 man-years of training annually; (b) the Institute in Tarija is providing 180 man-years of training per year. 12/31/76
- 3. Seventy percent of school administrators and field supervisors have received the equivalent of one-year of training over a period of five years. 12/31/79

- 1. Consultant report by December 31, 1975, illustrating that courses for school Directors and field supervisors are ready.
- 2. Check Training Institute records to verify that this amount of training is being accomplished.
- 3. Confirm that initial specialized training of school Directors and field supervisors begins in early 1975. Check training institutes records to confirm that 70% of personnel in those categories have received at least one-year of training by end of 1979.

OUTPUT

VERIFICATION

Professional Development

Dates

Professional Development

4. Training courses at the Institutes for SIDA personnel and central Ministry personnel designed and prepared for implementation.

12/31/76

4. Confirm that courses are prepared for SIDA and central Ministry personnel.

5. Training courses offered by the Institutes to at least 10% of SIDA and Central Ministry personnel.

12/31/77

5. Determine from Training Institutes the number of courses offered and the number of persons attending these courses. Coordinate results with those of ISAP courses for SIDA personnel.

6. A system and staged implementation plan for position certifications and salary incentives developed and adopted by the Ministry.

12/31/75

6. Mission review of this system by end of 1975, with annual reviews of implementation progress in subsequent years, through 1980.

7. 816 educational supervisory and administrative personnel trained to work at the district level.

12/31/78

7. Annual evaluation procedures and review of training record.

Planning and Evaluation

Planning and Evaluation

1. A National Education Plan having high level political endorsement accompanied by a viable financial implementation schedule.

12/31/75

1. Rigorous analysis of plan by consultants and Mission indicating that major issues are identified and analyzed and that the program prescribed is responsive to the problems and feasible in the Bolivian context.

2. Improved capacity for program/project formulation.

12/31/76

2. A portfolio of integrated well prepared preliminary projects susceptible to external financing prepared by the Educational Planning Project Office.

O U T P U T

Planning and Evaluation

- 3. Greater cost effectiveness of education programs, including a movement toward a reduced ratio of administrative and supervisory personnel to teaching staff. 12/31/77
- 4. More rational and equitable resource allocations. 12/31/76
- 5. Improved evaluation capability in the Planning Office that is disseminated to other offices. 6/30/77
- 6. MOE Planning Unit staffed by at least 60 trained professionals. 12/31/78
- 7. Planning Units in the District Centers each one staffed by at least 3 trained professionals. 12/31/78

V E R I F I C A T I O N S

Planning and Evaluation

- 3. Financial and budget data indicate greater efficiency in formal structure (e.g. number of graduates per investment units is increasing).

Progress toward the goal that by 1980 the ratio of administrative and supervisory personnel to teachers is reduced from 1-7 to 1-9.
- 4. Expenditures on rural vs. urban education and on instructional support vs. salary costs are increasing and moving toward the goals set forth in Annex I to the Loan Agreement: by 1980 rural education activities will be supported by 40% of the education budget and allocations for overall investment and support costs will have increased to 11% of the Ministry's budget.
- 5. Evidence of systematic use of evaluation techniques both within the Planning Office and elsewhere. Examples of involvement of Planning staff in aiding other divisions to plan and conduct evaluations.
- 6. Annual evaluation procedures and review of training record.
- 7. Annual evaluation procedures and review of training record.

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OUTPUTS

Research and Analysis

1. Research plan completed covering a period of at least the following two years, including a detailed description of projects to be undertaken, possibly the policy and/or program implications of each project, and the estimated quantity, type, and cost of resources needed to carry out each study. 6/30/75
2. Develop an increased capacity in the Ministry of Education to design and conduct research. 12/31/76

VERIFICATIONS

Research and Analysis

1. Review research plan. Confirm with MOE offices its appropriateness to the Ministry's management and technical problems.
2. Monitor training of research personnel and increasing Ministry budget for research.

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OUTPUTS

VERIFICATIONS

Research and Analysis

Dates

Research and Analysis

- 3. Carry out the research described in the research plan. Prepare summary reports of findings and their implications. Distribute these reports to key education managers and technicians.

12/31/77

- 4. An on-going coordinated research program and capability within the Planning Office and other key offices of the Ministry.

6/30/76

- 3. Review research findings. Confirm by discussion with managerial and technical personnel that research findings are useful for policy decisions.

- 4. An increased quantity and quality of research, development and evaluation projects in terms of content and relevancy, is underway.

Information Management

Information Management

- 1. A thorough assessment of the Ministry information requirements for management and planning, including recommendations on how best to collect the data needed, is completed.

12/31/75

- 1. Report received and reviewed by Mission together with examples of soft ware to be developed.

- 2. 50% of Statistical Office and related District-level staff trained in new program techniques.

12/31/76

- 2. Record of local and foreign training. Consultant's reports.

- 3. Pertinent statistical reports are prepared for managers and planners on a periodic basis. These reports should be far more complete and up to date than the reports now prepared, and should improve with time.

12/31/76

- 3. Discussions with high level Ministry officials and with the technical staff indicating that reliable, up to date statistical information is being provided on a regular basis. Consultants' reports and Mission's reviews should confirm gradual improvement of statistical reports.

O U T P U T S

Information Management

- 4. The information gathering system is fully implemented; data is collected, collated, analyzed, and stored.

Dates

12/31/77

- 5. 94 personnel trained in data collection, programming and terminal management.

12/31/78

Financial Management

- 1. Specification of program-budget structure-program level I, development of information-analysis system; preparation and testing of budgeting and expenditure-control, instruments, down to district level; and preparation of users manuals, down to district level.

12/31/75

- 2. 50% of related Ministry personnel trained in new system requirements.

6/30/76

- 3. Processing and analysis of 1976 budgeting information.

12/31/76

- 4. Revision of instruments, preparation and testing of instruments at school level and subsequent revision of manuals; preparation of users manuals at school levels; information-training sessions for district personnel.

12/31/76

V E R I F I C A T I O N

Information Management

- 4. Consultant reports that data collection system is working satisfactorily on a nationwide basis, that data is being collated, analyzed and stored and is readily retrievable.

- 5. Annual evaluation procedures and review of training record.

Financial Management

- 1. Consultant's report and copy of all programs and material submitted for Mission files.

- 2. Records of training programs.

- 3. Consultant's report and annual evaluation procedures.

- 4. Evidence that 10% of local school districts in each department are involved in budgeting their resources and financial requirements.

OUTPUTS

VERIFICATION

Financial Management

Financial Management

- 5. Development of program-budget structure-program level II; revision of information-analysis system. 6/30/77
- 6. Distribution of users manuals; budgeting and expenditure-control instruments down to school level, for fiscal year 1977; and processing and analysis of (a) budgeting information and (b) 1967 expenditure information completed for 20% of local school districts. 12/31/77
- 7. Revision of instruments and user manuals; national distribution; and school Directors trained in their use. 12/31/78
- 8. 40 MOE professional employees trained to carry out the implementation of the PBS. 12/31/78

- 5. Consultant's report and annual evaluation procedures.
- 6. Evidence of distribution and analysis confirmed by District SIDA offices; evidence that results of this preliminary study were used in District and National Education budget preparations.
- 7. Reports from each District Centers as to training of personnel and distribution of revised materials including an evaluation of their initial effectiveness.
- 8. Annual evaluation procedures and review of training record.

Instructional Materials

Instructional Materials

- 1. Complete initial survey of key educational needs in each District; survey will evaluate present educational program content and delivery systems in the context of basic skills required by the children to survive and prosper in their ambience and will make recommendations as necessary for curriculum revision. 12/31/76

- 1. Review report of survey. Later reviews should determine extent to which recommendations are being implemented.

O U T P U T S

V E R I F I C A T I O N

<u>Instructional Materials</u>	<u>Dates</u>	<u>Instructional Materials</u>
2. Increased capacity of the central media laboratory to design and produce low cost audio visual teaching aids.	12/31/75	2. Consultants report showing a series of quantified measures of 1974 outputs; targets for outputs during period 1974-1978; actual annual accomplishments; and adjustment of goals indicated by accomplishments.
3. Instructional media units established and operating at the district level.	12/31/78	3. Review of staffing patterns of district centers, CRA report of discussions with field supervisors and school Directors to confirm availability and utility of locally produced media aids. Confirm findings of above report with annual attitudinal survey of teachers.
4. Development and Adoption of Bolivian Instructional Materials Policy.	9/30/75	4. Mission review of Materials Policy.
5. Establishment of an Instructional Materials Fund with GOB contributions which will begin in 1975 and grow to the equivalent of \$1.00 per school child and \$0.70 per adult education student by 197	12/31/75	5. Mission review 1975 and subsequent MOE budgets for fund line item in budget.
6. Copies of five new subject-matter textbooks and teacher-guides printed and distributed to children in urban and rural areas according to Bolivian Textbook Policy.	12/31/75	6. Confirmation from Government that books have been printed and distributed. Occasional visits to distribution centers should confirm that excessive quantities of books are not being stored.

OUTPUTS

VERIFICATION

Instructional Materials

Dates

Instructional Materials

- | | | |
|---|-----------------|---|
| <p>7. Utilize and evaluate effectiveness of periodic educational supplements to newspapers with bilingual annexes as a supplementary instructional aid in grades 4-B.</p> | <p>12/31/75</p> | <p>7. Evaluation report submitted by National Curriculum Office.</p> |
| <p>8. Publish and distribute bilingual language arts texts on a pilot basis, and determine effectiveness of this approach to teaching Spanish.</p> | <p>12/31/77</p> | <p>8. Periodic reports of research project received and reviewed.</p> |

OUTPUTS

Instructional Materials

Dates

9. 45 MOE professionals trained to improve the capability of the MOE Curriculum Development Office. 12/31/78

Educational Facility Planning

1. Administrative and legal responsibilities of MOE for school planning construction and maintenance redefined. 6/30/75
2. Results of demand analysis for schools included in National Education Plan. 6/30/77
3. Staffing requirements of some autonomous MOE school facilities entity identified and met. 12/31/75
4. Maintenance budgets strengthened at national and district levels. 6/30/77
5. 40 employees trained in school design, construction, maintenance supervision, planning and research. 12/31/78

VERIFICATION

Instructional Materials

9. Annual evaluation procedures and review of training record.

Educational Facility Planning

1. Execution of legal administrative decrees and ministerial resolutions.
2. Review of National Education Plan.
3. Review of entity staffing pattern at National level; staff trained and on-board.
4. Review of national and district level budgets for increase in allocations and expenditures for school maintenance.
5. Annual evaluation procedures and review of training record.

3. Collection of Baseline Data

As illustrated above, methods of verification will vary, depending upon the specific activities being evaluated. In the same manner, the type of baseline data that will be required for evaluation of progress will vary. In many cases, such a baseline for measurement is already known, particularly as it relates to new activities being stimulated by Project inputs (e.g. the Ministry Planning Office does not now have a concise plan for educational research). This and other types of data, as they relate to very specific activities, will be compiled during the initial implementation period (see Required Assistance, Section 4 below).

However, in addition to evaluating the progress of specific project components, the Mission is interested in looking at certain major indicators, which would denote achievement of the Project purpose. After extensive deliberation the Project Committee decided that changes in personnel attitudes would be the most significant. The importance of this indicator cannot be over-rated. Based on information from both the Diagnostico and the CRA - San Jose State team, personnel, including teachers, (1) usually do not understand their own job functions; (2) lack motivation; and (3) do not have a feeling for their place or role in the system. Since the teacher is at the receiving end of the services, and perhaps the one most deeply affected, in terms of immediate understanding, by reform activities, it is believed that the attitude (or change thereof) of the teacher, in addition, to those of administrators will be paramount in evaluating the effect of the reform. In order to understand and evaluate this indicator, baseline data will be collected through a standardized questionnaire and interviews. The actual evaluation of change will be measured in a similar manner.

4. Required Assistance

As mentioned in the description of project elements above and as reflected in the technical assistance plan for the project (Annex V. Exhibit B), Loan funds will finance 14 man-months of short-term consultant services over a period of three years in Monitoring/Audit/Evaluation and management goal setting. Their major function will be to develop in detail a framework for this project's evaluation, define all baseline data requirements, develop mechanisms for the evaluation and as possible the measurement of change (such as personnel questionnaires), and develop a capability within the Ministry for project evaluation activities. CRA and the Planning Office will be their major Ministry counterparts in this endeavor.

SECTION III - PROJECT ANALYSIS

A. Organizational Analysis

1. The Executing Agency

The GOB executing agency for Loan activities is the Ministry of Education and Culture. Except for routine communications and coordination with the Ministry of Finance, which are required by all AID Loans, no other GOB agency will play an active role in Loan implementation.

The organizational structure of the Ministry of Education, which is illustrated in Annex II, Exhibit C, is generally described and discussed in Section III of the Sector Assessment. The organizational and administrative problems of the Ministry, the object of this Project, are detailed in previous sections of the paper. The following is a more detailed explanation of the Ministerial organs concerned with the administration of the Reform and most particularly with this Loan.

In addition to the project implementation unit - CRA - whose capability is analyzed in the Section below, the Minister of Education named during the early stages of loan development a high-level intra-Ministerial committee to oversee all aspects of the Reform and its financing by the AID Loan. This committee represents all major organs of the Ministry which in fact are major participants in project activities on the national level. They include: the CRA Director as committee coordinator, the Directors of Finance, Planning, Urban Education, Rural Education, and the Deputy Director of CRA. The main function of this committee is to facilitate CRA's capability to smoothly administer the Reform Program throughout the Ministry. It deals directly with the Minister on matters of utmost concern, and otherwise makes all basic decisions regarding the project. All of the representatives on this committee have worked closely with CRA and the USAID in the formulation of the proposed project and are in complete agreement with its objectives, the definition of project activities, and the financing requirements.

2. The Project Implementation Unit

The unit within the Ministry having most direct responsibility for Project implementation and coordination is CRA. As previously discussed this group, in conjunction with the San Jose State Team, has had direct responsibility for the study, design, and initial implementation

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of the Administrative Reform. In being chosen as the implementor of the Project, technical and organizational continuity is provided, assuring smooth operations. CRA's organizational relationships with the other parts of the Ministry have been established and operable for over two years.

During the Intensive Review the Mission's Financial Analysis and Review Office (FARS) conducted an analysis of CRA's management capability to carry out Project implementation responsibilities. Conclusions of this analysis are found in Annex II, Exhibit G. In summary, the FARS review determined that in order for CRA to effectively be the implementation unit for the Ministry it would have to increase its present staff of eight people to approximately thirty. The main reason for this increased staffing is that CRA's present staff is technically oriented to the Reform; they have not, up to this time, had experience with externally financed projects of this magnitude. However, based on their relationship with the San Jose contract, their accounting procedures and records for their present level of activity have been determined adequate. To meet their new responsibilities, additional expertise in the areas of accounting, bookkeeping, auditing, engineering, and purchasing will be required.^{1/}

No problems are foreseen in these additional positions being assigned to CRA. In reality, there are some 22 positions which were originally assigned to CRA when it was first established, but at least 12 of them during the past two years have been used by other organs in the Ministry. In his Letter of Loan Application to the USAID Mission, the Minister of Education confirmed his willingness to reassign and fill those positions to CRA. Additionally, AID will require that these positions will be filled with qualified personnel before any disbursements are made under the Loan.

Thirty-six man-months of grant-funded technical assistance (one full-time advisor) will be afforded CRA in the area of general Educational Administration. The purpose of this assistance is to continue on a much more limited basis, the type of consultant services begun under the San Jose State assistance.

3. Coordination with Other Entities Involved in Education

As outlined in Section I.A, the Ministry does not exercise direct control over all formal education activities. The so-called decentralized agencies (COMIBOL and YPFB) serve a combined population of

^{1/} See Annex II, Exhibit G for projected staffing requirements personnel of CRA.

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about 57,500 students and the private sector reaches approximately 124,000 students, on the primary and secondary level. Although in the past these other school systems have been considered superior to that of the Ministry of Education, more recent surveys have begun to doubt this premise. Up to this point, reform activities have not fully addressed the question of coordination between the Ministry of Education and these other entities. However, now with the growth in services and overall administrative capability anticipated as a result of this Project, the Ministry has gained an increased interest in at least "understanding" the educational impact of these other entities. Through the Ministry Office of Private and Decentralized Education it is planned to include the activities of these other entities in certain basic research regarding instructional standards, student achievement levels, and student evaluation procedures. Based on discussions with Ministry personnel, they see coordination, in the first instance, occurring on the level of the gathering and sharing of informational statistics. In the longer-run, the real standardization of instructional goals and student testing (on a regional basis) is seen possible. Also, as based on an analysis of need it is anticipated that the District Centers will provide basic instructional support services to supervisors and teachers working in these other school systems.

Except in the case of adult education programs, the Ministry is not actively involved in non-formal programs, nor is it fully aware of the present impact of the many non-formal programs which are administered by other public and private groups. As a first step in non-formal education, and as discussed in various parts of the Project Description in the above Section, the Ministry will make an inventory of and evaluate all non-formal and non-traditional activities conducted in the country. The purpose of this activity will be to: (1) understand what expertise and tested programs exist which could be utilized by the Ministry and other GOB agencies; (2) define its role as an executor as well as possible coordinator of agencies in the area of non-formal education; and (3) define needed research for the design of pilot programs in non-formal/non traditional instruction.

B. Economic Analysis

1. Least Cost Alternatives to Administrative Decentralization

The problems plaguing the existing administrative system and their negative implications for the effectiveness and efficiency of

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the educational process were discussed above in Section I.D. The proposed administrative reform, described in Section II above, was determined after extensive field work, thought and study to offer the best potential for removing those obstacles.

This determination was made initially by a team composed of Ministry of Education personnel (CRA) and advisors from San Jose State University, who studied the existing administrative problems for more than a year. The team findings and recommendations were thoroughly and critically reviewed by the Ministry of Education and USAID Mission prior to their acceptance as the basis for the proposed reform.

Considerable attention was given initially to ways of making the existing administrative system more effective and efficient. However, following extensive field visits by the administrative reform team, it was clear that if the administrative obstacles were to be removed, any reform would need to decentralize administration and integrate urban and rural educational services. Without decentralization the educational process could never be responsive to the needs of distant rural and urban children. Without integration rural schools would always receive a disproportionately small share of educational resources and the unnecessary and inefficient duplication of services would continue.

Three basic alternative decentralization plans (and many variations on those alternatives) were studied. The first alternative would have maintained basic administrative services on the district level and have broken instructional support units down into smaller areas, requiring district supervisors to move out of department capitals down to the nucleo school level. The supervisors would have been supplied with some basic instructional resources. While this alternative had several advantages over the proposed plan, it would have (1) reduced the contact between supervisors from different areas and between supervisors and curriculum and materials specialists who would still be on the national level; (2) made communications and the allocation of materials from higher levels more difficult; (3) required initially inordinately high investments in physical facilities to adequately establish the supervisors at the large number of locations involved.

In reviewing this alternative's financial implications, the Mission engineer estimated that the initial phase of locating

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117 supervisors in rural areas would have cost at least five million dollars. Transportation costs might have been somewhat lower, but other operational costs would have been considerably higher. Moreover, the difficulty of providing logistic support to maintain a satisfactory level of activities in more than 100 supervisory offices in rural areas was felt to be beyond the capability of the Ministry of Education.

A second basic alternative would have established three to five satellite offices of the Ministry in different regions of the country, placed according to major geographic/cultural groupings. In contrast to the alternative discussed above this pattern of decentralization would have concentrated great amounts of resources in only a few locations, well standing the chance of repeating several times over the central Ministry bureaucracy rather than a streamlined service-oriented organization. In this alternative pattern the question was never resolved as to the placement of field supervisors; the two possibilities available were both analyzed and determined to be inefficient. On the one hand, if supervisors lived and worked-out of the satellite offices, the distance between administrative and instructional services and actual school needs (particularly rural) would be very great. The supervisor would face tremendous problems of transportation and communication and it would be highly probable that the most important objective of the reform - getting relevant instructional support services to the local teachers - would not be accomplished without a large increase in resources. On the other hand, if supervisors had been placed in the field, away from the instructional support services of the center, all of the difficulties and expenses mentioned in the previous paragraph would be incurred.

Another major deterrent to establishing a few satellite offices was that it would have been imposed on the skeleton administrative structure that already exists on the district level - rural and urban district directors and administrative services. Interposing an additional intermediate administrative level would fatten the bureaucracy and produce obvious diseconomies. Rather than streamlining administrative procedures, this structure would have led to endless internal squabbling over lines of authority and responsibility according to organizational level and job. Eliminating the district offices was considered politically and bureaucratically impossible. As a result of these considerations, the proposal to set up three-five satellite offices was finally rejected as unproductive and inefficient.

The chosen alternative pattern, which establishes district-level educational development centers, is considered the most effective in organizational/educational terms and the most desirable in terms of financial inputs required for the anticipated output of services. The functions and benefits of the district-level center are described in Section II of this paper. The district level proves to be the most operational point to place a full set of instructional development resources which may be tapped by supervisors, school directors, and teachers. It eliminates the need for additional organizational levels and thus concentrates resources on an accessible level without spreading resources so thinly that their effectiveness is lost. Additionally, in terms of future programming, it is believed that this pattern of decentralization possesses flexibility in adjusting to and incorporating change. As the educational system expands, the district centers can incorporate the newly required supervisors and school directors at minimal cost as well as be a focal point for developing new curriculum and coordinating non-formal educational programs.

2. Evaluating the Benefits Against Costs

The value of the expected administrative benefits lies in their effect on the educational process and more specifically on the quality, quantity and efficiency with which the system produces "educated" Bolivians. For this reason we should be interested not so much in giving a value directly to the administrative outputs, but rather in doing so indirectly by determining the value of the improved and/or increased educational outputs which result from the expected administrative outputs. An effort to determine the educational benefits was undertaken and a summary of this analysis is contained in the next Section. The reader will note, however, that the difficulties involved in measuring the increased and improved output attributable to this program make a quantified projection of educational benefits impossible. For this reason we have attempted to quantify the value of the administrative outputs directly.

Our methodology was first to estimate the percentage of the total package of expected administrative services which is already being provided. (This estimate was made by experts in educational administration from San Jose State, the University of Indiana and the University of Pittsburgh.) The reciprocal, or the percentage of increased, improved, or new administrative services which go to making up the total package, is then attributable to the project.

The cost of the project and thus of producing the additional administrative outputs is a known amount. To estimate the value of the benefits (i.e. of the new services) we assumed that the value of the total package of services which will be achieved is equal to the Ministry's expenditure on them, i.e., its administrative budget for primary and secondary education less a few miscellaneous expenditures for services not included in the expected "package" of services. It should be noted that this is an extremely conservative valuation since it implies that the return on annual expenditures on educational administration, even under the post-project efficient conditions, will only equal the expenditures. It is further implied that the level and value of services now obtained from administrative expenditures must be far less than an efficient system would produce -- a fact which can hardly be refuted and which is central to the project's justification.

Raising the level of services to the point where their value equals the Ministry's expenditure on them was assumed to occur gradually over six years. The value of the additional services was calculated on the basis of the assumption noted above for 25 years. Discounting at 10% and 12%, the net present value (the discounted benefits less the discounted costs) was calculated at \$11.1 million and \$5.9 million respectively, and the benefit/cost ratios were estimated at 1.9 and 1.54 respectively. (A more thorough presentation of this analysis is presented in Annex III, Exhibit G.) It should be emphasized that the low valuation placed on total administrative outputs causes an undervaluation of the project's benefits. This undervaluation should compensate for any possible exaggeration by the education consultants of the level of the administrative benefits to be expected from the project, for under-achievement of the plan, or for benefits which should be attributed to small increases in per capita administrative expenditures if such increases occur.

A second methodology consisted of estimating what the cost of the current flow of administrative services would be under an efficient system. The "excess" amount being spent under the existing inefficient system was then assumed to be released under the reform and utilized to produce the new services which are anticipated. Again the benefit of these new services was assumed to only equal their cost. This methodology gave a benefit:cost ratio of 1.3. discounting at 10%, and of 1.13 discounting at 12%.

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3. Analysis of Economic Benefits Resulting from Expected Improvements in Education

The project description (Section II) described the activities which will be assisted by the proposed loan and explains how the resultant improvement in administration will strengthen education. More specifically the section describes how the improved administrative framework and decentralization will help make the overall system more responsive to varying needs of the rural areas and improve the effectiveness of instruction through better substantive supervision, administrative backstopping, and educational materials. The plan emphasizes the use of improved management rather than additional resources so that these improvements can be attained at the lowest possible cost.

It is anticipated that as a result of the project activities there will be both qualitative and quantitative improvements in the effectiveness of rural education. While simple logic and experience in other countries tell us that improving the inputs to the educational system - teachers, supervisors, school directors, educational materials, etc. - will raise the achievement level of the students, identifying and measuring that increased achievement requires the quantification of the situation as it exists. At the present time the educational system lacks a clear statement of the instructional goals sought at various educational levels and lacks the means to measure performance against such targets. For this reason, the project will provide the MINED with technical assistance and training to assist in the determination of reasonable education targets and a methodology and mechanisms to measure performance. Rapid implementation of this system to evaluate student's achievement will provide baseline data to evaluate the effectiveness of this and successive efforts to improve the quality of rural education.

One expected indirect indication of qualitative improvement which will not require this formal evaluation system will be a decrease in the drop-out rate in rural primary schools. Experience in other developing countries (e.g. Guatemala, Costa Rica) suggests that improving the quality of education causes children and their parents to give greater importance to school attendance and that this results in a decline in the delinquency and wastage rates. Although no adequate studies exist on the underlying causes of wastage in Bolivia, the GOB-Ohio State Team concluded that the low quality of education was clearly one of the most important explanatory factors.

