5270148-(1)
LA/DR-IEE-77-62
PD-AAB-777

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

ENVIRONMENTAL THRESHOLD DECISION

Location : Rural, semi-urban and urban areas of Peru

Project Title : Education Service Centers

Funding : (First FY) FY 1977 - $250,000; all FY - $1,590,000 (Grant)

Life of Project : Three Years

Mission Recommendation:

Based on the Initial Environmental Examination, the Mission has concluded that the project will not have a significant effect on the human environment and therefore recommends a Negative Determination.

The Latin America Bureau's Environmental Committee has reviewed the Initial Environmental Examination for this project and concurs in the Mission's recommendation for a Negative Determination.

AA/LA Decision:

Pursuant to the authority vested in the Assistant Administrator for Latin America under Title 22, Part 216.4a, Environmental Procedures, and based upon the above recommendation, I hereby determine that the proposed project is not an action which will have a significant effect on the human environment, and therefore, is not an action for which an Environmental Impact Statement or an Environmental Assessment will be required.

Edward W Coy
Acting Assistant Administrator
for Latin America

August 5, 1977
Date

Clearances:
DAEC Chairman: CWeinberg
LA Acting Environmental Coordinator: HAHasan, HH for H.H.

RECORD COPY

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Rural, semi-urban and urban areas of Peru

Project Title: Education Service Centers
Project No. 527-0148

Funding: (First FY) FY 1977 - $250,000; all FY - $1,590,000 (Grant)

Life of Project: Three years

IEE Prepared by: **Date:** July 28, 1977

Barry Heyman, USAID/Peru/HRD

Environmental Action Recommended:

The USAID/Peru project committee for the Education Service Center project has undertaken a complete Initial Environmental Examination (IEE) of the environmental impact aspects of the project and has arrived at a recommendation for a Negative Determination, as indicated in page 2, Threshold Decision section of the IEE.

Concurrence: Date: July 28, 1977

I have reviewed the Initial Environmental Examination prepared by the project committee and concur in the Threshold Decision recommendation for a Negative Determination.

Barry Heyman for

Leonard Yaeger
Director, USAID/Peru

I. Examination of Native Scope and Magnitude of Environmental Impacts

A. Description of Project

The goal of all projects for the Education sector in USAID/Peru is "to make the education system more responsive to the needs of the poor majority of Peruvians." The purpose of this project is to assist in the eventual attainment of that goal by testing on a pilot and experimental basis the capability of Education Service Centers to increase the quality, availability and use of educational services for students and adults in selected school districts containing predominantly disadvantaged populations. The Service Center concept is based on the inability of the education system to provide minimally adequate facilities and services on an individual school basis. By significantly reducing the level of capital investment required to provide services and equipment to all schools individually, the Service Center concept should permit the government of Peru to address more adequately the educational needs of its citizens.

Under the project, Education Service Centers will be established, equipped, operated and evaluated in four school districts which demonstrate varying cultural, geographic and socio-economic conditions. The four school districts (Cachicadan, Huamachuco, Pacasmayo, and Trujillo) are located in the department of La Libertad which is part of the MOE's Eighth Education Region. Two of these NEC's are predominantly rural and are located in the sierra, and two are coastal urban and semi-urban centers experiencing rapid growth due to migration from the sierra. The project will be implemented by the MOE through its regional office in Trujillo.

By the end of the project, the four Education Service Centers should be in operation and serving a combined student and adult population of approximately 30,000. The types of services which will be provided include libraries, pre-vocational and job skill training workshops, natural and physical science laboratories, school gardens/agriculture plots, art and music education, physical education facilities, health care, audio visual services, in-service teacher training, and the production and distribution of teaching materials. The Service Centers will be evaluated with regard to the educational effectiveness of the services provided, their cost, the degree of coverage and usage, the degree of community support, and the potential for replication.

A.I.D. funding will be required to assist in the construction and equipping of the four pilot Service Centers. A.I.D. will also finance approximately sixty-three months of technical assistance including a learning resources center specialist, a vocational education specialist, a research and evaluation specialist, an education economist, and education specifications and architectural engineering specialists. Fifty months of U.S. and third country training will be provided for

selected MOE and Service Center administrative and institutional personnel, and in-country training programs will be organized for all personnel assigned to the Service Centers.