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Under present conditions in Bolivia, dropping-out of school may in fact constitute highly rational economic behaviour for the child of a rural family. Relative to income, the costs of going to school are high. The direct costs include fees, expenditures for supplies, transportation and uniform. The indirect costs are the opportunity costs of the child's time and the labor that he can devote to farm work, particularly at planting and harvest time, which can be quite significant. The benefits the child receives from attending a school characterized by an urban-oriented curriculum, poor teachers, and virtually no instructional materials or supplies are minimal. It follows that the way to keep rural children in school is to lower the real costs to the child's family and/or raise the benefits by ensuring that the child receives an improved and more relevant education.

In addition to indicating qualitative improvement a reduction in the drop-out rate is itself one of the principal areas in which quantitative improvements can have important economic and financial implications. A simple analysis shows that despite the modest level of annual expenditure per student in Bolivia, the high wastage rate causes the cost per graduate to be extremely high. In rural areas, where the number of drop-outs is highest, 82.6% of those who begin first grade drop-out before the fifth grade. Using the progression of students between 1970-1971 to determine the current drop-out rate at each level, the following table shows the flow that is typical of any 1,000 rural children entering now primary education.

Table III - 1

Drop-out-Rates at the Primary Level in Rural Areas
(based on 1970-1971 comparisons)

	<u>Enrollment</u>	<u>Drop-outs</u>	<u>Continuing</u>	
			<u>Number</u>	<u>%</u>
1st grade	1,000	326	674	67.4
2nd grade	674	188	486	48.6
3rd grade	486	188	298	29.8
4th grade	298	124	174	17.4
5th grade	174			
	<u>2,632</u>			

Dividing the 2,632 student-years of education required to produce the 174 graduates of fifth grade (assuming all who enrolled

in fifth grade graduated) shows that the educational system provides slightly more than 15 student-years of education to produce each 5th grade graduate. At an average cost of \$33/student/year, the estimated cost of each 5th grade graduate in rural areas is about \$500 or three times the \$165 it would cost if there were no wastage. If one views the entire eight year primary cycle, only about 68 out of every 1,000 rural students who enroll in the first grade stay in the system until 8th grade. Approximately 34 student-years of education are "wasted" on drop-outs for every student that completes the eight year course, causing the cost/graduate to be about \$1,390. Drop-outs clearly greatly reduce the efficiency of the educational system.

It might be argued that the above estimates overstate the economic and financial losses because they implicitly attribute no value to the education of those who drop-out prior to completion of five of eight years of education. Although educators frequently do argue that less than five or six years of education has little sustained impact on the child's ability to read and write, to communicate verbally, to employ analytical tools such as mathematics, or to utilize other skills which will increase his economic productivity, yet in rural Bolivia as little as three years of low-quality schooling may have some positive effect on the child's social and cultural development. In an effort to reach a more reasonable (although still highly subjective) estimate of the cost of wastage in rural primary schools, let us assume that a child completing four years of education receives half of the benefits of a child completing five years, that a child completing three years receives one fourth the benefits of five years of education, and a child completing only one or two years receives none of the benefits. An average group of 1,000 rural students would then receive the following benefits from the primary educational system:

Number completing 1 year only	:	326		
" " 2 years only	:	188		
" " 3 years only	:	188	x .25	= 47
" " 4 years only	:	124	x .50	= 62
" " 5 years	:	<u>174</u>	x 1.0	= <u>174</u>
		1,000		283 graduate-equiv.

Given our assumptions about the relative value of 3, 4, and 5 years of education, the educational system can be said to produce

an output of 283 graduate-equivalents from each 1,000 rural students entering the system. Because of the high wastage rate in the first two grades, it takes 2,632 student-years of education to produce that output, or about 9.3 student-years of education to produce each graduate-equivalent. At a cost of \$33/rural student/year, the Government currently spends about \$307 on each graduate-equivalent. If wastage were eliminated it would take five student-years to produce each graduate. At a cost of \$33/student/year, the cost of a graduate would be reduced to \$165, about 46% less than at present. While these estimates are only rough approximations of the financial loss involved, they do suggest that reducing the drop-out rate can offer considerable increases in the efficiency of the educational system. If the quality of the education, and thus of the graduate's ability, is also being improved without additional investments, the increased value of the system's output are additive to the benefits accruing from reduced wastage. Clearly the returns per dollar of expenditure can be increased dramatically.

Given the lack of any data on how important the low quality of education is in explaining drop-out rates in rural Bolivia, and the Government's failure to date to adequately define and measure quality, any attempt to quantify the projected improvement in quality or the resulting decline in the rural drop-out rate would necessarily be arbitrary and unrealistic. We do believe that as a result of qualitative improvement some decline in the drop-out rate should be perceptible by the end of this project, and that the rate should decline even more rapidly thereafter if the present reform is followed by additional efforts to utilize the new administrative framework to improve the instructional process.

Another very important improvement in the quality of education expected from the project, which will be particularly difficult to identify and measure, has to do not with how much children learn but how they learn. Because of the almost total lack of printed materials, the learning process is now based entirely on the teacher - who is generally ill-equipped for the task. Provision of textbooks and other teaching materials will allow and encourage the child to develop self-teaching skills. These self-teaching skills are among the most important tools for the continued development of the individual, and thus play an important role in determining his future contribution to the society. Unfortunately, the learning of these skills is currently one of the least well achieved objectives of the formal educational process.

While the GOB rationale for decentralization is essentially to improve the efficiency and effectiveness of its existing education programs, the establishment of the new administrative infrastructure to deliver educational services in rural areas will facilitate the future implementation of new non-formal educational and community development activities. Research is planned under this Loan to determine how the physical and human resources which will be available in district centers and rural areas could be utilized to carry out these additional functions. The returns to the administrative reform will be further enhanced to the extent that the new systems can deliver these other needed rural development programs.

Important benefits for the educational system should also accrue from anticipated improvements in finance and budgeting. Increased efficiency and budgetary control should permit financial savings which can then be invested in improving the quality of education and expanding educational opportunity.

Finally, it should be expected that the equity of the educational system as between urban and rural areas should increase. As long as Bolivia administers urban and rural education separately, rural education will continue to get fewer resources and the poorest quality resources; urban areas would continue to get more funds per student, better physical facilities and maintenance, better teachers and administrators, more teaching materials, and a curriculum geared to urban needs. The integration of urban and rural education will not change this inequitable situation overnight and will never eliminate it completely, but it will put in motion a process through which a more equitable sharing of educational resources and of income will occur.

C. Socio-Cultural and Political Aspects of the Project

1. Socio-Cultural and Political Factors of the Reform

There are many social, cultural and political factors inextricably involved in the kind of administrative reform and change contemplated in this program. For instance, the institutional design of the education system must complement not contradict the traditional patterns of organization and administration developed over hundreds of years; new patterns of administrative behavior must be consistent with, yet challenging to, the present skills and capability of key administrative and supervisory personnel;

new technologies used for extending educational experiences to children and adults must be functionally appropriate and sensitive to the perceptual realities and experiences of those persons using them; and administrative decision-making processes must be compatible with both the tradition of centralized power historically characteristic to Bolivian education and to the national government's new emphasis on decentralizing some functions to district and local levels

CRA and the San Jose State Team have deliberately designed a reform program which takes into account the socio-cultural and political realities cited above. Even though, for example, it may be more efficient organizationally to have only one District Director of education, politically, it is not immediately feasible, and, in the opinion of the reform team, sociologically it could have had a negative effect, particularly on rural education. Thus every effort possible has been made to maintain the integrity and viability of the national rural education program and to give it the support and prestige it has heretofore lacked. Again, the tripartite administrative design at the district level illustrates a conscious effort to raise the decision making potential of rural education to a level equal to that of urban education, without diminishing the urban education sphere of influence. In this same manner, the national design for decentralization has been developed. Only those administrative functions germane and within the legal authorization of district and school directors have been assigned downward. Much in-service training and explanation has been given to "clear the way" toward smooth implementation and much more is planned for under the Project. On both the national and district level, decentralization both in design and concept has been fully endorsed by the rural and urban administrative leadership and teachers' unions.

In conclusion, it is believed that the impact of existing social, cultural, and political patterns on project implementation has been taken into consideration during the formulation of the program. The reform has been functionally designed to support and improve the existing Bolivian teaching/learning process and patterns of administrative behavior.

2. The Question of Language

Spanish is the official language of the country, nevertheless approximately two-thirds of the population do not speak Spanish

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at all or speaks it as a second language. Until recently, the Government has endorsed Spanish as the only "legal" language in the classroom. Though no analytical studies have been conducted to quantify the effectiveness (or ineffectiveness) of Spanish instruction in bi- and multi-lingual areas, the professional judgement of the curriculum laboratory and of consultants is that instruction solely in the Spanish language seriously impedes the teaching/learning process. However, these experts also emphasize that other factors, most particularly the lack of instructional materials, have a serious negative impact on the achievement of instructional goals.

The GOB has begun to support, as evidenced in the Diu-
nóstico and the forthcoming National Education Plan, a bilingual approach to education, which in essence is the method of "teaching Spanish as a foreign language." This method teaches basic reading, writing, and speaking skills in Spanish, with the use of the native language as a base. The concept behind this approach is that a student can best learn the "skills" of reading and writing first in his spoken tongue, with transference to the Spanish language being an easier and more rapid process. The USAID Mission has endorsed this approach to the classroom language problem through the financing of several pilot projects in bilingual education during 1975-78 under the Curriculum and Instructional Materials project component (see Section II. B. 7). These pilot projects are viewed as a mechanism both to better analyze the extent to which language is an educational problem in Bolivia (pilot testing in controlled groups), and to lay the basic groundwork for the development of a comprehensive language-arts program (through the conclusions of this pilot research).

Very closely related to this project activity is the publication of textbooks, another part of the Curriculum and Instructional Materials project component. As planned, the Loan will finance a run of 455,000 textbooks and accompanying teachers' guides (now designed) in the Spanish language, which will be distributed to both rural and urban areas (one book per two rural students and one book per three urban students). Even though bilingual education activities are being supported at the same time, the decision to distribute these textbooks on a nationwide basis was made for several reasons. First, at least a limited distribution of these texts to multi-lingual school areas was required for control purposes in the pilot projects. Second, except for the recent distribution of grade one texts financed by the A. I. D. grant projects, most of the indigenous language area

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are without any instructional materials. The distribution of this second run will provide continuity to methods of instructions. Third, it is known that even in areas where Spanish is not the predominant language, the teachers are Spanish-speaking (many times bilingual) and that the textbooks and guides offer them a methodology for instruction, which does not necessarily require strict dependence on the text. Experts claim that just the mere access to instructional materials (a systematic approach to reading and textbook utilization, coupled with in-service training in textbook utilization) leads to a general up-grading of the teacher's capacity. Fourth, it will be at least three years before bilingual educational concepts are tested and concomitant materials developed and distributed to all multi-lingual areas.

The Mission decision has been that, given the very positive factors relating to the use of some type of instructional materials in the classroom and given the lead time required to develop and test bilingual approaches in education, the distribution of loan financed textbooks should have the widest coverage possible. One hundred percent effectiveness in textbook utilization is not expected; it is not the goal of the exercise. The purpose is to continue the introduction of systematized instructional materials into the teaching/learning process, with the intent of adapting and changing these materials on the basis of research and testing of new concepts.

D. Engineering Analysis

1. General Description

The engineering and construction phase of the project comprises the planning, design and construction of nine District Educational Development Centers in each of the Department capitals of the country: Santa Cruz, Cochabamba, Chuquisaca, (Sucre), Potosí, Oruro, La Paz, Tarija, Beni and Pando (Cobija). Included also will be the construction of additional wings to existing facilities in Sucre and Tarija to house supervisor and administrative training institutes.

The proposed District Educational Development Centers will house the Directors of urban and rural education, the Integrated District Administration Service (SIDA), instructional support services and field supervisors, and include facilities

for conferences, limited instructional areas and a small auditorium. Also included will be storage and warehousing facilities, a vehicle maintenance shop and garage, parking and other auxiliary areas.

The two Training Institutes for Administrators are now being housed in the Administrative Institute for Urban Education (ISER) in Tarija and in the Normal School in Sucre. In both cases, these existing facilities are inadequate, and additional space will be provided within the existing physical plants. It is estimated that 500 m² of floor space will be required in each case.

The exact size of each of the nine centers are not yet determined and will vary in accordance with the service functions of each and the number of people it will house. Based upon the current student population of each Department, however, and taking into consideration projected growth trends, the floor-space requirements fall into three obvious groupings: La Paz, Santa Cruz and Cochabamba (large); Oruro, Sucre, Tarija and Potosí (medium); Beni and Pando (small). It is estimated that the total floorspace requirement for the first group will be 2,500 m², for the second 1900 m² and the smaller group 1,500 m². Some of these Centers will be new buildings in new sites, others will be additions and amplifications of existing facilities. In all cases, vertical rise will be limited to three floors to alleviate the need for elevators. Heating and air conditioning will be included as appropriate in the different centers.

The architectural treatment envisioned for all centers will utilize modern design concepts that will result in functional buildings reflecting the Bolivian ambiance through the use of local materials and innovative designs typical of the different regions of Bolivia. In structural terms, these buildings will be designed utilizing reinforced concrete frames, concrete floor slabs and lightweight roofing materials of local manufacture. A combination brick and glass frame panels will serve as curtain walls.

Loan funds will finance the cost of site preparation and construction, as well as the purchase and installation of all equipment and hardware that will be a permanent part of these centers. Also financed under the Loan will be selected furnishings not of Bolivia manufacture such as permanent audio-visual fixtures and equipment for the auditorium and classrooms and all architectural/engineering services. The Bolivian Govern-

ment will contribute the land and all furnishings and fixtures of local make or origin.

2. Engineering Implementation Plan

a. Site Selection

Some of the areas to be utilized for sites for the District Educational Development Centers are already owned by the Ministry of Education, others are the property of local municipalities and the rest will be acquired at a later date. Sites selected will be subject to a comparative analysis when more than one are available. Such general criteria as projected development plans of the different cities will be taken into consideration in site selection. The desirability of the site itself in terms of the availability of public utilities (electricity, water and sewerage), transportation services and accessibility will also be key factors in selection. The physical characteristics of the site such as topography to minimize grading and earthmoving costs, soils types and structural qualities to minimize the foundation cost, and the overall size, surrounding properties, suitability for future expansion etc. will also be considered in the selection.

Sites for the additions for the administrative institutes are already available within the existing facilities or in areas immediately adjacent that will meet all of these criteria.

Site selection will be subject to the approval of AID. Satisfactory evidence that the Ministry of Education has a free and clear title to all eleven project sites will be a condition precedent to disbursement for construction.

b. Design and Preparation of Contract Drawings

The Ministry of Education of the GOB has no architectural/engineering arm of its own, but depends for these services on the National Council for School Buildings (CONES).

CONES is a semi-autonomous agency responsible equally to the Ministries of Education and Urbanism and Housing, and is charged by decree with the design, construction, and maintenance of school buildings countrywide. It is also charged by law with the collection of a 1% education tax levied on the

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salaries of all Bolivian employees, public and private, and upon which it depends for its operating budget and construction and maintenance programs. At present its technical staff consists of eight architects and three engineers and includes several sub-professional and secretarial personnel. It has a small, inadequate field staff such as surveyors and topographers, and no right-of-way or land acquisition arm at all which considerably limits its effectiveness as an operational organization. It also lacks permanent experienced construction management personnel, but hires inspectors locally on a job basis.

Its current workload consists of 61 different projects scattered all over the country and in varying degrees of development estimated to cost approximately US\$3.9 million. An institutional analysis of CONES, including a brief history, functions, workload, and organization chart, and CONES's relationship with its two ministries, is shown in Annex IV, Exhibit A.

It is the judgement of the USAID engineering staff, based upon this analysis, a working association with CONEJ since its inception and upon conversations with its current staff, that it lacks the capacity to provide the engineering and construction management services for this project. CONES has a limited experience of three years concentrated in school design and lacks the personnel to undertake a project which would more than double its current workload.

Consequently, engineering and construction management services will be contracted from the private sector. The current thinking is to place several small engineering contracts in order to allow engineering firms based in the nine project cities to participate. This, however, does not rule out one single engineering contract for all work. There are available qualified Bolivian professionals fully capable of providing the needed A & E services for these buildings. Nevertheless, such services will be solicited from among eligible firms of 941 Code countries through advertising in the Commerce Business Daily. Selection will be in accordance with AID guidelines and will be subject to the written approval of AID.

These routine A & E services will be augmented with the input of a grant-financed educational architect with experience in educational services facility planning. This architect will collaborate with the consultant(s) especially

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during the conceptual stages of the design.

CONES will continue to play its normal advisory role to the Ministry of Education during the life of the project, and CRA will depend on CONES for normal housekeeping engineering support. No expansion of CONES' current staff is anticipated as a result of this project. It is anticipated that grant financed technical assistance and training will be provided the Ministry, and possibly other agencies such as CONES to strengthen school construction planning and execution capability and maintenance.

The consultant(s) selected will undertake site development and subsurface investigation, and will design the centers and develop contract drawings suitable for bidding. Conceptual drawings and preliminary layouts will be subject to the approval of the Ministry of Education and AID prior to the final preparation of the contract drawings. Final approval of the contract documents will be subject to the written approval of AID.

c. Public Bidding

Public bids will be solicited for construction of each of the centers individually, for all work in one package or in several packages as may be recommended by the consultants. The additions to the two Administrative Institutes may be covered in the contracts for the District Centers in their respective cities. The desirability of giving local small firms an opportunity to participate in the project will be weighed against efficiencies that may result from awarding one contract for all work in making such a recommendation. Contract(s) will be awarded to the lowest responsive bidder(s). In case of conflict with the Bolivian decree governing bidding procedures the criteria of the lowest responsive bidder shall govern.

The scattered, relatively unsophisticated isolated construction areas, and the relatively low monetary value of these contracts are not expected to attract U.S. or other 941 AID Area Code contractors. Nonetheless, a description of the project will be disseminated through the Commerce Business Daily at the time the loan agreement is signed in order to allow interested firms to contract the Bolivian agency handling procurement and arrange to receive prequalification information

Bids received will be publically opened and will be analyzed and evaluated by the consulting engineer(s). The

consultant will also make a recommendation as to the award. Copies of the bid tabulation sheets, the consultant's analysis and recommendation and the technical report of the Junta de Almonedas shall be submitted to AID for concurrence.

d. Construction

Construction services will be contracted by the Ministry of Education. It is anticipated that bidding will be limited to a list of pre-qualified contractors. The consulting engineer(s) contracted for the design will also carry out the construction inspection. He will be responsible for all related approvals of workmanship and materials, will approve change orders, additional work orders, monthly progress payments, and final inspection and acceptance of the project.

All construction contracts, and any subsequent modifications to such contracts will be subject to the written approval of AID.

e. Time provisions

The project as a whole, including non-construction components, is scheduled for completion within a four-year period from the time that the loan agreement is signed. Following is an estimated time schedule of the construction portion, that will be running parallel to many other factors of the loan project. It is also contemplated however, that the construction may be phased in such a way that the following timing may vary from Center to Center.

Select and contract Consultant(s) and finalize acquisition of land	6 months
Preliminary sketches and conceptual drawings	2 months
Final design and bidding documents	6 months
Receipt of bids, evaluation and award of construction contracts	4 months
Construction	<u>24 months</u>
TOTAL	42 months

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Construction should be completed at least six months before the completion of the project in order to allow the orderly furnishing and equipping of the nine centers.

f. Maintenance

Education facility maintenance is now the responsibility of CONES, but this responsibility is not well defined and consists entirely of corrective (as versus preventive) maintenance. Therefore, prior to disbursement for the construction of each center, a plan for maintaining that center will be submitted to A.I.D.

Pursuant to these plans, an on-the-site maintenance capability will be developed for each building which will include a maintenance shop with a small staff competent in routine electrical, mechanical, carpentry and plumbing repairs. These will be housed within the building and will have available a suitable stock of materials and spare parts. In addition to routine janitorial services, maintenance is expected to include some complicated mechanical and electrical work.

Long term preventive maintenance such as painting and servicing of air conditioning or heating system will also be developed through each center.

3. Technical Feasibility

It is considered that the project is technically feasible in all respects. No especially manufactured pieces of equipment will be required, and all materials are available either in Bolivia or in AID Area Code 941 countries. No exceptions to normal AID procurement rules are anticipated.

Experienced engineering and construction firms are available in Bolivia with considerable experience in building construction and adequate competitive response is anticipated in both engineering and construction areas.

No structural, foundations or architectural problems are anticipated which could not be readily resolved utilizing conventional design methods.

4. Construction Cost Estimates

The estimates of cost of the construction of the nine Centers and two additions to the Training Institutes were carefully developed from the latest available prices of materials and labor for buildings of comparable magnitude and complexity in the different areas.

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Records of the Camara Boliviana de Construcción, CONES, and USAID's experience in construction under recent loans were used to refine the estimate to the maximum extent possible.

The estimate includes an escalation allowance to compensate for the anticipated rise in the cost of materials and labor over the next two years, at which time it is anticipated that construction would commence. An escalation allowance of 30% per year was used due to the current trend in Bolivia. Also included in the construction cost estimate as a separate line-item is a 15% contingency item to cover unforeseen problems. This 15% is considered a mandatory minimum due to the preliminary nature of this estimate.

It must be pointed out however, that this estimate was developed for construction to commence in the early part of 1976. Minor deviations from this target date should not materially affect this cost estimate. A drastic change in this schedule, any changes in the Bolivian labor code or any unforeseen problems that may change the international material market such as the recent oil crisis, however, will most likely render this estimate obsolete.

The value of land was computed on the basis of current market prices of land that would meet the site selection criteria in the different project areas. In four areas (La Paz, Sucre, Tarija and Cochabamba), prices of actual possible sites are quoted. Although the actual sites may change, it is felt that these estimates fairly represent the contribution of the GOB.

The basis of the estimate of cost is shown in detail in Annex IV, Exhibit B. Shown below is a summary of the cost of the construction of the different project components.

CONSTRUCTION COST BREAKDOWN

In 1,000 U.S. Dollars

<u>Component</u>	<u>A I D Loan</u>			<u>Total</u>	<u>Land</u>	<u>Total</u>
	<u>Construction</u>	<u>Engr.</u>	<u>Conting</u>			
La Paz Center	450	50	75	575	150	725
Cochabamba Center	430	48	72	550	150	700
Santa Cruz Center	540	60	90	690	160	850
Oruro Center	345	38	57	440	64	504
Potosi Center	380	43	67	490	48	538
Tarija Center	380	43	57	490	48	538
Sucre Center	360	40	60	460	32	492
Beni Center	325	35	50	410	25	435
Pando Center	355	40	60	455	25	480
Sucre Admin. Inst.	95	10	15	120	45	165
Tarija Admin. Inst.	105	12	18	135	45	180
	<u>3,765</u>	<u>419</u>	<u>631</u>	<u>4,815</u>	<u>792</u>	<u>5,607</u>

5. Engineering Conclusions

From an engineering standpoint, this appears to be a feasible and sound project. The estimated cost of construction has been realistically developed based upon reliable data, and is considered reasonably firm. All material components and labor are to be procured off-the shelf and pose no special problem. Local engineers and contractors thoroughly experienced in this type and magnitude of construction are available. It is the judgement of the Capital Assistance Committee that the requirements of Section 611(a) (1) of the Foreign Assistance Act of 1961, as amended, have been met.

E. Financial Analysis

1. Summary Cost Estimate and Financial Plan

The total cost of the overall Project and the proposed sources of financing are presented by the following table.

	(US\$ 000)				
<u>Utilization of Project Funds</u>	<u>AID Loan</u>	<u>AID Grant</u>	<u>Local Contri- bution</u>	<u>Total</u>	<u>Other Donors</u>
1. District Centers	6,092	259	1,022	7,373	-
2. Professional Dev., Admin. Institutes	760	152	232	1,144	-
3. Planning & Evaluation	150	338	14	502	450
4. Research & Analysis	354	149	81	584	-
5. Information Management	587	152	130	869	-
6. Financial Management	158	123	67	348	-
7. Curriculum & Inst. Materials	1,451	107	470	2,028	-
8. Educational Facility Planning	98	21	14	133	-
9. Project Administration and Implementation	-	228	3,383	3,611	-
Total	9,650	1,529	5,413	16,592	450

Other donors' contribution is not included in the total costs and will represent an increment to the Project cost. A detailed financial plan and estimate of costs is contained in Annex V. Exhibit A.

2. Analysis of Foreign and Local Currency Components

The next table shows reasonably firm estimates of the component costs of the Project broken down between Foreign and Local Currency

(US\$ 000)

	<u>L o a n</u>		<u>G r a n t</u>		<u>Local Contribution</u>		<u>T o t a l Project</u>
	<u>Foreign Curr.</u>	<u>Local Curr.</u>	<u>Foreign Curr.</u>	<u>Local Curr.</u>	<u>Foreign Curr.</u>	<u>Local Curr.</u>	
District Centers	2,854	3,238	220	39	270	752	7,373
Professional Dev.	417	343	140	12	-	232	1,164
Planning & Evaluation	77	73	300	38	-	14	569
Research and Analysis	115	239	130	19	-	81	581
Information Management	430	157	140	12	-	120	869
Financial Management	112	46	115	8	-	67	348
Curriculum & Instruction Materials	222	1,267	100	7	-	470	2,028
Education Facility - Planning	57	41	19	2	-	14	133
Project Administration and Implementation	-	-	200	28	-	3,383	3,611
	4,284	5,366	1,364	165	270	5,143	16,592

Technical Assistance contributed by other donors (\$450,000) has not been included in the above table. This contribution will be made in foreign currency.

3. Summary of Project Inputs

The following table shows total costs according to major project inputs.

	<u>AID Loan</u>	<u>AID Grant</u>	<u>Local Contrib.</u>	<u>T o t a l</u>
1. Land and Construction	4,816	-	792	5,608
2. Equipment and Materials	1,693	-	240	1,933
3. Vehicles	392	-	150	542
4. Travel and Per Diem	132	-	-	132
5. Training Activities	677	-	198	875
6. Technical Assistance	658	1,529	65	2,252
7. Publications	1,176	-	592	1,768
8. Feasibility and Pilot Studies	106	-	-	106
9. Project Administration and Implementation	-	-	3,376	3,376
Total	9,650	1,529	5,413	16,592

4. Project Disbursements by Year

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

<u>Source</u>	<u>(US\$ 000)</u>				
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>
1. AID:					
a. Loan	3,002	2,672	2,479	1,497	9,650
b. Grant	886	468	144	31	1,529
2. Local Contributions					
a. GOB	2,200	1,514	850	382	4,946
b. Community	108	114	119	126	467
Total	6,196	4,768	3,592	2,036	16,592

5. Analysis of Local Contribution

The financial tables contain three elements falling under the rubric "counterpart" costs. The full cost of CRA operations, estimated at \$563,000 during the life of the project, is so included. The bringing of this unit up to full personnel strength of about 30 persons at the start of the project and the continued financial support of the unit will be covered by appropriate conditions precedent and covenants. This unit will be directed solely to the carrying out of the loan project, that will be its only function.

Concerning the second element there will be approximately 2153 people in the Ministry who will dedicate some percentage of their time to carrying out Project activities. To arrive at this percentage of personnel time estimated as essential to Project implementation it was determined that the Project required a streamlining of routine administrative functions in order to provide manpower which would then be devoted to policy/planning/analysis and instructional support functions of the Loan Project. At present the system spends most of its time on routine administration and minimal time in the latter two categories. As thoroughly described in the Project Description (Section II), improving and increasing the delivery

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of services related to program and policy planning and analysis-and-to instructional development and support, are the basic elements of the Project.

The analysis of personnel time essential to the Project is based on an intensive study conducted by the San Jose State-CRA Team which determines how various types of MOE personnel now spend their time and how they need to reallocate their time into other functional and more substantive areas in order to improve the educational process. The following table summarizes the analysis, indicating the percentage of additional time devoted to the substantive areas of policy/planning/analysis and instructional development. To be conservative, the estimate of time devoted to Project implementation begins after the completion of training and then carried through during the remaining period of Loan disbursement. This estimated percentage of time into new activities is then applied to basic salary levels for the estimate of GOB counterpart contribution. As shown below, this contribution totals approximately \$2.8 million and is applied in addition to CRA's expenses, to the line item of "Project Administration and Implementation" in the financial tables above.

Present Percentage of Time Spent by Key MOE
Administrative Personnel and Projected Increases
in % of Time Devoted to Policy/Planning/Analysis
and Instructional Support Activities as a
Percentage of Salary

(in U.S. dollars)

1 Position Classification	2 Approximate Staff to receive training	3 Present % time Distribution			4 % Time Distribution After Training			5 % increase in areas 2 - 3	6 Yearly Average Salary in U.S. Dollars	7 Years Service After Training to 1978	8 MOE Salary Contribut- able to New Job Dimensions After Training - \$(000)
		Rout- ine Admin- istrative	Policy/Planning/ Analysis	Instruc- tional Support	Rout- ine Admin- istration	Policy/Planning/ Analysis	Instruc- tional Support				
General Directorate	65	80	5	15	20	30	50	60	4,550	3	532.35
District Directors	18	90	5	5	65	15	20	25	3,900	3	52.65
District Center Special Staff	100	50	15	30	5	25	70	50	3,170	2	317.0
Field Supervisors	220	85	-	15	15	10	75	70	3,250	2	1,001.0
School Directors	1750	60	-	40	40	10	50	20	2,600	1	910.0
Universe Trained	2153										
Total GOB Contribution											\$2,813.0

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The third counterpart cost is that directly associated with the receiving of technical assistance. As a rough calculation we have estimated this at three percent of the technical assistance cost on a line item basis. The total amount is \$65,100. This conservative figure represents the operating costs associated with technical assistance such as office space, office machinery, desks and other similar expenses.

Other GOB contributions will cover such items as land, motorcycles and bicycles, publications, some in-country training costs furniture and equipment, bringing the total GOB contribution to \$4,945,100 to which should be added community contributions of \$467,000 for publications. The total local contribution, conservatively estimated, will be about 32.5% of total project cost. The GOB contribution is composed of \$912,000 in kind (land, etc.), \$2,813,000 in on-going budgeted cash and \$1,219,000 in new cash.

6. Project Operating Costs after Loan Disbursement

The major on-going cost after the Project is completed will be the continuing salary costs of the people who have been participating in the Project. This cannot be considered an incremental cost, however. Quite the contrary, these people will be rendering a far more effective administrative service and any increments in the form of salary upgrading or increased personnel costs should be matched by more efficient use of other resources. Conservatively, however, let us assume a direct increased salary cost arising from the Project of ten percent per year of one year's salary of the people involved, i.e., about \$300,000. The Project will provide vehicles valued at \$536,000. By the fourth year of the Project it can be expected that ten percent of the value of these vehicles will have to be spent on maintenance and another ten percent set aside for replacement. This totals \$107,200 per year. Maintenance of buildings constructed, over the ten years following the Project should not exceed one percent per annum or about \$8,000. In addition the on-going training costs should equal about \$100,000 yearly excluding salary costs. The total added costs to the Ministry of Education are thus estimated at well under \$600,000 per year or about 1% of the 1974 Ministry budget, clearly within the levels of natural growth.

7. GOR Education Budget Requirements

Previous Bolivian governments have spent through the education budget approximately 25% of total expenditures for education. Unfortunately, the end results have not met expectations. This loan is designed to improve the efficiency of the present administrative system with a view to maximizing the effectiveness of present budget allocations. The need for new teachers, for example, will be relatively limited, but the efficient utilization of the present human resources will generally be enhanced. The administrative reform project aims at rational and nonduplicative budget allocations. This end product will allow for more rational calls on limited Treasury resources to meet the objectives of rural education reform.

The recent improvement in central government revenues is a reflection of improved world prices for raw materials. Given the present tax structure any further increases in revenue must result from volume increases or higher tax rates, since it is unrealistic to count on continued rises in world prices. The tax elasticity of the present system is relatively low implying a revenue bottleneck relating to development needs, - especially since planned new programs for health, education and agriculture will need increased financial resources. The GOB has recognized this problem and is expected to make changes in the tax system to assure adequate resources; however, the rapidity with which such changes will be introduced is not clear. Thus, the Mission and the GOB have considered this issue of future budget implications of the programs planned for education.

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 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 10% per year in real terms, which we believe would be adequate to cover the real resource requirement of the rural education program. In addition, we expect the resource increment will also 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 real terms (1972 base) of the Treasury budget and of the education budget at a relative share of 20% which the Mission believes will be the minimum maintained by the GOB--especially since the GOB has for political reasons given priority to rural education to encourage the rural population's backing of the government.

TREASURY BUDGET PROJECTIONS
(In millions of pesos)

In 1972 Constant Terms

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

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

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. The relative share of education expenditures is expected to decline from 24% to 20% but this level in real terms is considered more than adequate to meet planned requirements. This increase in education budget resources will be approximately

US\$33 million over the next 6 years. The Mission estimates that the following added requirements will have to be met (during 1975 through 1980) out of this increment to assure success of the planned projects:

	(in US\$)
1. Instructional material - book fund	5,000,000
2. 50 New technical personnel, planning, research, finances, evaluation	1,000,000
3. Salary incentives	-
4. Higher operating costs	700,000
5. Training in-country	150,000
6. Construction (new)	2,000,000
7. Maintenance of new buildings	250,000
8. Salaries of additional 900 personnel to cover new graduates	5,700,000
9. Equipment - vehicles maintenance	150,000
10. Education equipment	<u>1,000,000</u>
T o t a l	15,800,000

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 incremental GOB budget requirements. Moreover, the reform will permit restructuring of budget, allowing some flexibility in the budget to meet salary and other contingencies.

8. Justification for use of AID Loan Terms

As an exporter of metals, petroleum and gas, Bolivia foreign exchange earnings should increase substantially in 1974. This situation, however, does not mean that Bolivia's need for concessional assistance is less. If the expected foreign exchange gain were distributed equally throughout the population, per capita income, which was about \$207 per year in 1973, would be increased by \$10 and would still be very much the lowest in South America.

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Moreover, increased foreign exchange earnings expected in 1974 will be needed to pay higher prices for imports, make income producing investments in the mining and petroleum sectors and increase reserves against the possibility of a return to a current account deficit position in 1975.

Given the probable temporary nature of Bolivia's higher foreign exchange earnings, it would not be in the country's development interests to finance a substantial part of its investment requirements 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.

The Project in question is primarily of social and long-term development concern, of undoubted economic benefit, but not immediately productive of a government return, and hence fully appropriate for concessional international financing at the terms indicated.

The Mission has reported fully on this development separately.

9. External Debt Service Capacity

The marked improvement in Bolivia's export earnings in the latter half of 1973 and the prospective improvement resulting from higher world prices for new major exports have expanded Bolivia's debt acquisition capacity, at least temporarily. However, the improvement in the terms-of-trade must be considered temporary in view of the probability that import prices will rise relatively sharply over the next year and given the sensitivity of mineral and agricultural exports to world price fluctuations. On the realistic assumption that Bolivia's import substitution and export diversification efforts will bear fruit only slowly, we estimate that Bolivia's debt accumulation capacity will continue to be hampered by potential world price fluctuations for Bolivia's major exports. Moreover, the relatively small petroleum reserve, assuming no further discoveries, augurs for only modest increases in the exportable surplus given the incremental growth in domestic consumption which can be expected as stronger industrialization efforts take place.

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The present favorable estimate of \$541 million for 1974 exports could be reduced to the \$500 million level in 1974 if mineral prices were to decline by an average 28% over the mid-April, 1974 highs. (Even if this decline were to occur, there would still be a weighted average increase of about 60% over the 1973 average price level). Indeed, a decline to \$500 million would not appear unlikely given present uncertainties. Further, the Mission has estimated the effect of a 30% decline in the world price of tin and zinc (using recent price quotations) and substantially smaller declines for other mineral, agriculture, petroleum, and gas exports. A reduction of \$118 million would be implied by these relatively marginal price adjustments.

The following table gives our longer range projections for exports.

Export Projections (FOB)

	<u>Favorable</u>	<u>Unfavorable</u>
1974	541	
1975	595	500
1976	655	530
1977	721	562
1978	793	596
1979	872	632
1980	959	670
		710

The assumptions governing the favorable estimate for 1975 are: a) no reduction in the average world prices for Bolivia's major exports from the estimated 1974 level; 2) export volume increases of 5% for petroleum/gas, 10% for agricultural commodities, and 10% for minerals; and 3) service payments increasing by about 2% which reduce the FOB value of exports. Thereafter, the Mission estimates that export growth will obtain an average annual 10% rate of increase.

Assumptions governing the unfavorable option for 1975 are: 1) an average decline of 28% from the recent highs of world mineral prices; 2) unchanged export volumes from the 1974 Mission estimate; 3) 2% increase in service payments and 4) maintenance of 1974 estimated world prices for petroleum and agricultural exports. Thereafter, a six percent growth is assumed.

Due to Bolivia's substantial accretion of short/medium term loans during 1972, interest and amortization payments are projected

by the Mission to increase in 1974 by 35% in comparison to the estimated 1973 level. Further accumulations of short/medium term would exacerbate this situation. The following tables are based on the level of existing debt and our best information on potential new borrowing under consideration.

Debt Service Projection (Favorable Option)

(In Millions of US\$)

	<u>Exports (FOB)*</u>	<u>Interest</u>	<u>Principal</u>	<u>Total</u>	<u>Ratio</u>
1974	541	27	57	84	16
1975	595	36	60	96	16
1976	655	38	64	102	16
1977	721	40	68	108	15
1978	793	41	74	115	15
1979	873	41	72	113	13
1980	959	40	68	108	11

Debt Service Projection (Unfavorable Option)

(In Millions of US\$)

	<u>Exports (FOB)*</u>	<u>Interest</u>	<u>Principal</u>	<u>Total</u>	<u>Ratio</u>
1974	500	27	57	84	17
1975	530	36	60	96	18
1976	562	38	64	102	18
1977	596	40	68	108	18
1978	632	41	74	115	18
1979	670	41	72	113	17
1980	710	40	68	108	15

Source: IMF and Mission estimates.

The real resource requirements to meet amortization and interest payments, assuming a real growth rate of 8% in 1974 and 5% thereafter, would remain within adequate margins.

Domestic Resource Requirement to
Meet External Debt Payments

	<u>GDP (Constant 1968 Pesos)</u>	<u>U.S. Dollars</u>	<u>Interest/ Principal</u>	<u>Ratio</u>
1974	13,984	685	84	12
1975	14,683	720	96	13
1976	15,417	756	102	13
1977	16,188	794	108	14
1978	16,997	833	115	14
1979	17,847	875	113	13
1980	18,739	919	108	12

* Converted at 20.40 pesos per dollar.

From the above the Mission concludes that there are reasonable prospects of repayment of this Loan given the future prospect of Bolivia in terms of growth and debt service capacity.

F. Environmental Analysis

1. General

The environmental implications resulting from activities financed through project funds are limited to the construction aspects, and no environmental implications at all are expected to result from other components of the Project. Inasmuch as loan funds will only finance the construction of nine District Educational Development Centers and two additions to existing facilities, the potential environmental disturbances are relatively easy to predict and will be addressed and tested in this analysis.

2. Assessment of Potential Environmental Impact

a. Introduction of Polluting Agents

Air pollution potential is limited to gases generated from heating fuels that may be used to heat these buildings, which potential is negligible in view of its magnitude. Water pollution potential will be limited to the disposal of sewerage generated by these buildings. Standard disposal measures in the form of septic tanks or city sewerage systems will be used to treat this aspect. Garbage, trash and derbies generated through the daily work cycle by these buildings will also be disposed of through conventional methods of burial or recycling.

b. Short and Long Term Effects

The short term environmental impact, essentially during the construction stages, is going to be limited in effect and of short duration. This type of disturbance is not novel, and most communities undergo similar disturbances on a continuous basis.

Long term effects that may adversely affect existing natural resources and ecological systems will be controlled. In all cases, conservation of existing land resources will be observed, and all existing plant life, foliage and ground contours will be preserved to the maximum extent possible. The architectural treatment of each building will be designed to be in harmony with existing surroundings.

Long term effects that may have adverse consequences on the nine locations in a cultural or social sense are non-existent.

3. Irreversible Commitment of Resources

Resources that will be irreversibly committed as a result of this Project will consist exclusively of relatively small plots

of land for the eleven building sites. Land thus committed will be in areas already being utilized for similar purposes, and which offer no particular agricultural potential because of their location and small surface area.

4. Alternatives

No viable alternative exists for the proposed construction. The nine District Educational Development Centers are considered an integral part of an overall administrative reform plan of the Educational System in Bolivia. The benefits these centers are expected to yield to the populace in cultural and social terms outweigh by far the very limited adverse effect that may be introduced into the environment as a result of their construction.

SECTION IV - LOAN ADMINISTRATION

A. Target Dates

1. Execution of the Loan Agreement

Substantial discussions and negotiations have taken place between the Ministry of Education and USAID during the Intensive Review of this Loan proposal, and it is believed that all major problems and questions have been resolved to the satisfaction of the concerned parties. The general GOB commitments listed in Section IV. H below have been discussed with the Minister of Education and his high level coordinating committee for the Loan, and they have been reviewed by the Minister of Finance. No difficulties are anticipated in bringing current discussions of specific expression of those commitments to an acceptable conclusion. Therefore no delays are foreseen in drafting and negotiating a loan agreement within two 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 three months following Loan-signing. Given the work of San Jose State and CRA during the development of this Loan proposal 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 A) to reassign and fill all positions in CRA which are required for smooth implementation of 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.

With the specialized grant-funded technical assistance planned to begin after September 1, 1974 (see Section G below), there should be no problems encountered by the Ministry of Education in meeting the additional conditions required prior to specific disbursements.

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 engineering and construction contracts will be paid through either the A.I.D. Letter of Commitment procedures, commercial letters of credit or direct disbursement procedures. Disbursements for the 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 CRA, the loan administration unit, and by the USAID/B Controller's Office. Approved vouchers will then be paid in a timely manner by the USAID/B Controller's Office.

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 requirement that 50% of liner revenues generated under the Loan must be paid for U.S. ships. Appropriate reports will be required from CRA 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 requests.

USAID has developed standard bid documents which will be used for all direct procurement from abroad. Specifications will be prepared by CRA and reviewed by USAID engineers and loan officers. 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 Mission Capital Development Office. The Committee will have the following responsibilities:

1. The overall responsibility for Project monitoring and implementation will be with the full-time direct hire Education Officer, who as Project Manager has been the Mission's most frequent contact with the Ministry of Education during the development of the Loan and Grant proposals.
2. The Missions' Engineering and Transportation Division (ETD) will review all procurement lists, plans and specifications, and will periodically inspect construction progress.
3. The Mission Controller will review disbursement/reimbursement requests for conformity with A.I.D. regulations and will ensure that adequate financial control methods are followed.
4. The Mission Program Office will coordinate with the Project Manager in implementation of the grant program, and will assist the Project Committee in the Annual Evaluation exercise.
5. The Mission Office of Capital Development (CAP) will have responsibility for ensuring that provisions of the A.I.D. Loan Agreement and Implementation Letters are met.

E. Reporting Requirements

CRA will be responsible for forwarding all reports to USAID/B. It will also be responsible for the proper presentation and review of all reports not prepared by them. 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 CRA -

CRA will submit annually full statements of all

fund accounts administered by them.

c. Quarterly Statements of Loan Transactions -

CRA will submit quarterly to USAID/B statements of all transactions administered by them under the Loan in a form acceptable to USAID/B.

d. Quarterly Shipping Reports -

CRA will submit to USAID/B quarterly shipping reports of all materials and equipment purchased under the letter of commitment procedures.

2. Quarterly Progress Reports, on the total Project, which will be submitted by the Head of CRA.

3. Monthly Progress Reports, which will be required from the consulting engineering firms and from the technical assistance advisors. The reports from the consulting engineering firms will be reviewed by the CRA engineers before submission to USAID/B.

4. Other Reports, which may be required as appropriate and which will be specified in implementation letters.

F. Evaluation Procedures

The Project will be evaluated annually, in joint sessions between the Ministry of Education, District level personnel, representative school directors, and USAID in order to measure progress, discuss problems, and determine future courses of action (as required) to achieve the objectives of the Project. The frame work for such an evaluation is outlined in Section II.D.

G. Coordination with Grant-Funded Program

As discussed in various parts of the paper, and as reflected in the financial plan under Section III. E of this paper, USAID is proposing in addition to the Loan a \$1, 530,000 grant proposal as a part of the total project. The activities financed by the grant, which are an integral part of project execution, include:
(1) up to 6 short-term consultants during FY 1975 whose specific expertise is relevant to initial implementation of the Loan;
(2) at least 10 long-term advisors (6 months and over) during the life of the Project for both the purposes of the reform as well as for

the provision of expertise required to lay the base for the multi-year effort in rural education; and (3) short-term participant training as it relates to USAID's longer-term interest in rural education. The A.I.D. Loan will finance all short-term consultants (under six months) during FY 1976-78, as well as short-term consultants not immediately required in FY 1975, and all foreign short-term and academic training required for the administrative reform.*

Of most direct concern to immediate project implementation activities are certain of the short-term consultants planned for FY 1975 and certain long-term consultants who also will begin work early in FY 1975. The experts in the short-term category, include:

- (1) Educational facility design expert to supervise the design for the District Centers and Training Institutes;
- (2) Systems analyst to schedule in detail the timing of inputs, such as construction, training, TA, consultant services and equipment, into the Centers and Training Institutes; and
- (3) Expertise in educational finance, financial management and program budgetting for immediate development of these systems, particularly as it relates to precise definition of personnel training needs.

The long-term technical assistance most pertinent to initial implementation activities are: (1) one general administrative expert to assist USAID and CRA in overall implementation of the reform and in coordination of foreign consultants; (2) organizational management experts and the District Centers to work with the Training Institutes; (3) an educational research specialist who, amongst other things, will assist in the development of research design plans; (4) one administrative expert for the Education Planning Office; (5) an expert in rural education planning; (6) an audio-lingual specialist to both assist in the final design of the bilingual pilot projects and to lay the basic groundwork for the development of a language-arts program; and (7) one information management expert.

* Consult Annex V, Exhibit B for details on all technical Assistance relating to the Project.

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After careful review of the entire technical assistance plan (Annex V, Exhibit B) with the CRA and San Jose State team members it was decided that the specialized expertise outlined above was essential for the detailed specification of certain project components, and thus was required for smooth and rapid implementation of activities. In utilizing grant funds for the financing of this expertise, it is anticipated that these consultants could begin arriving at early as September 1, 1974.

It is planned that the AID grant - financed advisor, attached to CRA, will be the managerial focal point for all grant and loan-financed TA. Further, the Mission plans to utilize to the extent possible the same contractor(s) for both loan and grant-financed TA. However, it still remains to be determined whether (i) a grantee or an AID contract would be most suitable for the grant-financed TA; and (ii) it would be feasible to have a single contractor or several contractors for the TA.

H. Additional Conditions and Covenants

1. Conditions Prior to Initial Disbursement

Prior to the first disbursement under the Loan, the Loan Agreement shall require in addition to the applicable standard conditions precedent:

- a. Submission of a Project Implementation and Evaluation Plan satisfactory to A.I.D., which will include among other things: (i) a global reform plan, describing all Ministry Offices to be affected by the Reform, the projected staffing patterns and projected budgetary allocations of these offices; (ii) a financial plan for the project approved by the Minister of Finance detailing the GOB contribution to the Project during the disbursement period of loan; (iii) a time-phased plan for implementation of each project element; and (iv) all required legal documentation for the orderly accomplishment of the purpose of the Loan, including Ministerial Resolutions covering: the reassignment to CRA of all positions originally designated to it, the structure and responsibilities of the new District Educational Development Center, and the use of bilingual materials in the classroom.

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- b. The appointment of all qualified personnel to CRA, in accordance with a staffing pattern agreed upon by Borrower and A.I.D., for the effective implementation of all Project activities.

2. Conditions Prior to Specific Disbursement

The Loan Agreement shall require:

- a. Prior to disbursement for the Construction of each Center and of each Institute CRA will submit: (i) evidence showing that the Ministry of Education has free and clear title to the construction site; (ii) a plan and detailed schedule for all construction work and satisfactory final plans, specifications, and bidding documents for that particular construction; and (iii) a maintenance plan for that Center or Institute.
- b. Prior to disbursement for specific research activities, CRA will submit to A.I.D. a detailed research plan covering the basic designs, timing, and personnel requirements for the study.
- c. Prior to disbursement for long-term foreign training, CRA will submit a staff development plan for all participants of this program, describing among other things the contractual relationships the Ministry will enter into with these individuals to assure their participation in Bolivian Education following training.
- d. Prior to disbursement for the procurement of vehicles under the Loan CRA will submit a plan for vehicle maintenance and replacement.

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- e. Prior to disbursement for the up-grading of the Ministry of Education's printing capability, CRA will submit (i) satisfactory evidence as to the reorganization of printing facilities within the Ministry (the plan for which is to be outlined in the Project and Implementation Plan); and (ii) a maintenance plan for the printing machinery.

3. Continuing Conditions

Except as AID may otherwise agree in writing, prior to the disbursement of additional Loan funds after March 1 of each year for any purposes except to pay salaries under existing contracts being financed by the Loan, the GOB will submit satisfactory evidence to AID that the necessary budgetary allocations required by the Project, and as approved in previous plans submitted to AID, have been made to the Ministry of Education budget.

4. Covenants

In addition to the standard covenants the Loan Agreement shall contain special covenants to the effect that:

- a. The Ministry of Education will support all operating costs of the District Centers during and after the disbursement period of the Loan, and will ensure that the budgetary allocations and the expenditure of funds for the Centers' operations, will be devoted to urban and rural programs so as to reflect relative needs of school enrollments represented by the urban and rural areas of the District.
- b. The Ministry of Education will increase during 1974-1980 the ratio of support costs to salary expenditures, with the intent of creating additional financial resources for investment and operational expenses related to: new programs in their priority areas; this Loan; and other externally financed programs in Education.
- c. The Ministry of Education will reduce during 1974-1980 the ratio of administrative/supervisory personnel to teaching staff, consistent with the objectives of the Reform;

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- d. The Ministry of Education will increase during 1974-1980 the allocation of resources in real terms to rural education, with the long-term goal of having education expenditures more accurately reflect the proportion, distribution, and needs of the urban and rural populations.
- e. The Ministry of Education will develop and implement a system for position certifications and salary incentives, such that the salary schedules for key educational administrators at the Central and District levels are competitive with those of similar job qualifications in the public sector.
- f. The Ministry of Education will establish, and begin contributions to in 1975, a special fund for publishing and distributing a variety of instructional materials for formal and non-formal educational activities. The amount of annual contributions to this fund should be, by 1976, the equivalent of the cost of one new textbook per student per year; and
- g. The Ministry of Education will develop and adopt by September 1975 an Instructional Materials Policy, to the satisfaction of A.I.D., which provides inter alia for a new materials distribution system which assures that any payment requirement with respect to such materials does not interfere with student access to such instructional materials.