B. Identification and Evaluation of Environmental Impacts

The project is a pilot, experimental effort which will utilize already existing education infrastructure, and to a lesser extent new construction. Only four sites, occupying a very small area (approximately 1 hectare in total), are involved and no significant impact on the physical environment is anticipated.

The cultural impact aspects of the project will be slight and positive. By providing access to high quality educational services, the project will facilitate the incorporation of the target group into the mainstream of national life. The nature of the services to be provided at the four Centers, particularly those which deal with pre-vocational training, should have a moderately positive impact on the socio-economic status of the project beneficiaries. The provision of these services will permit the target population to have access to more skilled and higher paying occupations.

The nutritional status of the target group will have a moderately positive improvement through classroom instruction and as a result of working in school gardens.

II. Recommendation for Environmental Action

As indicated above, and in the Impact Identification and Evaluation Form, attached, there will be no significant, foreseeable impact on the environment resulting from this project. It is the Mission's judgment that there is no need for any further environmental examination beyond that undertaken and provided above, and in the attachment.

Threshold Decision: For the reasons cited above, the Mission recommends a Negative Determination.

Attachment to
Initial Environmental
Examination (IEE)

IMPACT IDENTIFICATION AND EVALUATION FORM

USAID/Peru
Education Service Centers
Project No. 527-0148

	Impact Identification and Evaluation 1/
A. LAND USE	
1. Changing the character of the land through:	
a. Increasing the population	N
b. Extracting natural resources	N
c. Land clearing	N
d. Changing soil productivity capacity	N
2. Altering natural defenses	N
3. Foreclosing important uses	N
4. Jeopardizing man or his works	N
B. WATER QUALITY	
1. Physical state of water	N
2. Chemical and biological states	N
3. Ecological balance	N
4. Other factors	None

1/ Use the following symbols:
N - No environmental impact
L - Little environmental impact
M - Moderate environmental impact
H - High environmental impact
U - Unknown environmental impact

	Impact Identificati and Evaluation
C. ATMOSPHERIC	
1. Air additives	N
2. Air pollution	N
3. Noise pollution	N
4. Other factors	None
D. NATURAL RESORUCES	
1. Diversion, altered use of water	N
2. Irreversible, inefficient commitments	N
3. Other factors	None
E. CULTURAL AND SOCIO-ECONOMIC	
1. Altering physical symbols	N
2. Changes of cultural traditions	L
3. Changes in population	N
4. Other factors	
- changes in economic/employment patterns	M
F. HEALTH	
1. Changing a natural environment	N
2. Eliminating an ecosystem	N
3. Other factors	
- nutritional levels	M

	Impact Identification and Evaluation
G. GENERAL	
1. International impacts	N
2. Controversial impacts	N
3. Larger program impacts	N
4. Other factors	None
H. OTHER POSSIBLE IMPACTS (not listed above)	None

527-0148-(5)

2 DEC 1975

PD-AAB-777

INFORMATION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR (L.A.)

FROM: LA/DR, Donor M. Lion

SUBJECT: Issues Paper - Peru Education Service Centers Loan PRP.

A DAEC meeting has been scheduled for December 3, 1975 at 9:30 a.m., to discuss the PRP for the proposed $9.3 million FY 1977 Education Service Centers loan to Peru.

The project will finance the construction and development of three types of education service centers in two educationally disadvantaged areas of Peru: (1) a center (Model A) which would perform an outreach function by storing, producing and distributing educational materials and provide two to three specialists to work with rural teachers; (2) a center (Model B) containing a library, laboratory, workshop, and experimental garden to serve approximately 500 students who live within one hour's walk of the center; and (3) a more elaborate center (Model C) for heavily populated, low-income urban areas, based on the learning Resource Center concept, which would contain a wide range of educational and vocational facilities for student and community use. The project will finance construction of approximately 40 Model A, 55 Model B, 40 A and B combinations, and up to 6 Model C service centers in approximately 86 Nucleos Educativos Comunales (NEC's). The primary target audience of the project will be the students and teachers of grades 1-6, and project activities will focus on science and pre-vocational education at this level. The project will also involve technical assistance to the Government of Peru (GOP) and the individual centers to be established, and overseas and in-country training. Funding will also be provided for research and evaluation in connection with the education service centers. The Executing Agency will be the Ministry of Education (MOE) which will utilize a Special Projects Division for day-to-day implementation responsibilities.

Total project costs are estimated at $15.5 million, of which $6.0 million (39%) would be contributed by the GOP, this exceeding the host country contribution requirement of Section 110(a) of the FAA.