The above commitments will be defined in greater specificity in Annex I to the Loan Agreement. USAID has been in discussions with the Ministry of Education in regard to the above covenants, and would expect Annex I to the Loan Agreement to reflect the following descriptions relating to covenants (b)-(f) above:

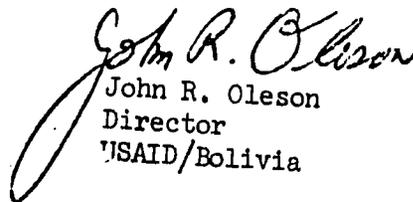
- a. Regarding (b) - develop a specific program within the area of financial administration where the major goal would be to devise ways and means of increasing the ratio of support costs to salary expenditures in real terms thus reducing the 1974 ratio of approximately 95% for salaries, 41% for transfers and 1% for investment and support costs towards the goal of 85% salaries, 4% transfers, and 11% investment and support costs, by 1980.

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- b. Regarding (c) - develop a plan for the systematic reduction of the ratio of administrative and supervisory personnel to teaching staff from the ratio existing in 1975 (expected to be approximately 1-7) to a ratio of 1-9 by 1980.
- c. Regarding (d) - increase the allocation of resources in real terms to rural education as compared to the urban sector with the long-term goal of making educational expenditures more accurately reflect the distribution of population between urban and rural areas. The rural/urban population distribution is approximately 70-30 at present. Approximately 33% of the education budget was allotted to rural education in 1973. This percentage should increase to approximately 40% by 1978.
- d. Regarding (e) - the system for position certifications and salary incentives will be implemented by stages during the period 1975-1980.
- e. Regarding (f) - the materials to be published will include, but not be limited to: newspaper supplements, pamphlets, charts, unit-text materials, and textbooks for the primary grades 1-8. By 1976, the amount of contributions to this annual budgetary item shall be equivalent to \$us. 1.00 for every school child and \$0.70 for every person enrolled in Adult Education courses during the previous school year. The fund shall be subjected to annual review as to the adequacy of the level of financing. Salaries and preparation costs shall not be chargeable to this fund. By 1980, this program should provide all primary school children and adult literacy students with at least 2 textbooks plus a variety of other instructional materials.

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

I, John R. Oleson, 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 to effectively maintain and utilize the capital assistance project: Educational Management and Instructional Development.


John R. Oleson
Director
USAID/Bolivia



MINISTERIO DE EDUCACION Y CULTURA
BOLIVIA

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ANNEX I Page 2 of 27
Exhibit B
Page 1 of 3

La Paz, 10 de mayo de 1974.

Al señor
Dr. JOHN R. OLESON
Director
USAID/Bolivia
Presente.

Distinguido señor Director:

Ref.: Solicitud de Asistencia Externa
para la Administración de la E-
ducación y el Desarrollo de la
Instrucción.

Durante el año pasado nos hemos estado comunicando, en forma amplia con usted y su personal, con referencia a nuestros planes para el Sector de la Educación en Bolivia. Hemos terminado un análisis amplio del Sector, que se describe en nuestro Diagnóstico de 16 volúmenes. En base a este análisis estamos ahora trabajando en un Plan Nacional de Educación de 5 años. Aunque se requiere una mayor investigación y análisis de los problemas específicos del área, hemos señalado tres áreas importantes que requieren de nuestra atención prioritaria: educación rural, educación técnica y reforma administrativa y financiera.

La primera de estas áreas de prioridad es considerada de importancia por el Gobierno de Bolivia en función de utilizar el sistema educacional en coordinación con otras actividades gubernamentales - muy especialmente aquellas relacionadas con la salud y la agricultura, en un esfuerzo amplio para incorporar a la población rural de tres millones a la economía nacional.

La segunda prioridad está también encarada utilizando el sistema educacional como un instrumento en la obtención de los objetivos de desarrollo nacional, específicamente en el área vocacional-técnico.

Aunque las actividades de reforma administrativa principiaron antes de la terminación del Diagnóstico, sus conclusiones confirmaron la necesidad de dicha reforma como una condición previa a todo mejoramiento cualitativo de largo alcance en el sistema. Es cada vez más evidente que si el Ministerio tiene que proporcionar servicios educacionales más amplios y de mejor calidad a la población boliviana, se requiere de una administración más eficiente del sistema educativo. Este énfasis en la eficiencia administrativa, incluyendo el proceso de desconcentrar ciertas actividades ministeriales, tiene su respaldo en la Ley Nacional de Organización Administrativa del Poder Ejecutivo, de septiembre de 1972, y el Plan Nacional de Reforma Administrativa de 1973-1977.

El Ministerio de Educación inició sus propias actividades de reforma en enero de 1972. Desde esa época el Consejo de Racionalización Administrativa



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(CRA), con la asistencia de la Universidad del Estado de San José, ha estudiado y proyectado la reforma administrativa del Ministerio de Educación. La reforma, que pone énfasis en la eficiencia administrativa, la eficacia de los costos y la desconcentración administrativa, está lista para ejecutarse en su integridad. Mediante esta carta solicitamos a AID los recursos financieros que se requieren para ayudar a ejecutar el programa. Las partes principales del proyecto de reforma administrativa son las siguientes:

1. La implementación de sistemas de base amplia para el Planeamiento, Información y Administración Financiera, que ha de requerir de asistencia técnica, adiestramiento y equipo técnico.
2. La creación de medios en todos los niveles Ministeriales para ejecutar las actividades de investigación y evaluación - y - la inmediata realización de estudios en áreas educacionales escogidas, relacionadas a programación futura en áreas de prioridad del Ministerio.
3. El establecimiento y equipamiento de nueve Centros Distritales de Desarrollo Educacional en cada Capital de Departamento, para la provisión de administración descentralizada y servicios de soporte en instrucción a supervisores, directores de escuela, profesores y alumnos.
4. La creación de medios en el Ministerio para la preparación, reproducción, distribución y utilización eficaz de libros de texto, guía para maestros y otros materiales de planes de estudio de menor costo.
5. La institucionalización de programas de desarrollo profesional para el personal en todos los niveles de la administración educativa.

Los principales insumos que requieren financiamiento son: construcción, equipo, asistencia técnica, adiestramiento y publicación de manuales de administración, libros de texto y guías para maestros. Se calcula que el costo total de este programa de reforma es de US\$ 13,300,000 que se desembolsará en un período de cuatro años. Estamos solicitando un Préstamo de la Agencia para el Desarrollo Internacional por US\$9,000,000, el Gobierno proporcionará US\$ 3,300,000, de los cuales por lo menos US\$ 1,600,000 representan una contribución financiera aparte del valor de los servicios de los empleados del Ministerio y de los bienes, instalaciones y equipos del Gobierno de Bolivia que serán destinados al programa. Estamos en condiciones de tomar aquellas medidas que sean necesarias para asegurar la exitosa implementación de los anteriores programas. Por ejemplo, asignaremos al CRA, la Unidad de Implementación del Préstamo en el Ministerio, todos los cargos originalmente señalados para él y aseguraremos que estos cargos estén llenados por el personal calificado a tiempo del primer desembolso del préstamo.



Además, con anterioridad a los desembolsos del préstamo, revisaremos con AID todos los planes para el desarrollo de una mayor capacidad funcional, provisión de personal y asignaciones presupuestarias para aquellas oficinas afectadas por el programa de reforma, como ser: Planeamiento, Finanzas, Educación Privada y Descentralizada, Plan de Estudios, Materiales de Reproducción y CONES.

A fin de sostener la eficiencia aumentada de la organización contemplada como resultado de las actividades del proyecto, así como también para dar un mayor énfasis en términos de potencial humano y recursos financieros a nuestras áreas de prioridad en educación, nosotros planeamos:

- (1) incrementar gradualmente durante 1974-1980 la proporción de costos de soporte para los gastos en salarios del Ministerio de Educación, con la intención de crear recursos financieros adicionales para inversión y gastos de operación relativos a: programas nuevos en nuestras áreas de prioridad; este Préstamo para el cual estamos solicitando financiamiento de AID, y otros programas en Educación financiados con fondos del exterior;
- (2) ajustar gradualmente durante 1974-1980 la relación del personal administrativo/supervisor a personal de enseñanza, de acuerdo con los objetivos de la Reforma;
- (3) aumentar la asignación de recursos en términos reales para la educación rural, con el objetivo a largo plazo de conseguir que los gastos en educación reflejen más exactamente la proporcionalidad entre áreas urbanas y rurales, en base al crecimiento de la población;
- (4) desarrollar e implementar un sistema de calificaciones e incentivos salariales en forma tal que la escala de salarios para los administradores claves de la educación en los niveles Central y Distrital sea competitiva con aquella que se aplica a trabajos de naturaleza y calificación similar en el sector público;
- (5) establecer y empujar con las contribuciones en 1975, a un fondo especial para publicar y distribuir una variedad de materiales de instrucción para actividades educacionales formales y no-formales. La cantidad de contribuciones anuales a este fondo debería ser en 1976, el equivalente del costo de un nuevo libro de texto para cada estudiante por año.

Las discusiones están en marcha entre nuestros personeros para definir, en forma específica, los anteriores puntos y le anticipamos, cada la autorización del Préstamo, que los elementos de nuestro plan arriba mencionado estarán incluidos en el programa formal que será la base del préstamo que estamos solicitando.

[Handwritten signature]
[Handwritten signature]
 Director General
 MINISTERIO DE EDUCACION Y CULTURA



CHECKLIST OF STATUTORY CRITERIA

(Alliance for Progress)

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 Agencies Appropriations Act, 1974.

MMA - 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;

c. Education

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

AID 1240-2 (4-74)

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. FAA § 208; §.251(b).

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 with respect to food production, storage; and distribution. AID Loan 511-L-042 and the newly proposed New Lands Development Loan will contribute to this effort.

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

The GOB program emphasized creation of a favorable climate for selected foreign and domestic private enterprise and investment. They are seeking special exemptions within the Andean Common Market for certain investments.

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

The Government continues to take an active role in the development process, and in so doing to increase popular participation.

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

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

(b) Diverting such resources for unnecessary military expenditure (See also Item No. 19) and intervention in affairs of other free and independent nations.)
(See also Item No. 10)

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 enterprises.

The government is making these efforts.

(8) Adhering to the principles of the Act of Bogota and Charter of Punta del Este.

The government adheres to these principles.

AID 1240-2 (4-74)

(7) Attempting to repatriate capital invested in other countries by its own citizens.

Bolivia has urged repatriation of capital invested in other countries by its own citizens, and is considering active measures to accomplish such repatriation.

(8) 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 government appears to be doing this in an increasingly effective manner.

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

Yes

Treatment of U.S. Citizens and Citizens of Recipient Country

3. FAA § 820(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 government is not known to be indebted under these circumstances to any U.S. citizen for goods or services furnished or ordered.

4. FAA § 820(e)(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, steps have been or are being taken to realize prompt, adequate and effective compensation to the former owners.

AID 1240-2 (4-74)

5. FAA § 620(o); Fishermen's Protective Act. § 5. 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?

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? No, the recipient country 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.

AID 1340-2 (4-74)

7. FAA § 620(b). If assistance is given 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 enterprise, 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(f). Is recipient country a Communist country?

No.

10. FAA § 620(i). 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 is not engage in those activities

11. FAA § 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?

The government of Bolivia has taken adequate measures to prevent the damage or destruction of mob action of U.S. property whenever possible.

AID 1240-2 (4-74)

12. FAA § 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, in convertibility or confiscation, has the A.I.D. administration within the past year considered denying assistance to such government for this reason?

The government has instituted the investment guarantee program.

13. FAA § 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. FAA § 620(q). 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.

ATD 1240-2 (4-74)

17. FAA § 481. Has the government of recipient country failed to take adequate steps to prevent narcotic 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 government is actively cooperating with USAID public safety advisors, BNDD 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 § 620(a). 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 represents approximately 16% of total budgeted expenditures of the government. Approximately \$1.3 million has been budgeted for the purchase of non-sophisticated military equipment.

AID 1240-2 (4-74)

CONDITIONS OF THE LOANGeneral Soundness

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

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

21. FAA § 251(b)(2); § 251(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 borrower has made an application for loan funded assistance in this activity and there have been assurances that the funds will be used in an economically and technically sound manner.

22. FAA § 251(b). 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 § 251(b). 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.

AID 1240-2 (4-74)

24. FAA § 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. Detailed engineering to be financed by the loan, remains to be done. Reasonable firm estimates have been established.

25. FAA § 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?

The GOB has indicated its willingness to provide the legislation necessary for the effective execution of Loan activities (see Annex I, Exhibit B).

26. FAA § 611(e). 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 § 207; § 251(a); § 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), (e) and (f).

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(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 educational development wholly within Bolivia.
29. FAA § 257(b)(3). 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 § 257(b)(7). 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; § 257(b)(8). Information and conclusion whether assistance will encourage regional development programs, and contribute to the economic and political integration of Latin America.
- By strengthening the educational base of the Bolivian population, the capacity of Bolivia to participate in regional activities should be enhanced.

AID 1240-2 (4-74)

32. FAA § 251(q); § 111. Information and conclusion on use of loan to assist in promoting the cooperative movement in Latin America.
- Not directly applicable.
33. FAA § 251(h). Information and conclusion on whether the activity is consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress in its annual review of national development activities.
- The activity is consistent with such findings and recommendations.
34. FAA § 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. Through the activity of decentralization of administration the Loan will encourage local level input into educational decisions relevant to community needs.
35. FAA § 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.

ATD 1240-2 (4-74)

36. FAA § 602(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) and (c).

37. FAA § 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. Program

38. FAA § 251(b)(4); § 202. 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 and assistance are furnished in a manner consistent with improving the U.S. balance of payments position.

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

39. FAA § 252(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.

Approximately \$4.8 million from loan funds will go directly to private enterprise for design and construction of activities. At least another \$1.5 million will be used for procurements of commodities from private sources. It is not planned to channel resources through intermediate credit institutions.

AID 1240-2 (4-74)

40. 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.

41. FAA § 601(d). 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.

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

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

43. 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.

44. FAA § 62L. 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

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

whether they are particularly suitable, are not competitive with private enterprise, and can be made available without undue interference with domestic programs.

Loan's Compliance with Specific Requirements

45. FAA § 113(a); § 208(e). Has the recipient country provided 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 (see Annex I, Exhibit B).
46. FAA § 112. Will loan be used to finance police training or related program in recipient country?
- No.
47. FAA § 114. Will loan be used to pay for performance of abortions or to motivate or coerce persons to practice abortions?
- No.
48. FAA § 201(d). Is interest rate of loan at least 2% per annum during grace period and at least 3% per annum thereafter?
- Yes
49. FAA § 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.
50. FAA § 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.

AID 1240-2 (4-74)

51. FAA § 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will loan agreements require that marine insurance be placed in the United States on commodities financed by the loan?
- In 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.
52. FAA § 604(e). 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.
53. FAA § 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.
54. FAA § 608(a). Information on measures to be taken to utilize U.S. Government excess personal 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.
55. FAA § 611(b); App. § 201. 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.

AID 1840-2 (4-74)

56. FAA § 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 AID and Bolivian regulations concerning procurement of contractor services.
57. FAA § 612(b); § 636(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 maximum extent possible.
58. App. § 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.
59. FAA § 612(d). Does the United States own excess foreign currency and, if so, what arrangements have been made for its release? U. S. does not own excess foreign currency in Bolivia.
60. FAA § 620(g). 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.

AID 1240-2 (4-74)

61. FAA § 620(k). If construction of productive enterprise, will aggregate value of assistance to be furnished by the United States exceed \$100 million? No.
62. FAA § 636(i). 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 a transaction? No. Any motor vehicles needed will be imported from the United States, unless other procurement is authorized.
63. App. § 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.
64. App. § 105. If loan is for capital project, is there provision for A.I.D. approval of all contractors and contract terms? Yes.
65. App. § 107. Will any loan funds be used to pay UN assessments? No.
66. App. § 109. Compliance with regulations on employment of U.S. and local personnel. (A.I.D. Regulation 7). Will comply

AID 1240-2 (4-74)

- 19 -

67. App. § 110. Will any of loan funds be used to carry out provisions of FAA §§ 209(d) and 251(h)?
- No.
68. 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.
69. App. § 601. Will any loan funds be used for publicity or propaganda purposes within the United States not authorized by the Congress?
- No funds will be used for publicity purposes within the U.S.
70. MMA § 901.b; FAA § 640C.
- Regulations will be complied with.
- (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.

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DRAFT
LOAN AUTHORIZATION

Provided from: Development Assistance Funds
BOLIVIA: Educational Management and Instructional
Development

Pursuant to the authority vested in the Assistant Administrator for Latin America 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 Part I, Chapter 1 of said Act to the Government of Bolivia ("Borrower") of not to exceed nine million six hundred and fifty thousand United States dollar and local currency costs of a project to increase and improve the educational services provided Bolivian students and teachers by improving the efficiency and quality of the Borrower's system for delivery of such services. ("Project"). The Loan shall be subject to the following terms and conditions:

1. 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 disbursements 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 on the outstanding balance of the Loan interest at the rate of two percent (2%) per annum during the grace period and three percent (3%) per annum thereafter.

2. 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 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 used under the Loan to finance local currency costs shall be made available pursuant to procedures satisfactory to A.I.D.

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(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 Project Implementation and Evaluation Plan which will include among other things: (a) a global reform plan, describing all Borrower Ministry of Education offices to be affected by the administrative reform under the Project, the projected staffing patterns and projected budgetary allocations of these offices; (b) a financial plan for the Project approved by the Minister of Finance detailing the Borrower contribution to the Project during the disbursement period of the Loan; (c) a time-phased plan for implementation of each project element; and (d) all required legal documentation for the orderly accomplishment of the purposes of the Project, including resolutions covering: the reassignment to the Administrative Reform Commission ("CRA"), or its successor agency of all positions originally designated to it, the organizational structure and responsibilities of the new District Educational Development Centers, and the use of bilingual materials in the classroom.

(2) The appointment of qualified personnel to CRA, in accordance with a staffing pattern agreed upon by Borrower and A.I.D., necessary for the effective implementation of all Project activities.

(d) Prior to any disbursement for the construction of each Center and of each Institute or issuance of any commitment documents for such construction under the Loan:

- (1) evidence that the Ministry of Education has free and clear title to the site of such center or Institute;
- (2) final plans, specifications, bidding documents, and detailed schedule for that particular construction; and
- (3) a maintenance plan for such Center or Institute.

(e) Prior to any disbursement or issuance of any commitment documents under the Loan for specific research activities, Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D., a detailed research plan covering the basic design, timing, and personnel requirements for the study.

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(f) Prior to any A.I.D. disbursement or issuance of any commitment documents under the Loan for long-term training outside of Bolivia, Borrower shall submit to A.I.D. in form and substance satisfactory to A.I.D., a staff development plan for all participants of Borrower's long term training program under the Project, describing among other things the contractual relationships the Ministry will enter into with these individuals to assure their participation in Bolivian education following training.

(g) Prior to any disbursement or issuance of commitment document under the Loan for the procurement of vehicles, Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D., a plan for vehicle maintenance and replacement.

(h) Prior to any disbursement or issuance of any commitment document under the Loan for the up-grading of the Ministry of Education's printing capability, Borrower shall submit to A.I.D. in form and substance satisfactory to A.I.D.: evidence of the reorganization of printing facilities within the Ministry; and a maintenance plan for such printing facilities.

(i) 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 1 of each year for any purposes except to pay salaries under existing contracts being financed by the Loan, 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, as approved in plans previously submitted to A.I.D., have been made to the Ministry of Education budget.

(j) The Borrower shall covenant, that except as A.I.D. may otherwise agree in writing, Borrower, through its Ministry of Education will:

(1) Support all operating costs of the District Centers during and after the disbursement period of the Loan, and will ensure that the budgetary allocations and the expenditure of funds for the Centers' operations will

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be devoted to urban and rural programs so as to reflect relative needs of school enrollments represented by the urban and rural areas of the District.

(2) Increase during the period 1974-1980 the ratio of support costs to salary expenditures, in order to permit additional financial resources to be used for investment and operational expenses related to: new programs in other priority areas; other externally financed programs in education; and the Project.

(3) Reduce during the period 1974-1980 the ratio of administrative/supervisory personnel to teaching staff, consistent with the objectives of the administrative reform under the Project.

(4) Increase during the period 1974-1980 the allocation of resources in real terms to rural education, with the long-term goal of having educational expenditures more accurately reflect the proportion, distribution, and needs of the urban and rural populations.

(5) Develop and implement a system for position certification and salary incentives, such that the salary schedules for key educational administrators at the Ministry and District levels are competitive with those for officials of similar qualifications elsewhere in the public sector;

(6) Establish, and begin contributions in 1975 to a special fund for publishing and distributing a variety of instructional materials for formal and non-formal educational activities, the amount of annual contributions to this fund to be, by 1976, the equivalent of the cost of one new textbook per student per year; and

(7) Develop by September 1975, an Instructional Materials Policy which provides, inter alia, for a new distribution system which assures that any payment requirement with respect to such materials does not interfere with student access to such material.

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

DISTRIBUTION OF URBAN AND RURAL ADMINISTRATIVE UNITS

BOLIVIA, 1966*

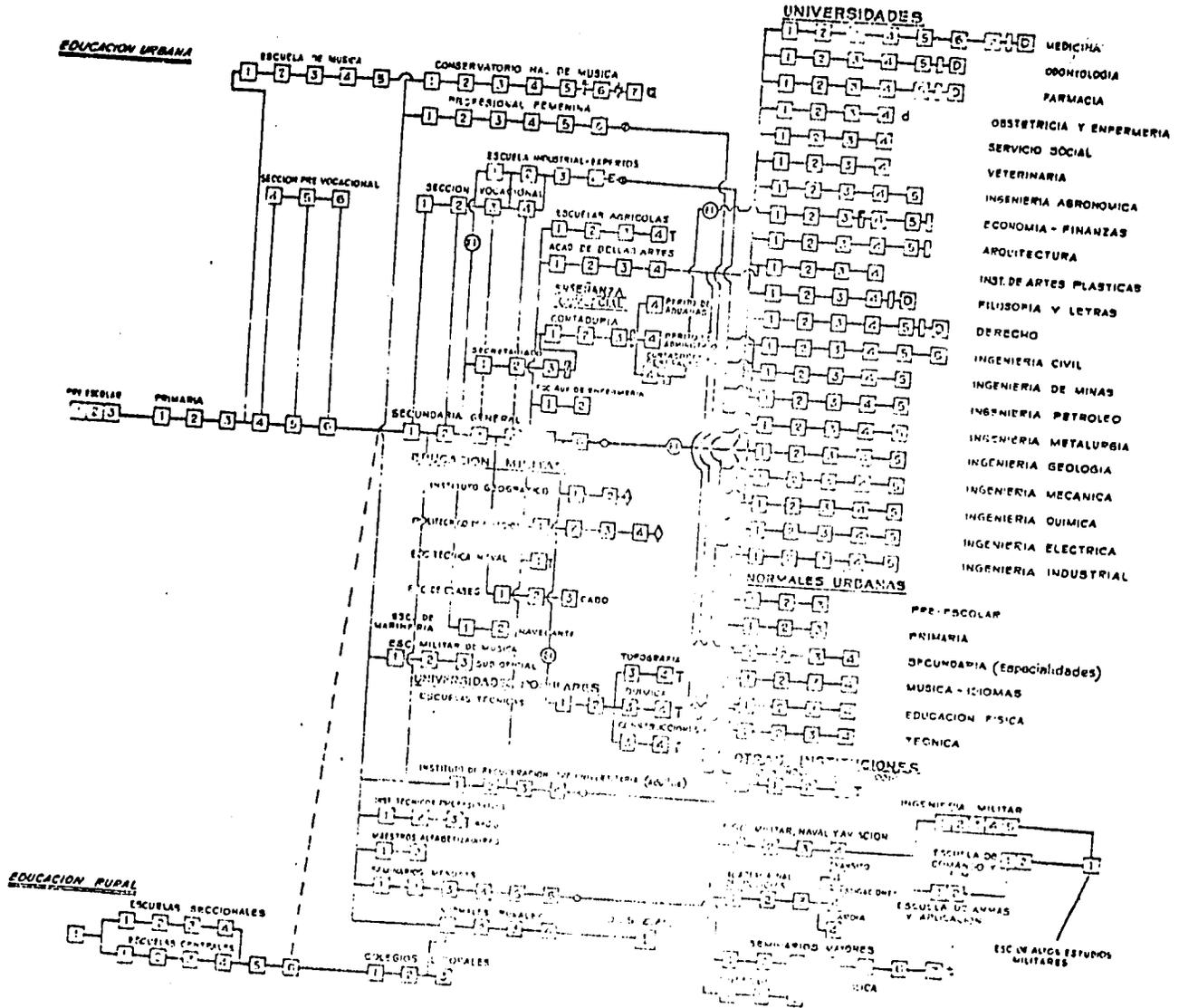
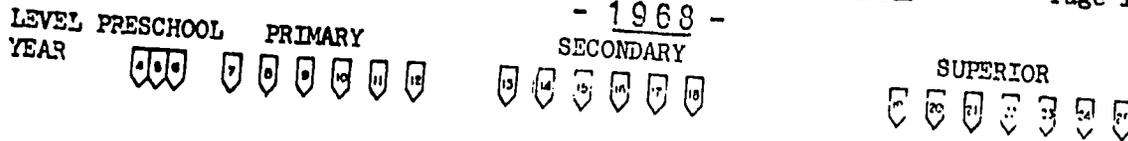
City	Type of Administrative Unit		
	Urban Regional & District Offices	Rural Regional & District Offices	Urban Inspection Offices
Aiquile.....	-	1	-
Camiri	1	1	-
Cobija	1	1	-
Cochabamba	1	1	-
La Paz	1	1	-
Montero	-	1	-
Oruro	1	1	-
Potosi	1	1	-
Puerto Suarez..	1	-	-
Riberalta	1	1	-
Robore	-	1	-
Rurrenabaque ..	-	1	-
Santa Cruz	1	1	-
Sucre	1	1	-
Tarija	1	1	-
Trinidad	1	1	-
Tupiza	1	1	-
Uncía	-	1	1
Uyuni	-	1	1
Vallegrande ...	1	1	-
Villamontes ...	1	1	-
Villazon	-	-	1
Yacuiba	-	-	1
Totals	15	20	4

*/ Still considered illustrative of pre-reform status

SOURCE: Ohio State University Human Resource Study, Draft April 1969, p.V-9.

SYSTEM OF FORMAL EDUCATION IN BOLIVIA*

- 1968 -

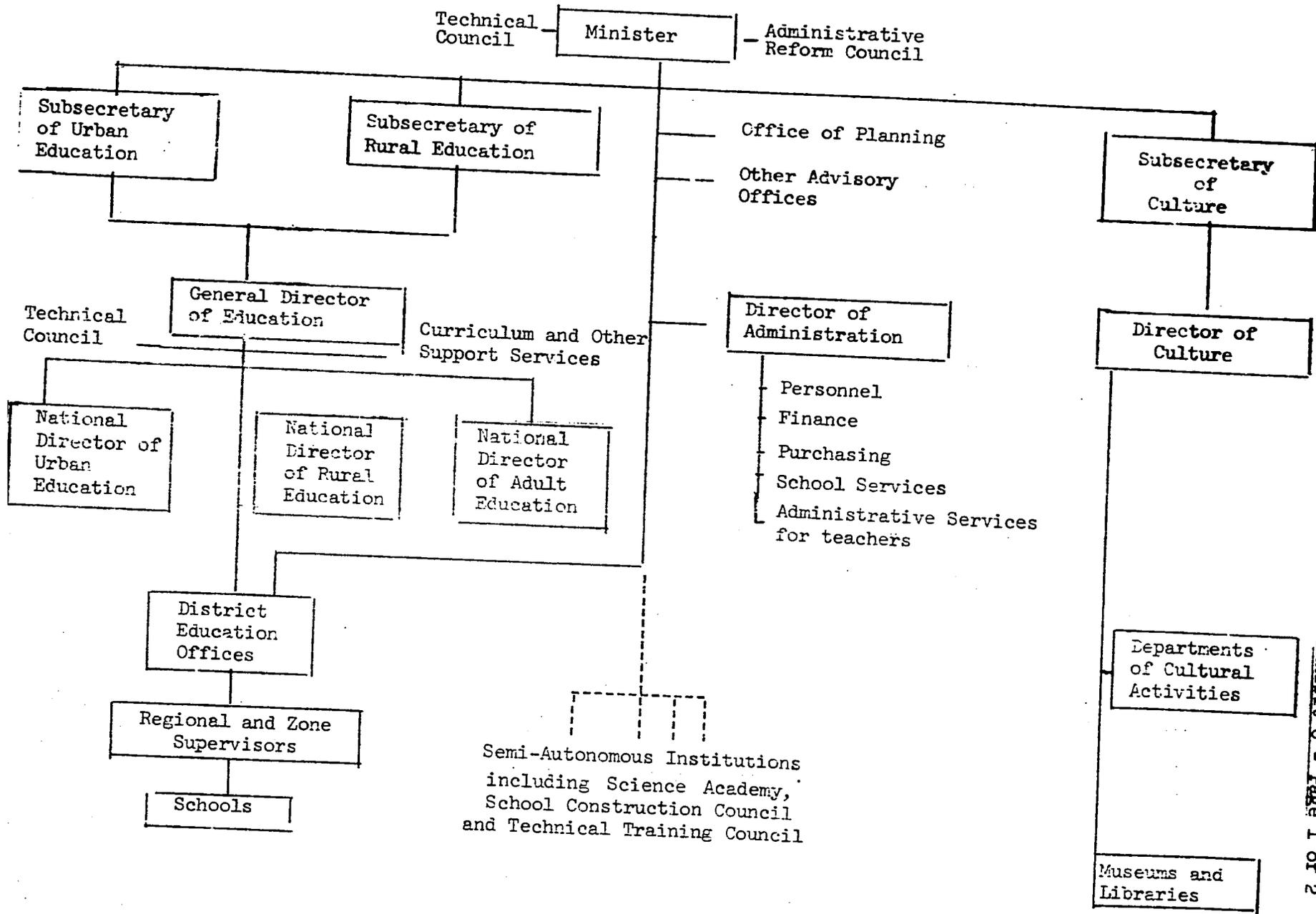


REFERENCIAS COMPLEMENTARIAS

○	BACHILLER TECNICA	○	CONSERVATORIO
○	BACHILLER AGRICOLA	○	CONSERVATORIO
○	BACHILLER QUIMICO	○	CONSERVATORIO GENERAL
○	TECNICO	○	CONSERVATORIO
○	FRANQUISIA	○	CLASO POLIMATARIO
○	TOPOGRAFIA	○	CLASO
○	FRANQUISIA DE AVIACION	○	CONSERVATORIO DE MUSICA
○	FRANQUISIA COMERCIAL	○	CONSERVATORIO DE MUSICA
○	FRANQUISIA	○	CONSERVATORIO DE MUSICA

*/ Guide to Diagram: black lines illustrate the principal routes for the movement of students.

ORGANIZATION OF THE MINISTRY OF EDUCATION AND CULTURE



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SUMMARY DIAGNOSIS OF EDUCATIONAL ADMINISTRATION *

Translation from Volume II of Documents for the Administrative Reform in the Ministry of Education and Culture. Published by the Consejo de Racionalización Administrativa - July, 1972.

CHAPTER I

6. Conclusions and Recommendations

The Diagnosis which was performed has shown many deficiencies in the organization of the Ministry; administrative management -- which implies processes of planning, organization, direction and control -- does not exist as such.

Organization, as a structure of interrelated jobs and functions which makes daily work effective, is not logically designed; the scope of direction is neither logical nor adequate for existing needs, there is no delegation of authority, nor are responsibilities clearly defined; the result is a concentration of personnel in some sections and a lack in others. Direction, as a task which gives impetus to organization, is effected under time pressures, without considering such factors as motivation, clarity and the logic of orders. The task of control cannot be accomplished, as there are no parameters for comparing that which is realized with that which is planned.

All these limits in the task of direction are due to a total lack of information, due to the following:

1. Geographical magnitude and amplitude of the work of the Ministry. The enormous volume of ministerial installations makes it very difficult to collect and process information. As a consequence, directors opt for working without such information.
2. There is no office responsible for gathering and processing information.
3. Organization is distorted; in some cases personnel is excessive, while in others, there is a total lack of trained personnel.
4. There is a dispersion of administrative offices in several physical units.

* / Free translation.

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Because of these reasons, the following is recommended:

1. The organization of an office responsible for the collection and processing of data, based on a system of Electronic Data Processing (computers); initiation of an Integrated Data System, which allows this data to be distributed to the respective offices with the necessary frequency and the quality and quantity required.
2. Systematic gathering of data based on master forms, which serve as sources of complete information for all the positions on decision-making levels.
3. Automatic data processing which is rapid and efficient, so that information arrives within the time required, and with the precision and frequency desired.
4. The design of a dynamic administrative organization for the educational services, which responds to the needs and objectives pursued by future educational policy.

CHAPTER III

Study of the Organizational Functions of Central Administration in the Ministry of Education and Culture

Part 4. Criticisms of Organization and Function

The organizational structure which directs the function of the Ministry of Education and Culture contains several deficiencies at all its levels, and even within each of its administrative units. In order to illustrate these distortions, the following are noted as practical and real examples: On the advisory level, the Dirección de Planeamiento Educativo -- totally apart from its specific functions and educational matters -- has taken responsibility for budget planning in education and exercises command and control over the units of Administrative Analysis and Auditing. Paradoxically, it does not have units which can formulate and evaluate: projects, construction plans, and school maintenance; nor does it have units which, because of their technical character, should serve as instruments which aid in the elaboration of plans, programs,

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and projects for the education sector. The School Statistics Unit, under its direction, does not respond technically or efficiently to the demand for reliable information which the educational service requires for the development of sectorial planning.

The administrative support level, which is the axis of efficient functioning in any organization, shows characteristics which are even more alarming: a) There is not a clear delineation of functions and standards for each of the units located at this level. b) The Director General, which is responsible for directing and coordinating the administrative support units, has under its direction only the office of Central Archives, whereas -- in principle -- the Direction of Educational Administration is also under its egis. c) There is an absolute absence of coordination in the communication and actions taken by units at this level. d) There is no personnel office which uses modern techniques in the administration of personnel; this illustrates a deficiency in the utilization of the human resources of the Ministry. e) The presence of two units of Teacher Registration --urban and rural-- contributes to duplication of efforts and resources for such service. f) There is an irrational distribution of labor, lines of authority overlap, and there is no mechanism for controlling and evaluating performance of the activities assigned to each unit. g) On this level, there is no unit responsible for budget planning. h) There is a deficiency in the functioning of the budget implementation unit, which creates a permanent state of social disfunctionality between teacher and administrative personnel within the service. i) Distribution of equipment and materials is deficient and irrational. j) There is no unit responsible for purchases and supplies, and for the storage and timely distribution of materials.

The operational level --which is responsible for the implementation of educational policy emanating from the decision-making level, and which directs the mechanisms by which education is supervised throughout the nation-- presents a totally irrational structure which contributes still more to the separation of urban and rural education. For example:

a) The Dirección General de Educación is not based upon a regulation which delimits the responsibilities of the functionaries under its direction, or which establishes lines of authority

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and coordination between the rural and urban areas. In practice, one observes that the National Directorates of Rural and Urban Education --dependencies of the Dirección General-- are oversized apparatuses which act without the required coordination. This situation leads to decisions which are contradictory and untimely, and which hinder departmental transactions.

However, the horizontal amplitude in the hierarchy at the second level -- 11 units in the case of Urban Education -- and the consequent weakening in the command unit demonstrate the marked centralization and concentration of activities in the central administration. This phenomenon forces teachers and district authorities to forward transactions, cases and problems -- as insignificant as they may be -- for acknowledgement and solution by the Dirección General.

b) Another problem which stems from the excessive centralization is the forced dependence of Field Supervisors on the Dirección General, to the detriment of the authority and coordinating function of each district director.

c) By the same token, the Department of Teacher Registration, a dependency of the Dirección General, does not have at its disposal adequate units for the elaboration of lists or tables of teacher classification by age, sex, marital status, years of service, professional title, work history, etc., all of which could supply data on the training quality and experience of teacher personnel, so that individual aptitudes could be utilized to the fullest.

d) Another deficiency in the coordination mechanism manifests itself between the Dirección General and Dirección of Educational Administration; this relates to the increase in line items and budget elaboration at the district level.

e) The Dirección General does not have at its disposal units of control and supervision vis-à-vis the network of educational establishments of Comibol and Y.P.F.B, in spite of the legal dispositions in this respect.

f) There is no unit which coordinates ministerial activities with those public and private enterprises which are responsible for educational services.

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This brief analysis of the present organizational structure of the Ministry of Education and Culture brings one to the following conclusions:

- a) The administrative separation of the systems of rural and urban education brings about an unnecessary duplication of efforts and resources.
- b) An obvious, marked centralization forces national authorities to devote a great part of their time to insignificant matters.
- c) The absence of coordination between the urban and rural areas makes efficient management of educational services very difficult.
- d) Clear directives or technical orientations are not conveyed; these could serve as instruments of inspiration which would effect an adequate functioning of the district directors, intermediate organisms, and operational units.
- e) The administrative shortcomings which outlined in this document are a result of an organizational and functional survey. It creates an alarming situation for the projections which one might make in the near future for educational development in Bolivia.

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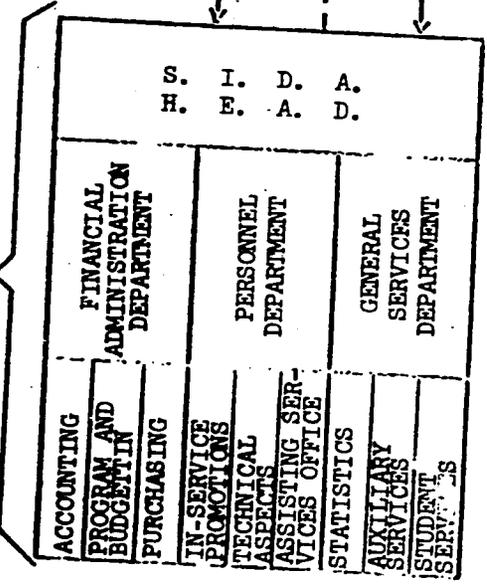
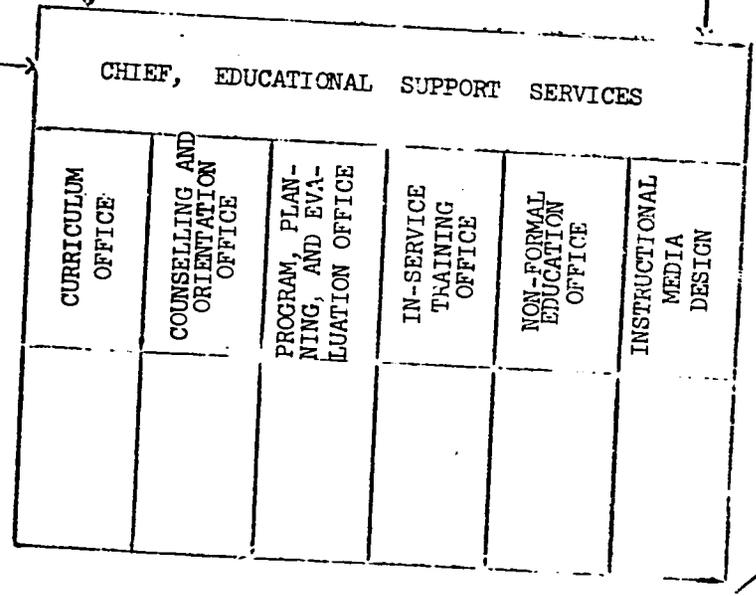
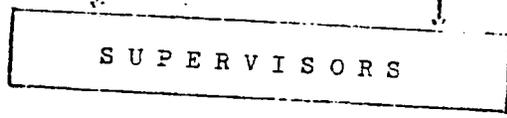
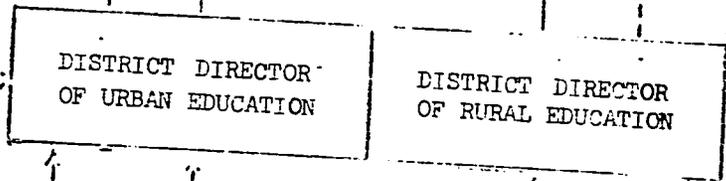
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DIRECTOR OF ADMINISTRATION

DIRECTOR GENERAL OF EDUCATION

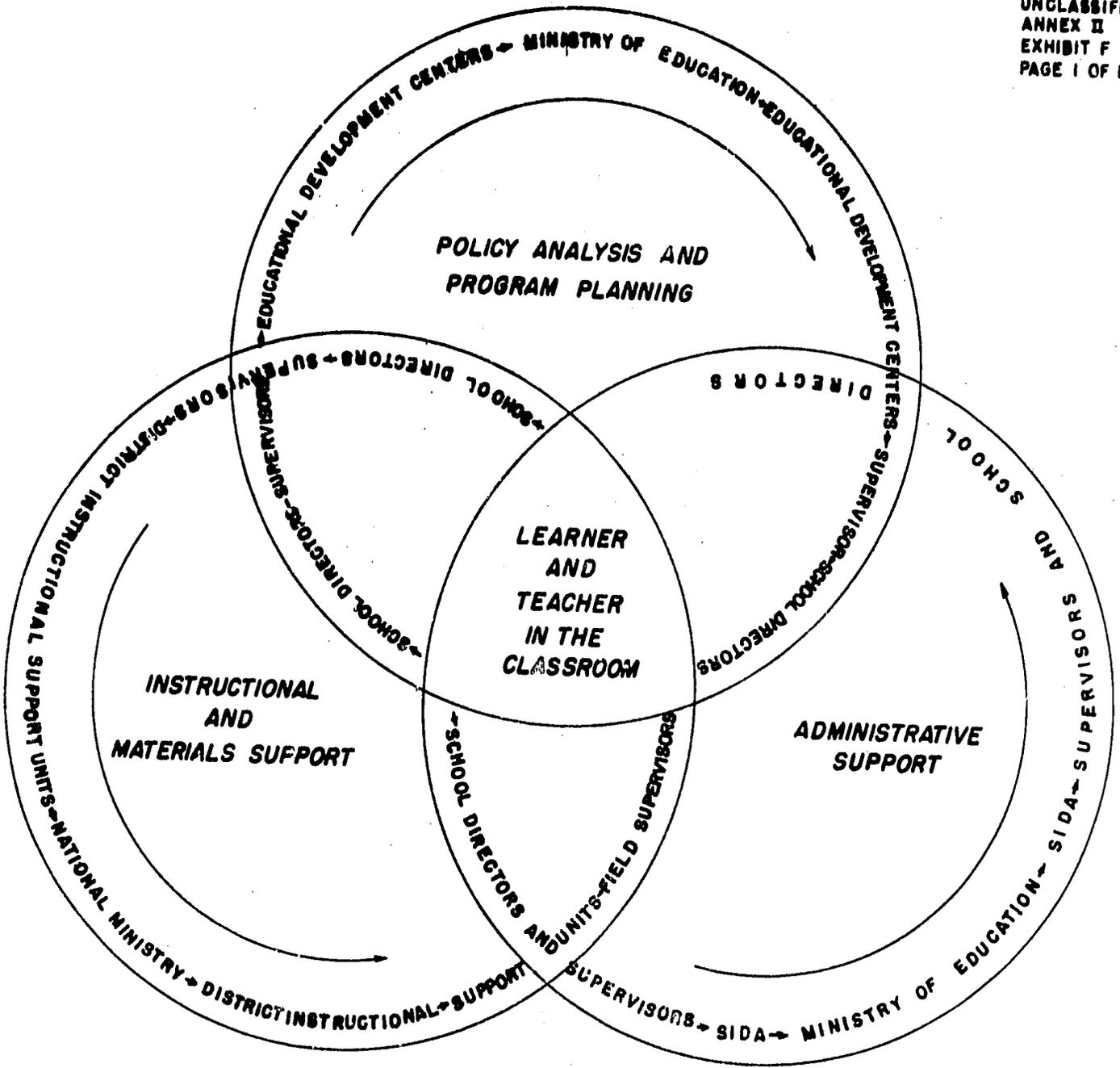
NATIONAL LEVEL
DISTRICT LEVEL

DISTRICT EDUCATION DEVELOPMENT CENTER



ADMINISTRATIVE SERVICES

TECHNICAL PEDAGOGICAL SERVICES



**THE FOCUS OF PROGRAM DESIGN AND ADMINISTRATIVE
SUPPORT IS ON THE TEACHER AND LEARNER**

FARS REVIEW OF EXPERTISE AND FINANCIAL CAPABILITIES
OF THE CONSEJO DE RACIONALIZACION ADMINISTRATIVA

I. Background Information

The Consejo de Racionalización Administrativa (CRA) was created in February 1972 for the explicit purpose of studying, designing, and implementing the reform. CRA is composed of a group of experts in several fields of education in charge of designing and implementing the education administrative reform.

In the organization chart of the Ministry of Education (MINEDUC), CRA is shown as an advisory group assisting the Minister of Education in all matters related to education reform.

The CRA has already prepared a set of manuals and regulations for the various fields covered by the reform. At the present time there are still some manuals in preparation. The most important task that the CRA has to face in the near future is the implementation of the reform at the different levels of the education system. CRA has begun this implementation as regards to the decentralization of school administration. The purpose of our review is to analyze the present organizational structure and financial capabilities of the CRA with a view toward their administrative role in the proposed AID education loan. For this purpose we are offering below some suggestions on the CRA future organization.

II. Scope of Review

Our review of the organization of this agency, included the following:

1. Description of activities of the CRA Director and experts.
2. Interviews held with the above (limited).
3. Interview held with the financial advisor.
4. Review of the accounting procedures of the CRA and San José mission.
5. Review of the proposed AID loan with the view toward the administrative capacity which will be needed by CRA as the implementing agency under the loan.

6. Preparation of a plan of personnel needed by CRA and, the education and previous experiences needed by the new personnel.

III. Description of activities of the CRA members

The following is a brief description of the duties performed by the present CRA officials:

1. Hugo Alborta - CRA Director.

He programs and distributes responsibilities to the CRA experts, supervising and coordinating their activities.

2. Osvaldo Vega - Coordinator.

He assists the CRA Director and San José Mission chief in the programming and distribution and supervision of the activities of the experts.

He is in charge of the coordination activities between CRA and San José Mission and also these two entities with the Ministry of Education.

3. Ruben Murillo - Supervision and Evaluation of education.

Hugo Camacho - Student Orientation.

Arnaldo Mejía - Curriculum.

Efraín Ariscurinaga - Financial Administration

The main duties of the above experts in their own fields are the following:

- 3.1 Planning of the system.
- 3.2 Preparation of manuals and regulations.
- 3.3 Coordination with other GOB entities for the implementation of the system.
- 3.4 Supervision and assistance to the country units for the same purpose.

3.5 Programming the training of personnel

4. Due to the limited time available and since Mr. Roberto Terrazas (Internal Administration expert) was on commission at the MINEDUC and Mr. Reynaldo Tellería (Legal Counselor) was not available, we were not able to interview these two officials.

IV. Conclusions and Recommendations

A. Analysis of Present CRA Organization

1. We believe that CRA, for their present function, is a well organized entity which joins a group of professionals, who are experts in their fields.
2. At the present time, there are 8 CRA advisors. We were informed that at one time the CRA had twenty members of which later twelve were transferred to other offices of the MINEDUC. However, these transferred employees remained as CRA members for budget purposes.

We believe that the necessary increase of the CRA staff should be based on the return of these "budget personnel items" without the personnel now filling the positions.

3. We have noticed that the financial advisor dedicated half of his time to other duties assigned by the Ministry of Education. We believe that the financial administrative reform is an important task which requires the full time work of this employee.

B. Review of Present Accounting Procedures

It is our opinion that, for the present level of transactions of the San José Mission and the CRA the accounting system and records are adequate. However we noticed that some of the basic accounting procedures were not being followed. We wrote a letter to Raul Oñoro, Chief of Party of the San José Team, outlining these deficiencies and how they should be corrected.

It should be noted that the accounting system and personnel will necessarily be revised with the technical assistance provided under the loan.

C. Suggestions on CRA Future Organization

We suggest the following outline:

c.1 Management (Number of employees - 3)

H. Alborta - Director
O. Vega - Assistant Director
R. Tellería - Legal Counsel

c.2 Advisory Group (Number of employees - 8)

E. Ariscurinaga - Financial Administration
Assistant - Financial Administration
H. Camacho - Student orientation
J. Espinoza - (not determined)
A. Mejía - Curriculum
R. Murillo - Supervision and Evaluation of the Education
R. Terrazas - Personnel (Teachers)
----- - (not determined)

c.3 Loan Administration (Number of employees - 5)

Administrator - University degree of Economics, English knowledge, and five years experience in professional field.

Accountant - Institute or University degree - accountant - 3 years experience.

Bookkeeper - Institute degree or equivalent - accountant or bookkeeper.

Internal auditor - University degree - audit - 3 years experience.

Junior auditor - University student - accountant or audit.

c.4 Engineering (Number of employees - 4)

Chief Engineer)
2 Engineers) (Education and experience to be
Architect (part time)) determined by USAID/ETD)

c.5 Procurement and Warehousing (Number of employees - 3)

Two Purchasing Officers - 3 years of experience in purchasing and knowledge of English.

Warehouseman - Experience only 3 years

In addition to the above, CRA will need a secretarial pool of four secretaries, two should be bilingual. Therefore, as outlined above, CRA will need a total of twenty-nine employees. We understand that in the Ministry of Education budget, over thirty positions are assigned to CRA. It will be necessary for at least twenty-two positions in the budget to be returned to the CRA organization. All CRA positions should have some degree of security in both the position and the person.

It will be necessary to include some language in the Supreme Decree authorizing the loan implementation, assuring job security as CRA has had problems in this area in the past. It should also be a condition that CRA choose the personnel to fill the positions.