The DAEC will seek clarification or additional information concerning the following aspects of the project:

1. Service Center Facilities

(a) Model B: The DAEC will consider the feasibility of the concept of the Model B facility, which involves requiring the 500 students who use the center to attend two schools in two different locations. The DAEC will discuss whether there are any precedents in Peru or elsewhere which primary students have used separate facilities and instructors for some subjects. The DAEC will also discuss the way in which the centers will be used to insure maximum use and minimum logistical difficulties, and the proposed relationship of center staff to local teachers. Alternatives to this type of center might include providing for specially-trained teachers to travel among the schools in a particular rural area, the consolidation of rural

RECORD COPY

schools so all classes would be held at the same location as the improved facilities, or the regional satellite school concept with which AID has had experience in Guatemala. While the PRP discusses some of these alternatives, the DAEC will consider in more detail whether any of them would be more realistic in Peru instead of the proposed Model B center.

(b) Model C: Model C centers are expected to serve many learning functions, including self-teaching, for which the type and quantity of learning resources required are unknown. The DAEC will discuss the basis on which the Mission feels there is sufficient demand for the type of resources to be provided by these centers to justify the construction of six of them through the project. The DAEC will seek additional information regarding the following aspects of the Model C centers: the manner in which the centers will be used and how logistical difficulties will be minimized; whether certain groups would have priority in using the facility and if so, which ones; whether regular school classes will be held at the centers; and whether the centers would have their own teaching staffs or depend on local teachers for instruction and supervision of students. In addition, the DAEC will consider whether there has been sufficient experience in the U.S. in this area to be able to provide technical assistance to Peru.

(c) Cost Effectiveness: The PRP suggests a wide range in the minimum cost of Model B centers (from $7.70 to $16.50/student) because of the possibility of capturing and reinvesting certain existing educational resources, principally teachers' time. The DAEC will discuss the way in which it will be determined in the intensive review whether these savings can be achieved, and whether this aspect of the project is sufficiently cost-effective if these savings cannot be achieved. The PRP also states that the user cost/hour of the Model C center is between $.08 and $.17. While the Mission will conduct a cost-effectiveness study of the project during the intensive review, the DAEC will discuss whether sufficient information is available at this time to determine whether these minimum costs for Models B and C compare favorably to other possible education interventions.

(d) The DAEC will discuss the way in which the proposed centers will fit into the existing educational system in Peru, including whether academic credit will be received for time spent by students at service centers, how the administration of the centers will fit into the Ministry of Education (MOE), the relationship of the centers to the new curriculum being introduced, and the relationship of center staff to regular school teachers.

2. Target Group

The target group for the project are the students and teachers in grades 1-6 in rural areas and low-income urban areas in two disadvantaged districts (Cuzco and Huancayo). This targeting will be discussed in the context of the priority given in the Education Sector Assessment to the 15-39 age group. In addition, the DAEC will consider whether the proposed facilities to be constructed by the project (laboratories, pre-vocational workshops)

are appropriate and those most needed by students in grades 1-6. The PRP also states that no education service centers are planned for those NEC's classified as "rural inaccessible", and only Model A centers will be built in NEC's classified as "rural accessible dispersed" which, presumably, are the most disadvantaged areas, educationally and otherwise. The DAEC will consider whether sufficient attention has been given in the project to address the educational needs of AID's target group, and ways in which the project targeting might be revised to reach the poorest students and those most in need.

3. Rationale

The DAEC will discuss the availability of existing facilities, such as libraries, factories, workshops or municipal buildings, which would be used or adapted to provide the services proposed by the project. The present nature and adequacy of instruction in science and pre-vocational subjects in grades 1-6 in rural areas will also be discussed. The DAEC will consider whether science and pre-vocational training are the most difficult subjects for individual schools and teachers to provide adequately and whether the type of facilities, equipment, materials, and specially-trained teachers required to improve instruction in these subjects at this level can be provided more efficiently through centers of the type proposed rather than through each individual school.

4. Selection Criteria

The PRP states that the following factors will be used in determining where centers are established and which model is most appropriate: need, population density, proximity between schools, and acceptability of the concept of service centers to teachers and community residents. The DAEC will discuss the likelihood that the areas so chosen will be those in which it is least difficult to establish a service center, and the impact of this on project replicability. In addition, the DAEC will discuss the way in which the availability of existing facilities which could be used to provide educational services of the type contemplated by the project will be taken into account in the selection of center locations.