TABLE I - 1

School Enrollment, 1970

	<u>Public</u>	<u>Private</u>	<u>Total</u>
Urban	<u>396,970</u>	<u>146,807</u>	<u>543,777</u>
Pre-Primary	18,561	9,365	27,926
Primary	307,050	103,466	410,516
Secondary	49,968	24,001	73,969
Girls' Professional	1,882	496	2,378
Commercial	1,925	1,602	3,527
Industrial/Vocational	901	1,852	2,753
Normal	5,933	701	6,634
Adult Literacy	9,594	5,324	14,918
Art and Music	1,156	0	1,156
Rural	<u>280,119</u>	<u>57,463</u>	<u>337,582</u>
Pre-Primary	34,118	7,108	41,226
Primary	240,467	50,109	290,576
Secondary	1,178	197	1,375
Normal	4,356	49	4,405

TABLE I - 2

Number of Schools, 1970

	<u>Public</u>	<u>Private</u>	<u>Total</u>
Pre-Primary and Primary			
Urban	1,078	389	1,467
Rural	5,596	1,717	7,313
Secondary			
Urban	233	135	368
Rural	24	2	26

SOURCE: Bolivian Cifras, 1972

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Exhibit B - Page 1 of 1

GROSS DOMESTIC PRODUCT AND TOTAL EDUCATION

Expenditure 1965 to 1973
(In million current pesos)

YEAR	1965	1970	1971	1972	1973
Gross Domestic Product	7,180.0	12,080.0	13,145.0	15,271.0	19,852.0
Total education expenditures, excl. spec. fam. contributions Percentage of GDP	315.9 4.4	588.0 4.9	650.6 4.9	785.3 5.1	1,037.8 5.2
Total education expenditures, incl. spec. fam. contributions Percentage of GDP	410.4 5.7	716.3 5.9	787.2 6.0	911.7 6.1	1,194.4 6.0

Source: GDP: Boletín Estadístico, Banco Central

Expenditures: Aggregation of subsequent Tabulations.

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>1,035</u>	-	-	-	-	<u>757</u>	<u>279</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>101</u>

*Decentralized education refers to education provided by two major public corporations: COMEOL and Y.P.F.B.

PRIMARY ENROLLMENT AS A PERCENT OF POPULATION 6-12 YEARS: 1972
(1000)

Department	R U R A L			U R B A N			T O T A L		
	Population 6-12 Years	Enrollment	% Enrolled ^{a/}	Population 6-12 Years	Enrollment	% Enrolled ^{a/}	Population 6-12 Years	Enrollment	% Enrolled ^{a/}
Chuquisaca ^{b/}	67	22	33						
La Paz	171	68	40	24	15	64			
Cochabamba ^{b/}	106	38	36	119	125	105 ^{c/}	91	37	41
Oruro ^{b/}	33	17	51	48	62	130 ^{c/}	290	193	66
Potosí ^{b/}	125	39	31	30	34	115 ^{c/}	153	100	65
Tarija	27	15	54	40	38	97	63	51	81
Santa Cruz ^{b/}	53	42	78	12	12	105 ^{c/}	166	78	47
Beni	18	14	77	39	61	154 ^{c/}	39	27	69
Pando	6	2	39	21	15	74	93	102	98
TOTAL	610	257	42	329	364	111 ^{c/}	939	621	66

^{a/} Percentages based on numbers before rounding.

^{b/} Departments which are targets of AID Loan.

^{c/} Enrollment percentages greater than 100 probably result from underestimation of population (the last census was in 1950); influx of children from rural areas into urban schools, and/or statistics which are basically faulty.

Source: Diagnóstico: Economic, Social and Financial Analysis of Education in Bolivia (February 1974)

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AVERAGE COST PER STUDENT: CURRENT PRICES, U.S DOLLARS
1971

	<u>Rural</u>	<u>Urban</u>	<u>National</u>
<u>Primary</u>			
Pre-primary	35	49	39
Basic	33	50	42
<u>Middle</u>			
General Secondary	15	59	57
Feminine Tech.	-	-	203
Industrial	-	-	417
Commercial	-	-	59
Rural Normal	-	-	120
<u>Higher</u>			
Urban Normal	-	-	124
Industrial	-	-	1,504
Commercial	-	-	186
University	-	-	N.A.*
<u>Adult</u>	-	-	44

*N.A. = Not available

Source: Diagnóstico: Social, Economic, and Financial Analysis of Education in Bolivia (February, 1974).

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WASTAGE*

	<u>1960/65</u>	<u>1963/68</u>	<u>1966/71</u>
Total primary	79%	78%	74%
<u>Rural Total</u>	95	94	92
FUB.	95	94	na.
PRIV.	96	96	na
<u>Urban Total</u>	49	48	43
FUB.	55	52	na
PRIV.	31	43	na

*Percentage of students who begin first grade in year n who do not finish in year n + 5.

n.a.: Not available

Source: Diagnóstico and Statistics, 1960-1970, Ministry of Education.

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ESTIMATE OF BENEFIT: COST RATIO

The following exercise was conducted in an effort to assess in a rather subjective way the benefits of the administrative reform relative to its costs.

As a first step the basic functions of the administrative system were grouped into three categories:

- (1) Routine Administration
- (2) Policy and Program Planning and Analysis
- (3) Instructional Support (including educational materials preparation and distribution)

At the present time the first of these three functions is being performed reasonably well, the second two hardly at all. Educational administrative experts from three universities (San Jose State, University of Indiana, and the University of Pittsburgh), all of whom were familiar with the Bolivian educational system and the proposed reform, were asked to estimate the level of services now provided in these three categories against the level we could reasonably expect when the full effects of the reform were realized. Their answers were consistent with one another (after considerable debate), and were as follows:

Table A

<u>Category</u>	<u>Current Level of Services as a % of Expected Level</u>
1. Routine Administration	60%
2. Pol. and Prog. Plan. & Analysis	15%
3. Instructional Support	15%

It is important to note that the current level of services were not compared with an "ideal" level, but with the level of expected services. In response to further questioning, the professors estimated the expected level of services for the three categories at roughly 85%, 60%, and 30% respectively of the level they thought Bolivia eventually could attain. Obviously, the attainment of these "ideal" levels would require the input of additional resources not contemplated at this time.

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The estimates in Table A were subjective, but were not arbitrary. They were partially based, for example, on an analysis of the time four key types of administrative personnel currently devote to functions in each of the three categories compared with the amount of time they are expected to spend after the proposed reform. These data are summarized in Table B.

Table B

Percentage of Time Spent by Key Ministry Administrative Personnel on Each of the Three Basic Functional Categories

<u>Type of Personnel</u>	<u>Approx. N° of Director-Level Staff</u>	<u>Present Time Distrib. Among Key Functional Areas</u>			<u>Future Time Distrib. Among Key Functional Areas</u>		
		<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
General Directorate	65	80	5	15	20	30	50
Field Supervisors	220	85	-	15	15	10	75
School Directors	1,750	60	-	40	40	10	50
District Directors	18	90	5	5	65	15	20

One can see, for example, that for each day the director-level staff of the General Directorate now spend on Policy and Program Planning and Analysis, they are expected to spend six days in the future. Moreover they should have available to them a much improved Planning Office staff and data which does not now exist. Viewed in these terms, the large anticipated improvement in the planning function from its low current level of performance (as per Category 2 in Table A) does not appear unreasonable.

There is no reason to assume that the importance or value of each category of administrative services is equal. The same educational administration experts referred to above were, therefore, also asked to place a relative value on the full set of expected services in each of the three categories, i.e., to weigh the value of the three categories. Their relative weights were: Routine Administration - 30%, Policy and Program Planning and Analysis - 10%, Instructional Support - 60%.

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On the basis of this information, the overall value of the current performance of the system relative to the value of the expected performance was calculated at 28.5% as follows:

Table C

(a) Category	(b) Wt.	(c) Current Perf. Index	(b) x (c) Perf. x Wt.
1	.3	.60	.180
2	.1	.15	.015
3	.6	.15	.090
	<u>1.0</u>		<u>.285</u>

If the value of the administrative services currently produced is only 28.5% of the value of the services which will be produced after administrative reform, how quickly will services increase once the reform is instituted? The educational administrators provided the estimates shown in the following table. The bottom line of the table then shows the increase in administrative outputs (i.e. the achieved rate minus .285) attributable to the project.

Table D

Year	0	1	2	3	4	5	6	7
Overall Perf. Index	.285	.32	.40	.50	.70	.90	1.0	1.0
Increase in Performance	0	.035	.115	.215	.415	.615	.715	.715

It was then assumed that the overall budget and the administrative part of it (4.85%) would increase at a constant annual rate of 7.5% in real terms. Seven percent is the approximate rate of increase in primary enrollment; thus the total cost/student and the administrative cost/student are assumed to be constant in real terms. Without the proposed reform, both administrative output and "wastage" caused by inefficiency would increase by 7%.

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It was further assumed that the value of the administrative services, when the services are provided at full (100%) efficiency beginning in Year 6, would equal their cost. This implies that the value of the services rendered at present is only 28.5% of the funds expended. Clearly this is a conservative assumption. Economic theory tells us that the marginal productivity of any input should at least equal its (marginal) cost. If it does not, the productive system is probably using too much of that input relative to other inputs. Given that Administration (including policy planning and analysis and instructional support) constitutes only 5% of educational inputs, it is inconceivable that too many resources are devoted to Administration. Thus the assumption that the benefits from Administration (under an efficient utilization of resources) are only equal to expenditures on Administration is highly conservative. The values assigned to current outputs and to the increase in outputs are therefore minimum ones and are probably understated.

Based on the above estimates and assumptions, the following table shows the calculation of the present value of the anticipated benefit and costs assuming 10% and 12% discount rates.

Table E

Calculation of Present Value of Costs and Benefits

<u>Year</u>	(a) <u>Costs</u> (US\$ millions)	(b) <u>Est. Admin. Budget</u> (\$millions)	(c) <u>Incr. Output Ratio</u>	(d) <u>(b) x (c) Incr. Output</u> (\$millions)	<u>Present Value: 10%</u>		<u>Present Value: 12%</u>	
					<u>Costs</u> (US\$ millions)	<u>Outputs (Benefits)</u> (\$millions)	<u>Costs</u> (US\$ millions)	<u>Benefits</u> (\$millions)
1975	1.3	39.6						
1976	4.0	42.3	.035	1.4	1.30	1.4	1.30	1.3
1977	5.0	45.2	.115	4.9	3.64	4.3	3.57	3.8
1978	3.0	48.4	.215	9.7	4.13	7.6	3.99	7.3
1979		51.8	.415	20.1	2.25	14.4	2.14	13.5
1980		55.4	.615	31.9		20.8		19.2
1981		59.3	.715	39.6		23.4		21.2
1982		63.5	.715	42.4		22.8		20.3
1983		67.5	.715	45.4		22.2		19.4
1984		72.6	.715	48.3		21.5		18.4
1985		77.7	.715	51.9		21.0		17.9
1986-2000			.715	1,495.4		20.4		16.9
Totals					<u>US\$11.32</u>	<u>247.8</u>	<u>US\$11.00</u>	<u>179.6</u>
						\$b427.6 US\$ 21.38		\$b338.8 US\$ 16.94

$$\frac{21.38}{11.32} = \underline{\underline{1.89}}$$

$$\frac{16.94}{11.00} = \underline{\underline{1.54}}$$

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Included in the costs of the project are the AID loan and grant funds and the GOB contribution. On the basis of these calculations the benefit:cost ratios assuming 10% and 12% discount rates are 1.89 and 1.54 respectively.

An alternative way of measuring the benefits of the increased administrative outputs is to first estimate the cost of the current administrative outputs in terms of an efficient system. The educational administrators estimated the present outputs could be produced under an efficient system at about 50% of current expenditure.

This conclusion was based on an analysis of the considerable needless duplication and triplication of effort which pervades the system at present. A "classic" example is the existence of parallel systems to provide routine administrative support separately to urban and rural areas within the same district. Another example cited by the university consultants was the existence of three separate Ministry offices which concern themselves with quantitative information on students and teachers. None of the offices has an information system capable of providing accurate information even on the most basic characteristics of these groups causing the information provided to be inaccurate and inconsistent. Two of the offices could devote their efforts to providing other important services which are now neglected with no loss in output of existing services.

The estimate that current services could be efficiently produced at half their present cost implies that the current "excess expenditure" or "waste" caused by inefficiency is the remaining 50% spent on administration. Administrative costs are not expected to diminish after the reform; thus it seems reasonable to assume that it is the "excess" of 50% (\$17.3 million in 1973) that could be utilized to produce the new Administrative outputs under an efficient system. Valuing the output of new services (benefits) at cost (as justified above) means that benefits would be worth \$17.3 million, growing at 7% annually. The benefit:cost ratio computed on this basis would then be 1.3 discounting at 10% and 1.13 at 12%. These calculations are summarized below.

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Table F

<u>Year</u>	<u>Incr. Output Ratio</u>	<u>Incr. Output</u>	<u>Present Value</u>	
			<u>10%</u>	<u>12%</u>
1975	.035	1.4	1.4	1.3
1976	.115	4.9	4.3	4.1
1977	.215	9.7	7.6	7.3
1978	.415	20.1	14.4	13.5
1979	.500	25.9	16.7	15.6
1980	.50	27.7	16.4	14.9
1981	.50	29.7	16.0	14.2
1982	.50	31.7	15.5	13.6
1983	.50	34.0	15.1	13.0
1984	.50	36.3	14.7	12.4
1985	.50	38.9	14.3	11.8
1986-2000	<u>.50</u>	<u>1045.1</u>	<u>159.9</u>	<u>125.6</u>
Totals		1305.4	\$b296.3	\$b247.3
			US\$ 14.8	US\$ 12.4

$$\frac{\text{Benefits}}{\text{Costs}} = \frac{14.8}{11.3} = 1.3 \quad \frac{\text{Benefits}}{\text{Costs}} = \frac{12.4}{11.0} = 1.13$$

Net P.V. = US\$3.5 million Net P.V. = US\$1.4 million

INSTITUTIONAL ANALYSIS

CONSEJO NACIONAL DE EDIFICACIONES ESCOLARES (CONES)

1. Introduction

This analysis will attempt to evaluate the institutional capability of CONES, both in managerial and technical terms, to handle the engineering portion of the project. It will also point out any areas of deficiency in CONES's current structure that may be remedied through technical assistance and training under the loan.

This analysis is based upon the USAID/Bolivia local engineering staff's familiarity with CONES since its inception in 1971, and knowledge and familiarity with committees and offices that preceded CONES in dealing with school buildings. It is also based upon the study of CONES's current structure, operational procedures, staffing and workload, and also upon candid conversations with members of its staff.

2. History and Background

Up until 1950 activities related to public school buildings were the responsibility of the Ministry of Education. Such responsibility, however, was limited to the allocation of funds to the different school districts for urgently needed school repair. The only funds then available came from the Ministry's regular budget which was disbursed mostly for operational expenses leaving very little for capital investments.

In 1950, the Ministry recognized the need for a central organ that would be charged exclusively with the design, construction and repair of school buildings on a countrywide basis, and the Committee on School buildings. (Comité de Edificaciones Escolares) was created. This committee, however, had little support within the Ministry and a meager operating budget. About the same time, or before, the Interamerican Cooperative Service for School Buildings (SCIDE) came into being. This Service was essentially a vehicle for channelling U.S. assistance funds into the then urgently needed School building program countrywide. The Committee of School Buildings continued to handle school repairs and both organizations existed simultaneously until the early 1960's.

In 1963, the Department of School Architecture (Departamento de Arquitectura Escolar) was created to replace both the Committee and SCIDE under the Ministry of Education. This was the first time in the history of the Ministry that a professionally trained group was retained to focus on school buildings in functional terms. This Department also proceeded to organize and implement a systematic school construction and maintenance program. The involvement of this Department, however, was strictly in an architectural sense, and educational planning and other functions were retained by other organs of the Ministry. Typical responsibilities of the Department during this period included new designs at pre determined locations, additions, remodeling, design of certain teaching aids and furniture (blackboards, desks,

etc.), and construction contract administration. In order to alleviate the chronic budget shortages for the Department, a Supreme Decree was published on March 9, 1966 titled "National Plan for School Buildings" which levied a 1% tax on all public and private salaries paid in Bolivia. Proceeds of this tax were to provide the operational and Capital investment needs of the Department.

The School Architecture Department remained a part of the Ministry of Education until 1969, at which time it was transferred to the Ministry of Urbanism and Housing in a major re-organization of the departments of the Executive Branch of the GOB. It remained a part of this Ministry until March 2, 1971.

CONES came into being on that date through a Supreme Decree creating it and charging it with the administration of the 1% salary tax fund ^{1/}. CONES was created as a semi-autonomous agency independent in its internal structure, but equally responsible to both the Ministries of Education and Urbanism and Housing.

3. Legal Responsibilities and Functions of CONES

CONES is equally responsible to both Ministries because of its history and because the Ministry of Urbanism and Housing is charged with national development, including educational facility planning. Its legal charter

^{1/} The 1% applies to those employees earning 2,000 pesos/month or more. Those earning less paid at a graduated scale ranging from 0.25% - 0.75%.

charges it with two basic duty areas (a) to develop and implement the "National School Facility Plan" in coordination with the planning arm of the Ministry of Education and the Ministry of Urbanism and Housing and (b) to promote, centralize and manage all financial resources, existing or contemplated, assigned to the construction of school facilities.

CONES's responsibility under the National School Facility Plan consists of the design and construction of school buildings contrywide, undertaking maintenance and repair of the all school facilities and the supply of furnishings, equipment and school supplies other than textbooks. Its financial responsibility under the decree consists essentially of the collection and suggested expenditure of the 1% salary tax.

4. Organization and Current Staffing

CONES is managed by an executive director nominated by the Minister of Education with the concurrence of the Minister of Urbanism and Housing. The executive director is responsible to a six man board of directors consisting of representatives of the Ministries of Education, Urbanism & Housing, Planning & Coordination and Finance, the executive director himself and non-voting board Secretary. The Board of Directors, in turn, is equally responsible to the Minister of Education through the Department of Education Planning and to the National Planning Group in the case of the Ministry of Urbanism and Housing.

The executive director, normally an architect, is assisted in his functions by a deputy director and planning and legal departments. CONES operations are carried out through six departments: economic and finance, project design, calculations and cost estimated, bidding and contract management, maintenance and repair and construction inspection. Field offices with responsibility for collecting the salary tax are located in all departmental capitals. Field representatives of the engineering side of CONES's operations are contracted on a job basis.

At present, CONES employs nine architects (including the Executive Director) and 4 engineers on a full time basis. In addition, it employs five architects on a part-time basis and contracts four engineers and one architect for field operations. These are assisted with Secretarial (11 persons) and sub-professional staff (14).

The economic and finance department employs 11 people in La Paz and 12 people in the field, (5 in Santa Cruz and one in each of the other departmental capitals), charged with the collection and monitoring of the 1% tax. These include economists, accountants and bookkeepers. Monies thus collected are turned into the National Treasury.

An organizational chart of CONES is shown in this annex.

5. Current Workload

The projected work schedule of CONES for the school year 1974-1975 includes 61 different projects in all nine departments of the country, totaling

an estimated cost of \$3.9 Million. Below is a summary table taken from CONES's records showing a breakdown of this work load.

<u>Department</u>	<u>No. Projects</u>	<u>Estimated Cost</u> U. S. Dollars
La Paz	14	1,235,000
Cochabamba	6	343,000
Potosí	8	542,000
Oruro	8	433,000
Chuquisaca	2	145,000
Tarija	3	149,000
Santa Cruz	13	722,000
Beni	6	266,000
Pando	1	59,000
Total	61	3,894,000

The average cost of the 61 projects is estimated at \$64,000, ranging from \$169,000 for the largest project to about \$1,600 for the smallest.

These projects are in varying degrees of development, some being almost complete and lacking only minor work, others being still in the conceptual stages. Without exception, all projects are school facility projects that include mostly classrooms, but also dormitories, laboratories, gymnasiums, etc.

6. Financial Picture.

The economic and financial department of CONES estimates that it collects 1,700,000 Bolivian pesos (\$85,000) per month as a result of the 1% tax,

or a total of \$1,020,000^{1/} annually. CONES expends a maximum of 12% of this figure allotted to it by law for the salaries of its employees and its operating expenses, or approximately \$120,000 per year.

7. Capacity of CONES to Undertake Project Engineering Services

CONES estimates that at present they contract about 10% of all engineering work to the private sector, and rely on five part-time architects to carry out their workload. The estimated cost of the nine centers is \$4.8 Million dollars, or approximately 125% of CONES's workload. It would be impossible for CONES to carry out the project without a proportionate increase in their professional staff.

The experience of CONES has been exclusively in the design of classrooms and auxiliary facilities. The District Educational Development Centers are functionally office buildings with a certain degree of complexity.

CONES has had a history of problems and delays with its routine relatively small undertakings. It also enjoys a less than flattering reputation among the local contractors because of its slowness in processing payments, its delays in issuing change orders and its indecisiveness when decisions are required. This project is a major undertaking with definite

^{1/} The apparent discrepancy between the \$3.9 estimated work load and the \$1,0 Million in revenues is that the current work load will not be terminated in one or even two years, and that the 1% tax is not the only resource used for school construction.

deadlines for implementation and disbursement that needs to attract the best of the local constructors.

It is clear from the foregoing that CONES, at this stage of its development, and with its current staffing and workload is unable and unsuitable to undertake the design and construction inspection of these buildings. It is the conclusion and recommendation of this analysis that consulting services be contracted from the private sector.

8. Recommendations for Institutional Improvements

The following recommendations are made on the basis of what we have learned about CONES during this analysis, and the history of association between CONES (and its preceding agencies) and the USAID/Bolivia Engineering and Transportation Division over the years in the implementation of AID financed school construction activities.

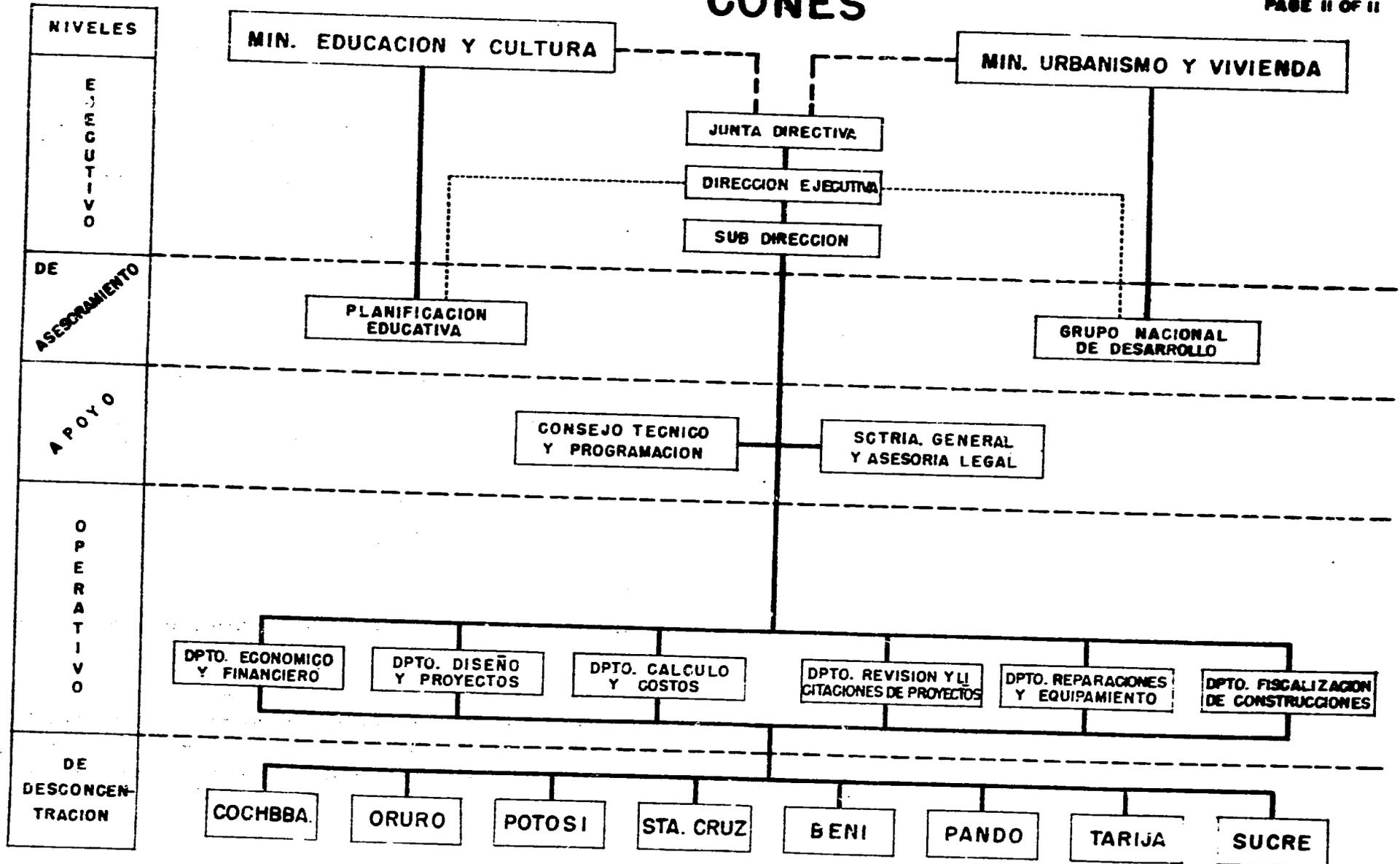
a. Improved collection procedures. - Perhaps the collection of the 1% tax could be delegated to local banks, which would release personnel now engaged in collection to concentrate on the inspection and reinforcement of the system. Also the collection base should be expanded. It is estimated that the tax now collected represents only 1% of the salaries of the public sector and a very small portion of the private sector. All self employed persons and all Bolivian employees of international and diplomatic missions at present do not pay this tax. Such improvements should yield considerable additional revenues.

- b. Modernization and Automatization of Accounting Procedures: It is our understanding that the department of Economics and Finance of CONES lacks the modern equipment to properly collect, process and account for revenues collected. The collection system needs to be streamlined and efficiencies introduced through the introduction of modern accounting machines, and the automatization of routine functions.
- c. Creation of an Education Facility Planning Department: This department would fill a needed complementary function of CONES's construction responsibilities. It would also enhance communication with the education planning department of the Ministry of Education. As an example, at present facility site location selection is an ad hoc decision that follows no particular guide or standard.
- d. Creation of a Land Acquisition Section: CONES lacks a group of skilled personnel who would carry out this function by undertaking preliminary site surveys and property record checks that would anticipate problems with acquisition before they occur and when other options are still open. At present, 13 out of 61 projects or 21%, are being delayed because of land related problems.
- e. Improvement and Expansion of the Current Staff: The turnover rate of professional personnel at CONES is rather high, and most employees appear overworked. A workload analysis should be made in order to determine the efficient utilization of the current resources and allow for the

orderly expansion of the staff to meet the rising demand on their time. A skilled group of surveyors, topographers and construction inspectors should be added. CONES should adopt incentives in order to attract and retain these personnel.

It would appear, however, that the foregoing suggests that a restructuring of CONES may be warranted. Such restructuring would consist of two elements: (a) relieving CONES of its tax collection functions and assigning that to either the Ministry of Finance or another organ of the Ministry of Education, (b) making CONES an integral part of the Ministry of Education as its school design, construction and maintenance arm and terminating its association with the Ministry of Urbanism and Housing.

"CONES"



PRICE COMPUTATIONS

Base price (La Paz, April, 1974)	=	\$ 113/M2	
Escalation (30% per year for 2 years)	=	\$ 67.80/M2	
Future base price (La Paz, Spring, 1976)	=	<u>180.80</u>	
La Paz Center:	2.500 M2 x 180.80	= 452,000	Say \$ 450,000
Cochabamba	2.500 M2 x 171.76	= 429,400	" 430,000
Santa Cruz	2.500 M2 x 216.00	= 540,000	" 540,000
Oruro	1.900 M2 x 180.80	= 343,520	" 345,000
Potosí	1.900 M2 x 198.80	= 377,720	" 380,000
Tarija	1.900 M2 x 198.80	= 377,720	" 380,000
Sucre	1.900 M2 x 189.84	= 360,696	" 360,000
Beni	1.500 M2 x 216. --	= 324,000	" 325,000
Pando	1.500 M2 x 235. --	= 352,500	" 355,000
Sucre Administr. Inst.	500 M2 x 189.84	= 94,920	" 95,000
Tarija Administr. Inst.	530 M2 x 198.80	= 105,364	" 105,000

CONSTRUCTION COST BREAKDOWN

Bid Item Breakdown - City of La Paz Prices
 Typical Two Story Office Building 1.900 M2 both floors
 April, 1974

Work Item	Unit	Qty.	Unit price	Total in \$b.
1. Mobilization and site preparation	Lump sum			30,000
2. Structural Excavations				
a) isolated footings	m3	150	66	9,900
b) Continuous footings	m3	90	30	2,700
3. Earthwork	m3	200	24	4,800
4. Structural reinforced concrete				
a) Spread footings	m3	100	2280	228,000
b) Columns	m3	50	3480	174,000
c) Beams and lintels	m3	90	3360	302,400
d) Slab	m3	105	3000	315,000
e) Stairways	m3	5	3360	16,800
5. Wall footings	m3	95	360	34,200
6. wall sills	m3	95	480	45,600
7. Brick walls	m2	2700	120	324,000
8. Interior brick partitions	m2	190	72	13,680
9. Floors				
a) Tongue and groove wood, Ground Fl.	m2	870	360	313,200
b) " " " " , Second Fl.	m2	880	240	211,200
c) Mosaic Tile	m2	63	228	14,364
d) Concrete	m2	16	36	576
10. Stairways trimming	m2	40	60	2,400
11. Baseboards				
a) Wooden baseboards	m1	1050	60	63,000
b) Mosaic baseboards	m1	25	72	1,800
c) Concrete baseboards	m2	105	48	5,040
d) Glazed tiles	m2	30	480	14,400
12. Interior plastering (gypsum)	m2	7350	36	264,600

Work Item	Unit	Qty.	Unit price	Total in \$b.
13. False ceilings (w/gypsum)	m2	30	132	3,960
14. Exterior plastering	m2	950	108	102,600
15. Window sills	ml	190	132	25,080
16. Wooden doors	m2	225	420	94,500
17. Steel windows	m2	360	540	194,400
18. Interior painting	m2	7300	20	146,000
19. Glass panes	m2	350	420	147,000
20. Door locks				
a) Interior	ea.	55	300	16,500
b) Exterior	ea.	5	600	3,000
21. Hardware	Lump sum			42,000
22. Iron work	m2	6	1,200	7,200
23. Banisters	ml	25	540	13,500
24. Roofing	m2	980	288	282,240
25. Electrical Installation	ea.	340	425	144,500
26. Telephone Installation	ea.	50	1,200	60,000
27. Water supply installation	ea.	25	600	15,000
28. Sanitary Installation				
a) W. C.	ea.	5	2,500	12,500
b) Washbasins	ea.	7	1,800	12,600
c) Urinals	ea.	4	1,800	7,200
d) Showers	ea.	2	1,200	2,400
e) Water heaters	ea.	2	18,000	36,000
f) ϕ 4" pipe for disposal	ml	30	600	1,800
29. Downspouts and gutters, storm drains	Lump sum			42,000
30. Sewerage - Inspection chambers	ea.	17	600	10,200
31. Concrete pipe for sewer				
ϕ 2 1/2"	ml	110	40	4,400
ϕ 4"	ml	130	80	10,400
ϕ 6"	ml	70	120	8,400
32. Sewerage connection	Lump sum			12,000
33. Floor sanding and polishing	m2	1900	20	38,000
34. Cleaning	Lump sum			11,000

Work Item	Unit	Qty.	Unit price	Total in \$b.
35. Perimeter wall	m	160	1,000	160,000
36. Mechanical equipment	Lump sum			105,000
37. Parking and landscaping	Lump sum			115,000

Total in \$b. 4,294,240

Total in \$us. 214,700

Price per square meter $\frac{214,700}{1,900} = 113 \text{ \$/m}^2$

PROJECT AREA PRICE INDEX

Using La Paz as a base, it is estimated that the following list reflects construction price indices for the different project areas of Bolivia:

La Paz	100%
Cochabamba	95
Santa Cruz	120
Tarija	110
Potosí	110
Sucre	105
Oruro	100
Beni	120
Pando	130

The differences in the index reflect mostly transportation costs but also the demand for these materials.

DERIVATION OF UNIT PRICES

Typical Computations
 La Paz Prices, April, 1974

Example (1)

Unit Price Breakdown for 1 cu. meter of reinforced concrete

<u>Materials:</u>	1. Cement	6. bags	at \$b.	44.50	\$b.	267. --	
	2. Sand	0.41 m3	at	60.00		24.60	
	3. Gravel	0.82 m3	at	60.00		49.20	
	4. Steel rein-						
	forcement	90 Kg.	at	14.50		1.305.00	
	5. Wood	65 sq. ft.	at	5.20		338.00	
	6. Nails	1.5 Kg.	at	21.00		31.50	
	7. Wire	0.85 Kg.	at	17.00		14.45	
<u>Labor:</u>	Sub-contract per M3						570.00
<u>Equipment:</u>	Concrete mixer, etc.						55.00
				TOTAL		\$b. 2,599.75	
<u>Overhead:</u>	15%					398.21	
						\$b. 3,052.96	
<u>Profit:</u>	10%					305.29	
						\$b. 3,358.25	
			Adopted:		\$b. 3,360.00		

Example (2)

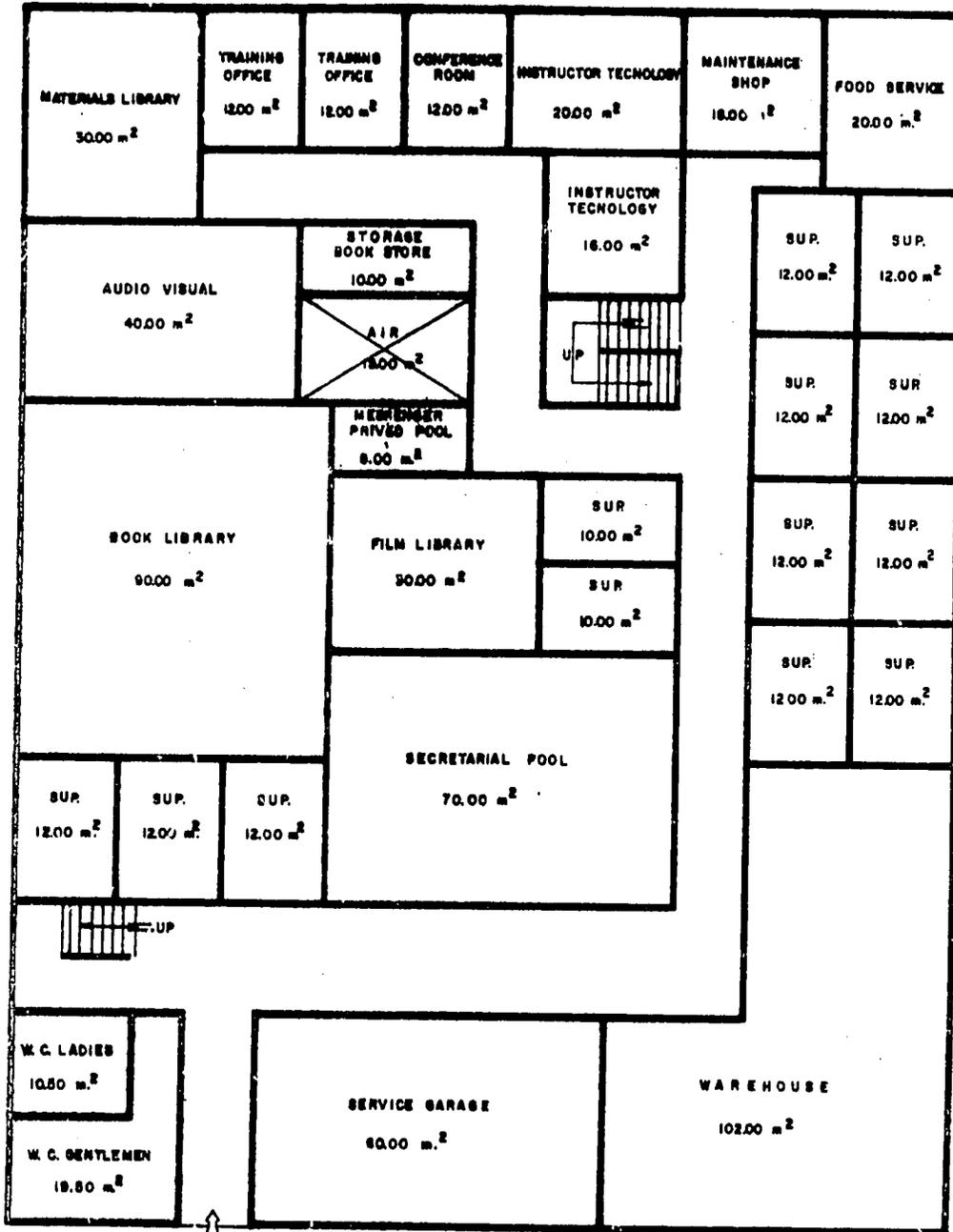
Unit Price Breakdown for 1 sq. mt. of brick wall

<u>Materials:</u>	1. Bricks	32 ea.	at \$b.	1.80	\$b.	57.60
	2. Mortar	0.03 m3	at	360. --		10.95
<u>Labor:</u>	1. Brick layer	.18 eff.	at	72.20		13.00
	1. Assistant	.18 eff.	at	45.60		8.21
<u>Equipment:</u>	Scaffolding, etc.		Lump sum			3.50
						\$b. 93.26
<u>Overhead:</u>	15%					13.99
						\$b. 107.25
<u>Profit:</u>	10%					10.73
						\$b. 117.98
			Adopted:		\$b. 120. -/m3	

DISTRICT EDUCATION DEVELOPMENT CENTER

SCHEMATIC FLOOR PLAN

ANNEX III 16 OF 20
EXHIBIT C
PAGE 1 OF 3



ENTRANCE

S T R E E T

GROUND FLOOR

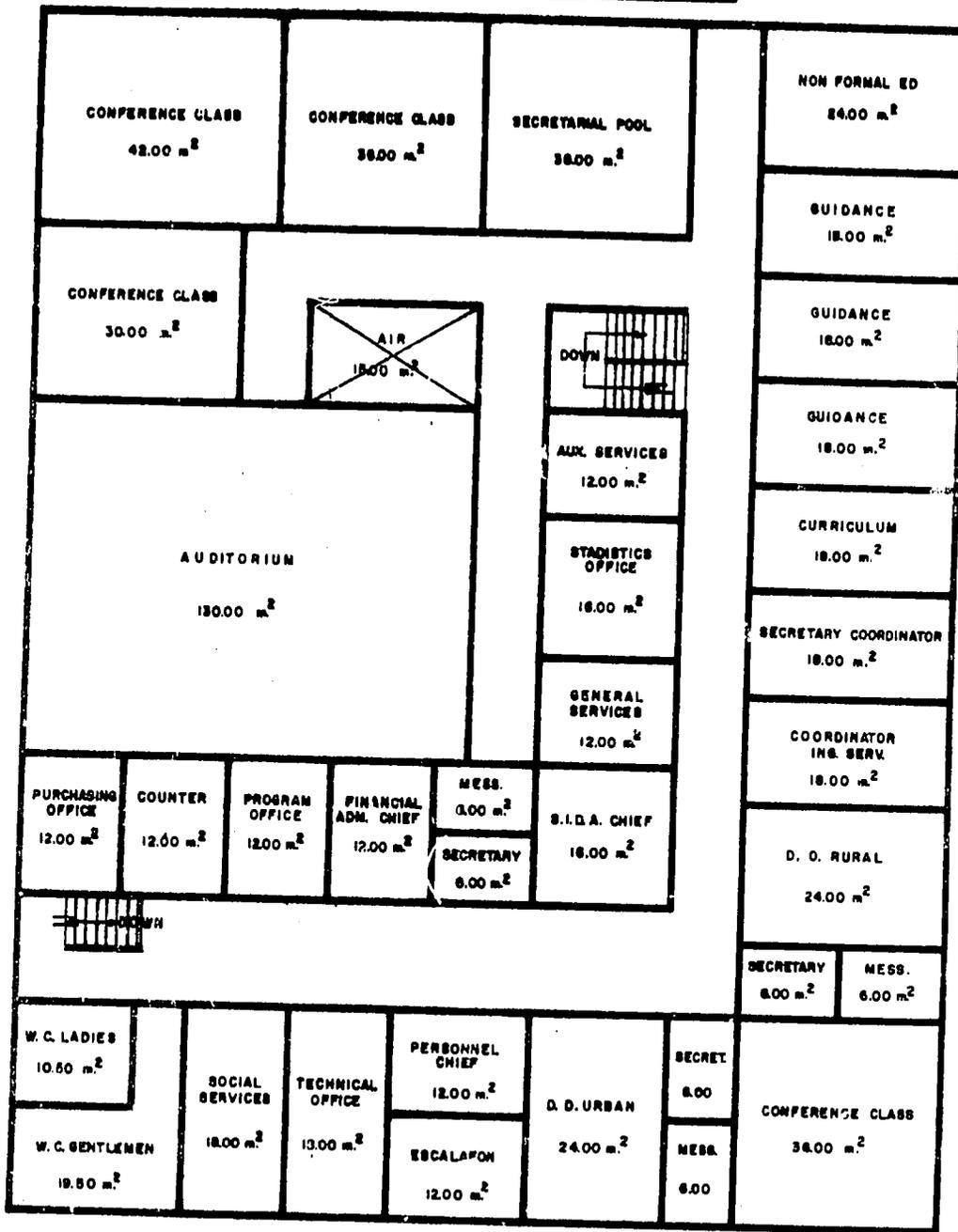
GROUP I - LA PAZ, COCHABAMBA, SANTA CRUZ AREA 1250 m²
 GROUP II - POTOSI, SUCRE, TARIJA, ORURO AREA 950 m²
 GROUP III - BENI, PANDO AREA 750 m²

SUPERFICIE TOTAL 950 m²

ESCALA 1:200

DISTRICT EDUCATION DEVELOPMENT CENTER SCHEMATIC FLOOR PLAN

ANNEX II 19 OF 20
EXHIBIT C
PAGE 2 OF 8



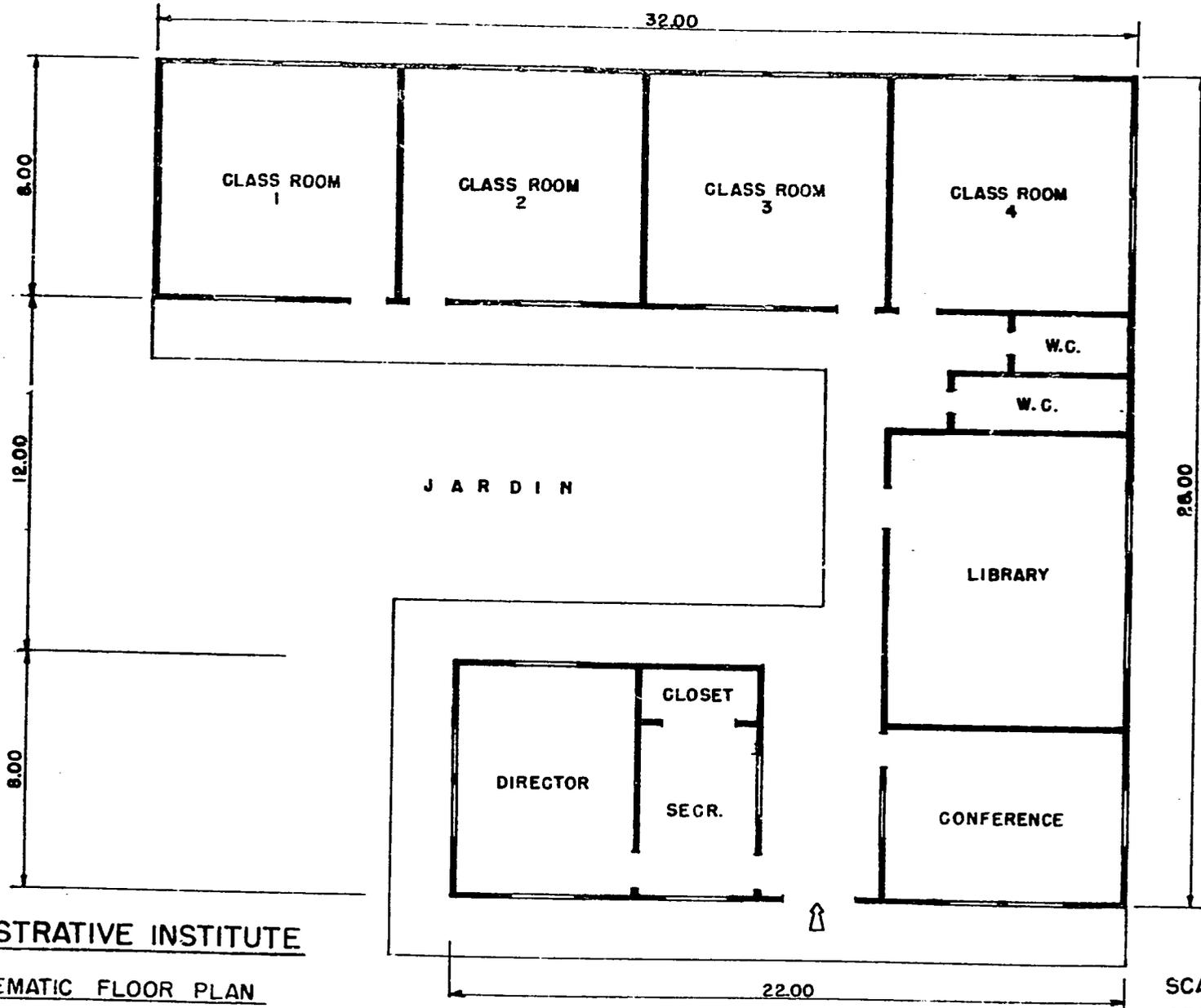
S T R E E T

SECOND FLOOR

GROUP I - LA PAZ, COCHABAMBA, SANTA CRUZ	AREA 1250 m ²
GROUP II - POTOSI, SUCRE, TARIJA, ORURO	AREA 950 m ²
GROUP III - BENI, PANDO	AREA 750 m ²

SUPERFICIE TOTAL 950 m²

ESCALA 1:200



ADMINISTRATIVE INSTITUTE

SCHEMATIC FLOOR PLAN

ANNEX IV 20 OF 20
EXHIBIT O
PAGE 3 OF 3

SCALE 1:200
AREA 542 mts.²

EDUCATION MANAGEMENT LOAN
FINANCIAL PLAN AND COST ESTIMATES
(US\$ - 000)

	<u>A. I. D.</u>	<u>L C A N</u>					
	<u>Foreign Curr.</u>	<u>Local Curr.</u>	<u>Total</u>	<u>A.I.D.</u>	<u>GOB</u>	<u>Community</u>	<u>Total</u>
				<u>Grant</u>	<u>Contrib.</u>	<u>Contrib.</u>	<u>Project</u>
							<u>Other</u>
							<u>Donors</u>
1) <u>District Centers</u>							
<u>Land for Sites</u>							
Construction	1,070.0	2,495.0	3,565.0		702.0		702.0
Engineering Services	160.0	237.0	397.0				3,565.0
Contingencies	185.0	413.0	598.0				397.0
Furniture & Office Equip.	573.0	-	573.0				598.0
Educational Equip. (In- struction Media)	400.0	-	400.0		240.0		813.0
Vehicles	354.0	-	354.0				400.0
Motorcycle & Bicycles	-	-	-				354.0
Training Activities	32.5	33.7	66.2		150.0		150.0
Technical Assistance	80.0	12.0	92.0	259.0	561.0		627.2
Travel & Per Diem	-	47.0	47.0		10.5		361.5
Sub-Total	<u>2,854.5</u>	<u>3,237.7</u>	<u>6,092.2</u>	<u>259.0</u>	<u>1,663.5</u>		<u>8,014.7</u>

	A. I. D. L O A N			A.I.D. Grant	GOB Contrib.	Community Contrib.	Total Project	Other Donors
	Foreign Curr.	Local Curr.	Total					
2) <u>Professional Develop.</u>								
Admin. Institutes								
Land								
Construction	60.0	140.0	200.0		90.0		90.0	
Engineering	9.0	13.0	22.0				200.0	
Contingencies	10.0	23.0	33.0				22.0	
Training Activities	160.0	135.1	295.1				33.0	
Technical Assistance	96.0	13.0	109.0	152.0	1,629.0		1,924.1	
Vehicles	18.0	-	18.0		8.0		269.0	
Materials & Equip.	64.0	19.0	83.0				18.0	
Sub-Total	417.0	343.1	760.1	152.0	1,727.0		2,639.1	
3) <u>Planning & Evaluation</u>								
Develop. of Textbook Policy	-	5.0	5.0				5.0	
Plan & Eval. of Printing Plant	-	1.0	1.0				1.0	
Loan Program Eval. Plan	-	15.0	15.0				15.0	
Technical Assistance	77.0	52.0	129.0	338.0	14.0		481.0	450.0
Sub-Total	77.0	73.0	150.0	338.0	14.0		502.0	450.0

	A. I. D. L O A N			A.I.D. Grant	GOB Contrib.	Community Contrib.	Total Project	Other Donors
	Foreign Curr.	Local Curr.	Total					
4) <u>Research & Analysis</u>								
Field Research Proj.	-	32.0	32.0					
Equip. & Materials	35.0	8.0	43.0				32.0	
Travel & Per Diem	-	44.0	44.0				43.0	
Publications	-	10.0	10.0				44.0	
Health Pilot Studies	-	9.0	9.0				10.0	
Training Activities	60.0	56.2	116.2				9.0	
Technical Assistance	-	30.0	30.0	149.0	226.0		342.2	
Mobile Units	20.0	-	20.0		5.0		184.0	
Mobile Units - Feas.	-	25.0	25.0				20.0	
Comm. - Feas.	-	25.0	25.0				25.0	
Sub-Total	115.0	239.2	354.2	149.0	231.0		734.2	
5) <u>Information Management</u>								
Equip. & Materials	420.0	48.0	468.0				468.0	
Equip. Maintenance	10.0	20.0	30.0				30.0	
Travel & Per Diem	-	41.0	41.0				41.0	
Publications	-	3.0	3.0				3.0	
Training Activities	-	19.5	19.5				294.5	
Technical Assistance	-	25.0	25.0	152.0	275.0		182.0	
Sub-Total	430.0	156.5	586.5	152.0	280.0		1,018.5	
6) <u>Financial Management</u>								
Equip. & Materials	8.0	3.0	11.0				11.0	
Training Activities	12.2	27.5	39.7				99.7	
Technical Assistance	91.0	16.0	107.0	123.0	60.0		237.0	
Sub-Total	111.2	46.5	157.7	123.0	67.0		347.7	