5. GOP Policy

The project will entail increased GOP budgetary allotments to the NECs selected for service centers, as well as to general support facilities and personnel at the MOE. The DAEC will discuss the likelihood that these increased GOP budget resources will be available and that the GOP will be willing to discriminate among NEC's in the fashion proposed. Given the projects' inputs in research and materials development, the DAEC will also discuss the role of the Instituto Nacional de Investigacion y Desarrollo de la Educacion (INIDE) in the project.

6. Local Participation

The DAEC will discuss the degree to which the local communities are expected to directly be involved and/or control the Education Service Centers and curricula.

527-0148 -6

JUL 28 1977

PD-AAB- 777

30.

INFORMATION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR (LA)

FROM: LA/DR, Charles B. Weinberg

Subject: Issues Paper - Peru Education Service Centers

A DAEC meeting has been scheduled for Friday, July 29, at 2:30 p.m. to review the PP for the $1.59 million FY 77 Education Service Centers Grant to Peru.

The education system in Peru lacks adequate educational services (e.g., libraries, laboratories, pre-vocational and job skills training) within the majority of school districts (Nucleos Educativos Comunales - NECs) in Peru. As an alternative to providing these services to individual schools, the GOP is considering establishing centralized education service centers which would provide such facilities and services for use by students attending most schools in each district (NEC). The purpose of this project is to test, on an experimental basis, the capability of education service centers to increase the quality, availability and use of educational services for students and adults in four selected school districts--Cachicadan, Huamachuco, Pacasmayo and Trujillo. The first two NECs are predominantly rural and are located in the sierra, whereas the latter two are coastal semi-urban and urban centers experiencing rapid growth due to migration from the sierra.

The AID contribution of $1.59 million will finance long and short term technical assistance ($320,000), participant training ($165,000) and will assist in the construction ($760,000) and equipping ($345,000) of the four pilot service centers. The GOP contribution will also finance the construction and equipping of the service centers, as well as the operational costs of the centers. The host country contribution is estimated at $1.61 million or 50% of the total project cost of $3.2 million, thus satisfying the minimum contribution requirement of Section 110(a) of the FAA.

This project was initially proposed as a loan. The PRP was reviewed and intensive review authorized for FY-1977 funding. A feasibility study conducted during intensive review concluded, however, that, although the service center concept is basically feasible, further study is required before proceeding with a country-wide program. As a result, the Mission concluded that major investment should be delayed until a pilot grant project to test the concept could be implemented and evaluated. The acting AA/LA approved the Mission's request to change the project from a loan to a grant in June 1977.

RECORD COPY

Although the project appears in the FY 1977 Congressional Presentation, the change in the project design and the shift from loan to grant financing requires that an Advice of Program Change be submitted to the Congress.

The Latin America Bureau's environmental committee has reviewed the Initial Environmental Examination for this project, and concurs with the Mission's recommendation for a Negative Determination.

The DAEC will discuss the following:

(1) Target Group

A. The project proposes to establish pilot service centers in Cachicadan, Huamachuco, Pacasmayo and Trujillo. The rural, semi-urban and urban composition of these areas is considered to be representative of conditions in which future service centers are likely to be located. Given that two of the centers are in urban areas, the DAEC will examine the characteristics of the 27,000 immediate project beneficiaries for consistency with AID's mandated target group.

B. In questioning target group impact, the DAEC will review the rationale behind the Mission's choice of the four proposed service center locations and discuss whether a different number and/or mix of pilot centers should be considered under the project.

(2) Replication

If this project is successful, it is expected that the service center concept will be extended on a national basis. The PP estimates that between ten and twenty years would be required before a national service center system could be in operation. Given the resources available to the Ministry of Education for capital and operational costs, the DAEC will examine the extent to which the GOP can be expected to support the extension of the service center concept on a national basis. In this regard, the Mission's plans for a follow-on loan will also be discussed.

(3) Service Center Operation and Administration

A. The service centers will provide central educational facilities for use by students throughout school districts. It is not clear from the PP, however, how these centers will operate. For example, the outreach mechanism from the center to the rural school is not described. Furthermore, it is not clear how students will be scheduled to attend the various center activities (in addition to regular classes), and what factors will be used in determining which students attend what activities at the center. The Mission will be asked to elaborate in detail on the operational aspects of the service centers.