	A. I. D. L O A N			A.I.D. Grant	GOB Contrib.	Community Contrib.	Total Project	Other Donors
	Foreign Curr.	Local Curr.	Total					
7) <u>Curriculum & Instructional Materials</u>								
Equip. & Materials	28.0	7.0	35.0				35.0	
Publications	-	1,032.0	1,032.0		125.0	467.0	1,624.0	
Other Instruct. Mat.	-	125.0	125.0				125.0	
Training Activities	60.0	55.2	115.2		247.0		362.2	
Technical Assistance	134.0	10.0	144.0	107.0	7.5		258.5	
Sub-Total	222.0	1,229.2	1,451.2	107.0	379.5	467.0	2,404.7	
8) <u>Educational Facility Planning</u>								
Equip. & Materials	34.0	11.9	45.9				45.9	
Equip. Maintenance	-	5.0	5.0				5.0	
Training Activities	4.0	21.2	25.2		13.0		38.2	
Technical Assistance	19.0	3.0	22.0	21.0	1.2		44.2	
Sub-Total	57.0	41.1	98.1	21.0	14.2		133.3	
9) <u>Project Administration</u>								
Technical Assistance	-	-	-	228.0	6.9		234.9	
CRA Operations	-	-	-		563.0		563.0	
Sub-Total	-	-	-	228.0	569.9		797.9	
TOTAL	4,283.7	5,366.3	9,650.0	1,529.0	4,346.1	467.0	16,592.1	450.0
Percentage			58.2%	9.2%	29.8%	2.8%	100%	

SCHEDULE OF TECHNICAL ASSISTANCE

	Man - Months				Estimated Costs (US\$ - 000)												
	1975	1976	1977	1978	USAID Gr. Ln.	GOB	OTHER DONOR	1975	1976	1977	1978	USAID Gr. Ln.	GOB	OTHER DONOR	TOTAL		
<u>District Educational</u>																	
<u>Development Centers</u>																	
Community Education	-	12	6	-	18	-	-	-	76	31	-	107	-	-	-	107	
Organization & Manag.	12	12	-	-	24	-	-	76	76	-	-	152	-	-	-	152	
Organization & Manag.	-	-	4	2	-	6	-	-	-	21	11	-	32	-	-	32	
Curr. Develop./Materials	-	2	2	2	-	6	-	-	11	11	11	-	33	-	-	33	
Student Guidance	-	2	1	1	-	4	-	-	11	6	6	-	23	-	-	23	
Student Guidance	-	10	-	-	-	-	10	-	4	-	-	-	-	4	-	4	
Sub-Total	12	38	13	5	42	16	10	76	178	69	28	259	88	4	-	351	
<u>Financial Management</u>																	
Program Budget	8	6	-	-	14	-	-	55	31	-	-	86	-	-	-	86	
Program Budget	-	-	4	-	-	4	-	-	-	21	-	-	21	-	-	21	
Program Budget (CNES)	4	4	-	-	-	-	8	2	2	-	-	-	-	4	-	4	
Systems Analyst	3	-	-	-	3	-	-	16	-	-	-	16	-	-	-	16	
Systems Analyst	-	3	1	-	-	4	-	-	16	6	-	-	22	-	-	22	
Programmer	2	-	-	-	-	2	-	11	-	-	-	-	11	-	-	11	
Programmer	-	1	1	-	-	2	-	-	6	6	-	-	12	-	-	12	
Financial Reform Mgt.	4	-	-	-	4	-	-	21	-	-	-	21	-	-	-	21	
Financial Reform Mgt.	-	4	2	-	-	6	-	-	21	11	-	-	32	-	-	32	
Financial Reform Mgt. (U-CAT)	4	4	2	-	-	-	10	2	2	1	-	-	-	5	-	5	
Sub-Total	25	22	10	-	21	18	18	107	78	45	-	123	98	9	-	230	

UNCLASSIFIED
ANNEX V 5 OF 21
Exhibit B
Page 1 of 4

	Man - Months				USAID			Estimated Costs (US\$ - 000)			TOTAL					
	1975	1976	1977	1978	Gr.	Ln.	GOB	OTHER DONOR	1975	1976	1977	1978	USAID Gr.	GOB Ln.	OTHER DONOR	
Information Management																
Information Mgt. Specialist	12	12	-	-	24	-	-	-	76	76	-	-	152	-	-	152
Management/Computer	24	24	12	-	-	-	60	-	10	10	5	-	-	25	-	25
Sub-Total	36	36	12	-	24	-	60	-	86	86	5	-	152	-	25	177
Planning - Evaluation																
Planning Org/Admin.	12	-	-	-	12	-	-	-	76	-	-	-	76	-	-	76
Planning Org/Admin.	-	1	1	-	-	2	-	-	-	6	6	-	-	12	-	12
Education Financing	3	3	3	-	9	-	-	-	16	16	16	-	48	-	-	48
Efficiency/Resource/Utilization	12	12	12	-	-	-	36	-	5	5	5	-	-	-	15	15
Develop/Planning Instruments	18	18	18	-	-	-	54	-	8	8	8	-	-	-	24	24
Mgt. Goal Setting	2	-	-	-	-	2	-	-	11	-	-	-	-	11	-	11
Mgt. Goal Setting	-	1	1	-	-	2	-	-	-	6	6	-	-	12	-	12
Monitoring/Audit	3	-	-	-	-	3	-	-	16	-	-	-	-	16	-	16
Monitoring/Audit	-	2	1	-	-	3	-	-	-	11	6	-	-	17	-	17
Audit Evaluation	-	2	1	1	-	4	-	-	-	11	6	-	-	17	-	17
Communications	13	-	-	-	-	-	13	-	5	-	-	-	-	-	-	5
Ed. Plan Development	12	12	12	-	-	-	-	36	50	50	50	-	-	-	-	150
Rural Ed. Planning	12	12	6	6	36	-	-	-	76	76	31	31	214	-	-	214
Rural Ed. Planning	12	12	12	-	-	-	-	36	50	50	50	-	-	-	-	150
Rural Ed. Planning	12	12	12	-	-	-	-	36	50	50	50	-	-	-	-	150
Sub-Total	111	87	79	7	57	16	103	108	363	289	234	31	338	85	44	450

UNCLASSIFIED
ANNEX V -6 of 21
Exhibit B
Page 2 of 4

	Man - Months				USAID			GOB	OTHER DONOR	Estimated Costs (US\$ - 000)				USAID	GOB	OTHER DONOR	TOTAL
	1975	1976	1977	1978	Gr.	Ln.				1975	1976	1977	1978				
Research/Analysis																	
Research Management	12	6	-	-	18	-	-	-	76	31	-	-	107	-	-	-	107
Bol. H/R Availability	12	-	-	-	-	-	12	-	5	-	-	-	-	5	-	-	5
Social Research	24	12	12	12	-	-	60	-	10	5	5	5	-	-	25	-	25
Feasibility Study-Commun.	4	-	-	-	4	-	-	-	21	-	-	-	21	-	-	-	21
Feasib. Study - Mobile Units	4	-	-	-	4	-	-	-	21	-	-	-	21	-	-	-	21
Sub-Total	56	18	12	12	26	-	72	-	133	36	5	5	149	-	30	-	179
Ed. Facilities Mgt.																	
Org/Ed. Facilities Office	4	-	-	-	4	-	-	-	21	-	-	-	21	-	-	-	21
Org/Ed. Facilities Office	-	2	2	-	-	4	-	-	-	11	11	-	-	22	-	-	22
Sub-Total	4	2	2	-	4	4	-	-	21	11	11	-	21	22	-	-	43
Professional Development																	
Admin. of Training Centers	12	12	-	-	24	-	-	-	76	76	-	-	152	-	-	-	152
Admin. of Training Centers	-	-	3	1	-	4	-	-	-	-	16	6	-	22	-	-	22
Ed. Institutional Eval.	-	1	1	1	-	3	-	-	-	6	6	6	-	18	-	-	18
Decision Making	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theory Models	-	1	-	-	-	1	-	-	-	6	-	-	-	6	-	-	6
Instructional Leadership	-	2	-	-	-	2	-	-	-	11	-	-	-	11	-	-	11
Research/Eval of Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Personnel/Perf. Eval.	-	1	2	-	-	3	-	-	-	6	11	-	-	17	-	-	17
School Admin-Elem/Sec.	2	-	-	-	-	2	-	-	11	-	-	-	-	11	-	-	11
School Admin-Elem/Sec.	-	2	2	-	-	4	-	-	-	11	11	-	-	22	-	-	22
Training for Integrated Serv.	6	-	-	-	-	6	-	-	2	-	-	-	-	2	-	-	2
Sub-Total	20	19	8	2	24	19	6	-	89	116	44	12	152	107	2	-	261

Curriculum/ Instructional Materials	Man - Months				USAID		GOB	OTHER DONOR	Estimated Costs (US\$ - 000)				GOB	OTHER DONOR	TOTAL	
	1975	1976	1977	1978	Gr.	Ln.			1975	1976	1977	1978				USAID Gr.
Audio-Lingual/Lang Arts	12	6	-	-	18	-	-	-	76	31	-	-	107	-	-	107
Audio-Lingual/Lang Arts	-	-	3	2	-	5	-	-	-	-	16	11	-	27	-	27
Social Studies	3	-	-	-	-	3	-	-	16	-	-	-	-	16	-	16
Social Studies	-	2	1	-	-	3	-	-	-	11	6	-	-	17	-	17
Mathematics	3	-	-	-	-	3	-	-	16	-	-	-	-	16	-	16
Science	3	-	-	-	-	3	-	-	16	-	-	-	-	16	-	16
Science	-	2	1	-	-	3	-	-	16	-	-	-	-	16	-	16
Research/Eval of Prototype Components	3	-	-	-	-	3	-	-	-	11	6	-	-	17	-	17
Modernization of MOE	-	3	-	-	-	3	-	-	16	-	-	-	-	16	-	16
Printing Capacity	6	-	-	-	-	-	6	-	-	16	-	-	-	16	-	16
Sub-Total	30	13	5	2	18	26	6	-	143	69	28	11	107	141	3	251
<u>Ed. Administration</u>																
Chief of Party	12	12	12	-	36	-	-	-	76	76	76	-	228	-	-	228
TA Administration																
TOTALS									1094	939	517	87	1529	541	117	2637
														658		

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Publication of Textbooks and Teacher's Guides
Assumption for the Projected Cash Flow

1975 - 1984

- (1) Collection of \$b. 2.50 in 1975 for use of books to all rural and urban children grades 1-8.
We have assumed that the amount of collection will be increased by \$b. 2.50 every three years.
- (2) Ministry of Education will provide \$b. 20.00 for each primary school child and \$b. 14.00 for each person enrolled in adult education as budget support for instructional materials. We have also assumed these amounts will be increased by \$b 5.00 every three years.
- (3) AID Loan for publications of US\$ 1,032,000.00 to be disbursed US\$ 976,000.00 in 1975 and US\$ 56,000.00 in 1976.
- (4) We have assumed a 4 year life of each textbook and guide and printing of 3 new manuscripts every year plus the necessary reprints needed every four years.

The following are the printing costs for 1975 in USDollars:

Mathematic textbook	\$.95
Science, in five signatures	2.70
Other subjects, in five signatures	1.30
Primers, Spanish-Aymara and Spanish-Quechua	.93
Science, Spanish-Aymara and Spanish-Quechua, in five signatures	5.52
Other subjects, Spanish-Aymara and Spanish-Quechua, in five signatures	2.60
Teacher's guide, Science	3.70
Teacher's guide, Other subjects	2.13

We have assumed an increase of 5% of previous year in publication costs each year to cover price increases due to inflation. We have also assumed that approximately 41% of the total students correspond to rural schools.

We have considered a 5% increase per annum in number of textbooks and teacher's guides (based in 1975) corresponding to grades 1-8, but we have also considered a 15% decrease of previous grade in number of students in the following grade.

- (5) We have assumed that the textbook project will expend US\$ 100,000.00 in 1975 for newspaper supplements, pamphlets, charts, and other small textbooks for grades 4-6. A 5% yearly increase in printing costs have been assumed.
- (6) We have not included any distribution costs for the textbooks. It was assumed that these costs would be absorbed in the Mined budget for the District Centers.
- (7) Rate of exchange \$b 20 equal \$ 1.

TEXTBOOKS AND BILINGUAL PILOT PROJECTS FUND
Projected Cash Flow for the year 1975 - 1984 (US\$ -000)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Source of Cash										
Cash on Hand-Beginning of year	-	183	379	1272	2145	1654	1696	2572	3480	3520
Income from all primary students:										
Urban	65(1)	136(1)	140(1)	146(1)	231(1)	243(1)	255(1)	356(1)	372(1)	392(1)
Rural	43(1)	92(1)	98(1)	106(1)	165(1)	174(1)	183(1)	256(1)	268(1)	280(1)
Contribution by Ministry of Education for Educational Materials:										
Urban	45(2)	542(2)	704(2)	732(2)	769(2)	968(2)	1017(2)	1068(2)	1308(2)	1373(2)
Rural	30(2)	365(2)	490(2)	525(2)	552(2)	695(2)	730(2)	766(2)	939(2)	986(2)
Adults	-	25(2)	28(2)	41(2)	45(2)	50(2)	69(2)	76(2)	84(2)	112(2)
A. I. D. Loan Contribution	976(3)	56(3)	-	-	-	-	-	-	-	-
TOTAL CASH SOURCES	1159	1399	1839	2822	3907	3784	3950	5094	6451	6663
Utilization of Cash										
Printing costs of textbooks and guides:										
Urban	517(4)	540(4)	270(4)	331(4)	1257(4)	1156(4)	734(4)	869(4)	1642(4)	1952(4)
Rural	359(4)	375(4)	187(4)	230(4)	874(4)	804(4)	510(4)	604(4)	1141(4)	1357(4)
Printing of supplements, pamphlets, etc.	100(5)	105(5)	110(5)	116(5)	122(5)	128(5)	134(5)	141(5)	148(5)	155(5)
TOTAL CASH UTILIZATION	976	1020	567	677	2253	2088	1378	1614	2931	3464
Cash Surplus (Deficit)	183	379	1272	2145	1654	1696	2572	3480	3520	3199

EDUCATIONAL MANAGEMENT AND INSTRUCTIONAL DEVELOPMENT

TRAINING ACTIVITIES
(US\$ - 000)

	<u>Number of Personnel</u>	<u>Training Period</u>	<u>A. I. D. L O A N</u>			<u>G. O. B.</u>	
			<u>Publications</u>	<u>Exterior Total Cost</u>	<u>Local Per Diem</u>	<u>Local Transport.</u>	<u>Training Costs</u>
District Centers							
Admin. Personnel	45	9 weeks			4.0		
Tech./Pedag. Staff	36	8 weeks			2.6	2.2	85.0
Admin. Study Tour UFA	18	4 weeks				1.4	87.0
Admin./Tech./Dept. Chiefs	137	3 weeks		32.5			91.2
							91.0
							76.5
							368.5
				12.5	29.2	3.3	561.0
					26.8	6.9	627.2
Financial Management							
Finan. Management	4	3 mos.		12.2			
Finan. Management	20	2 weeks			16.0	6.4	10.0
Budget Preparation	20	2 weeks			3.1	1.5	2.0
Cost Accounting	18	2 mos.			1.8		1.0
							47.0
				12.2	21.4	7.9	60.0
							101.5
Information Management							
Data Collection - Dist.	70	2 weeks	.6		7.7	2.0	147.0
Programming-Nat.	24	3 mos.			2.6	1.0	50.0
Terminal Management	37	1 mo.			4.1	1.5	78.0
							83.6
				.6	14.4	4.5	275.0
							294.5
				-	-	-	-
				-	-	-	-

	<u>Number of Personnel</u>	<u>Training Period</u>	<u>A. I. D. L O A N</u>			<u>G. O. B.</u>	
			<u>Publications</u>	<u>Exterior Total Cost</u>	<u>Local Per Diem</u>	<u>Local Transport.</u>	<u>Training Costs</u>
Research & Analysis							
Research/Devel./Eval.	5	10 mos.		60.0			
Research/Devel./Eval.	90	4 weeks			54.0	2.2	13.0
				60.0	54.0	2.2	213.0
							269.2
Education Facility Mgmt.							
National Inventory Plan	3	2 mos.	5.0		15.0	1.2	9.0
Develop. Norms	2	2 mos.		4.0			4.0
			5.0	4.0	15.0	1.2	13.0
							38.2
Professional Development							
Social Service Staff	27	4 weeks			13.0	7.0	65.0
Separ. Admin/Tech.	36	3 weeks	5.0		1.2	.4	19.0
Admin./Supervision	816	11 mos.			12.0	13.5	809.0
Admin./Supervision USA	6	11 mos.		60.0			60.0
Admin. Coordin.	46	3 weeks	2.0		5.7	1.1	88.0
Guidance Cansellers	4	12 mos.		50.0			50.0
Guidance Cansellers	500	3 mos.			30.0	5.0	474.0
Community Relations	48	3 weeks			15.1	1.2	91.0
Communic. Systems			.5				107.3
Non-Formal Methodology	15	6 mos.		50.0			31.0
Non Formal Methodology	50	4 weeks	2.4		13.0	7.0	52.0
			9.9	160.0	90.0	35.2	1,629.0
							1,924.1

	<u>Number of Personnel</u>	<u>Training Period</u>	<u>A. I. D. L O A N</u>				<u>G.O.B. Training Costs</u>	<u>Total</u>
			<u>Publications</u>	<u>Exterior Total Cost</u>	<u>Local Per Diem</u>	<u>Local Transport.</u>		
Curriculum Instructional Materials								
Tech. Material Writing	15	1 mo.		20.0			35.0	55.0
Curric. Develop.	15	1 mo.		20.0			35.0	55.0
Production Aux. Materials	15	1 mo.		20.0			35.0	55.0
Util. of Instruc. Materials	90	7 weeks			20.4	4.8	142.0	167.2
			30.0					30.0
			30.0	60.0	20.4	4.8	247.0	362.2
			45.5	328.7	242.0	62.7	3,011.0	3,689.9

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CONSULTANT REPORT: Textbook Design
Publication, Distribution and Utilization

Summary and Evaluation of the Grant Program and Future Program 1975-1976.

SUMMARY

1. Background

In July, 1966, the Curriculum Laboratory was established by an agreement between MINED and USAID: to address both urban and rural education concerning textbook design, publication, distribution and utilization.

From 1966-1968 technical assistance was received from third countries. In July, 1969, the Curriculum Laboratory was institutionalized with administrative and technical assistance under MINED, and financed by USAID. In June 1971, the Curriculum Laboratory became the National Department of the Curriculum.

2. Publications

1. 1967:500 copies of a Guide for Content of Learning in the Primary Schools of Bolivia (Grades 1-6): scope and sequence charts for a series of textbooks and teachers' guides in four subject-matter areas (Mathematics, Science, Social Studies, Reading and Language Arts)
2. 1968-1969 publication; 1970-1974 distribution, Science I: 200,000 textbooks; 10,000 teachers' guides.
3. 1969 publication and distribution; Program for Teaching Basic Education: 2000 copies.
4. 1970 publication; 1970-1972 distribution: Pre-reading (Al - Campo Muchachos) - 200,000 textbooks; 10,000 teachers' guides.
5. 1971 publication; 1971-1972 distribution: Language Arts. 200,000 textbooks, 10,000 teachers' guides.
6. 1972-1973 publication; 1974 distribution: Mathematics I 200,000 textbooks; 10,000 teachers' guides.

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7. 1973-publication and distribution Introductory charts (supplementary materials) for two reading books: 1000 charts.

8. 1973: Publication and distribution: Program for Teaching Basic Education (Grades 1-5). Revised Edition 30,000 copies.

3. Textbook Utilization Seminars: 1970;1974

These seminars were carefully planned by the Curriculum Lab. each year at the beginning of the distribution of the respective subject matter textbook, at five levels of participation:

1. Supervisors (urban and rural)
2. Directors (Urban and rural)
3. Teachers (grades 1-5 urban and rural)
4. Normal School Teachers (urban and rural)
5. Last year Normal School students (urban and rural)

The Grant Program provided for USAID's limited financial assistance to support training seminars in the use of textbooks for Grade I, whose design and printing received USAID funding.

From 1970-1974, 16,000 participants were trained in both theory and demonstration concerning the effective use of textbooks as teaching tools.

EVALUATION

1. Content of the Textbooks

The content of the textbooks was carefully organized, using scope and sequence charts, and was selected to meet the social, cultural and economic situations both urban and rural, for the entire country. Technical assistance in research and evaluation concerning content has been requested for 1975.

2. Content of the Guides

The Teachers' Guides were planned so as to give flexibility to

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teachers, to enable them to adapt the textbooks to the geographic and economic background of the students, and to the reality of the urban and rural areas. Technical assistance in research and evaluation has been requested for 1975.

3. Distribution

There are 24 distribution centers throughout Bolivia; but there is not a distribution "system". Technical assistance in this area has been requested for 1975, with the recommendation that the distribution be organized within the private sector.

Currently the distribution is tied into funding, i.e, the collection of 2 1/2 pesos per student per year (within the school store allotment of 10 pesos urban; or 5 pesos rural). The director must pay the 2 1/2 pesos per book at the respective distribution center in order to receive the textbooks and teachers' guides. If no funds, no textbooks or teachers' guides are disbursed. This system has evoked problems in the rural areas. Currently 77% of the textbooks and 55% of the teachers' guides have been allocated to the 24 distribution centers. An audit is needed concerning the textbooks and guides actually distributed to the schools; and technical assistance in this area has been requested for 1975.

It is strongly recommended that the collection of funds, and the distribution of the textbooks and teachers guides to the schools be kept separate. I am told that if it were, the distribution centers "could be empty within one week".

Currently the Curriculum Laboratory has no control over distribution.

4. Utilization

There has been unanimous acceptance of the textbooks and teachers' guides and students by teachers, with one exception: resistance of the methodology in the reading materials, i.e, emphasis on reflection, conceptualization, respect for psychological attitudes and the development of the child.

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The Curriculum Laboratory lacks personnel to conduct pilot projects, research and evaluation, and has requested technical assistance in these areas for 1975.

5. Insufficient Funding under the Grant Program

Owing to inflation the cost of the runs of textbooks and teachers guides had virtually doubled so that titles for Grade II were not run. In addition, the 2.5 peso input, from the school store, was insufficient to fund additional runs, and the money was allocated to other areas. The provision for 20 pesos per year per student, in addition to the increased 2.50, will ameliorate this situation.

THE FUTURE 1975-1976

The following are conclusions regarding Printing capacity in Bolivia.

After surveying the private sector (Offset press, Don Bosco, El Diario, and others in La Paz and in Oruro); analyzing the equipment in the MINED (Planning Office, STATE, and Arce); and making recommendations for the coordination of the three latter units, I feel that the textbooks and fasciculos (32-page teaching-learning units) and teachers' guides should be printed and bound in the private sector: it has the production capability, technical know-how, and cost-effectiveness relevant to large runs.

The coordinated MINED press is needed for the production of administrative manuals, newsletters, professional materials for teacher education, short runs for the pilot testing of textbook materials in the demonstrations schools of the normal schools, or other instructional materials for pilot projects.

One further comment covering the private sector, the newspaper supplements will of course be printed by El Diario (under contract for Nuevos Horizontes). But their estimates for textbooks are relatively high, owing to their lack of binding equipment.

The following estimates are from the private sector.

I. Nuevos Horizontes

Grades 5 and 6 and above

Number of copies	200,000	
Number of editions	20	
Cost per copy	\$b. 50	
Total in US Dollars		100,000

II. Textbooks and guides - 1975

Social Studies-I

Signatures (5 signatures for 2 students)	60000 ea at \$1.30	78,000
Signatures (5 for 3)	40000 ea at \$1.30	52,000
Teacher's guides	15000 ea at \$2.13	31,950

Mathematics II

Textbook (1 book for 2 students) plus Workbook for above (1 year)	100000 ea at \$.95	95,000
Teacher's guides	15000 ea at \$2.13	31,950

Science II

Signatures (5 signatures for 2 students); plus	50000 ea at \$2.69	134,500
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Signatures (5 for 3)	35000 ea at \$2.69	94,150
Workbook for above (1 year)		
Teacher's guides	15000 ea at \$2.13	31,950

Reading II

Signatures (5 signatures for 2 students)	50000 ea at \$1.30	65,000
Signatures (5 for 3)	35000 ea at \$1.30	45,500
Teacher's guides	15000 ea at \$2.13	31,950

Language Arts II

Signatures (5 signatures for 2 students); plus	50000 ea at \$1.30	65,000
Signatures (5 for 3)	35000 ea at \$1.30	45,500
Workbook for above (1 year)		
Teacher's guides	15000 ea at \$2.13	31,950

III. Pilot project I (Step 1)-1975

10,000 primers Aymara-Spanish	at \$.93	9300
10,000 primers Quechua-Spanish	at \$.93	9300
		<u>18600</u>

IV. Pilot project II (Step 2)-1976Social Studies I

Signatures (5 signatures for 3 students) Aymara-Spanish	7000 ea at \$2.82	19,740
Ditto above, Quechua-Spanish	7000 ea at \$2.82	19,740

Reading II

Signatures (5 signatures for 3 students) Aymara-Spanish	7000 ea at \$2.82	19,740
Ditto above, Quechua-Spanish	7000 ea at \$2.82	19,740

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Summary

1. 1975 New Horizons - Lower cost materials	\$ 100,000
2. 1975 Publication (text & guides)	\$ 834,400
3. 1975-76 Publication of Pilot project	<u>97,560</u>
TOTAL	<u><u>\$ 1,031,360</u></u>