B. Coordination of administrative responsibilities is an important factor in successfully operating the service centers. The PP, however, states that, although each service center will have a director, it is not clear whether ultimate responsibility for the centers will be with this director, with the NEC director (who is responsible for the entire school district) or with the centro base director (who is responsible for the school to which each service center will be linked). The Mission will be asked to provide additional detail on the role of each director and how these roles will be coordinated.

(4) Service Center Curriculum

A. The PP does not address the population problem in Peru (at present growth rates the population will double within twenty-five years). The DAEC will question whether family planning/population education should be explicity incorporated into the service center curriculum.

B. As proposed in the PP, the curriculum appears to be male-oriented (e.g., auto mechanics, drafting, woodshop, etc.). The DAEC will examine the extent to which women are likely to participate in such male-oriented activities and what revisions may be necessary in the curriculum to assure adequate participation of women in service center activities.

5270148

5270148 - ①

PD-AAB-777

JUN 9 1977

ACTION MEMORANDUM FOR THE ACTING ASSISTANT ADMINISTRATOR (LA)

FROM: LA/DR, Charles B. Weinberg

Problem: To authorize intensive review of the Peru Education Service Centers project on a grant basis.

Discussion: The PRP for the Peru Education Service Centers project was approved on December 3, 1975, and intensive review for a $10.0 million loan was authorized. The project was to finance the construction and development of three types of education service centers designed to reach students and teachers of grades 1-6.

As a first step in intensive review, a feasibility study was conducted to provide data necessary for designing the project. The study was recently completed and its results demonstrated that, although the service center concept is basically feasible, further study was required before proceeding with a country-wide program. As a result, the Mission has concluded that major investment in this concept should be delayed until a pilot project is executed and evaluated. The Mission has, therefore, requested approval to change the loan project to an FY 1977 grant funded project.

Due to the proposed shift from loan to grant funding, the reduction in size of the project and the proposed structural modifications to the project, Handbook 3, Section 8C5c4, requires that the PRP be revalidated. In this regard, the Mission was asked to provide (a) information concerning changes which have occurred since the DAEC approved the PRP, (b) a description of the reduced project, and (c) an assessment of GOP support for a grant-funded project as well as support for a future loan should a follow-up be warranted (see TAB B).

The Mission has now submitted the requested information (TAB C), and Bureau staff offices have completed their review. Based on this review, we agree with the Mission that a small experimental grant funded project will be more suitable at this time and will generate the data necessary to make further investment decisions in the general concept.

Recommendation: That you sign the attached cable (TAB A) approving intensive review of the Peru Education Service Centers project on a grant basis.

Attachments:
TAB A - Cable to Lima
TAB B - State 93321
TAB C - Lima 3929

LA/DR:KKelly:gah:6/8/77:2

RECORD COPY

527-0148 77-12 -6

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT DOCUMENT ACTION FORM

1. TRANSACTION CODE: PD-AAB-777
A = ADD
C = CHANGE
D = DELETE

PDAF

2. DOCUMENT CODE: 4 3bp

COUNTRY/ENTITY: Peru

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 527-0148

6. BUREAU/OFFICE
A. SYMBOL: LA
B. CODE: 05

7. PROJECT TITLE (Maximum 40 characters): Education Service Centers

8. RELATED DOCUMENT CODE: 2
1 - PID
2 - PRP

9. PROJECT DOCUMENT ACTION
(ENTER COMMENT FOR * ITEMS IN BLOCK 13)

ACTION TAKEN: A
A - APPROVED
D - DISAPPROVED*
S - SUSPENDED*
CA - CONDITIONALLY APPROVED*
DD - DECISION DEFERRED*

10. APPROVED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE C. GRANT	PRIMARY TECH CODE D. LOAN	E. FIRST FY 77 F. GRANT	E. FIRST FY 77 G. LOAN	LIFE OF PROJECT H. GRANT	LIFE OF PROJECT I. LOAN
(1) 111	530		600		[illegible]		[illegible]
(2)							
(3)							
(4)							
TOTALS					[illegible]		[illegible]

11. PROPOSED PLANNING RESOURCES: 1
1 - APPROVED
2 - DISAPPROVED
3 - APPROVED AS MODIFIED

12. PROPOSED NEXT DOCUMENT
A. 3
2 - PRP
3 - PP

B. PROPOSED NEXT DOCUMENT DATE
MM | YY

13. COMMENTS (Maximum 240 characters)

7/14/77

14. ACTION REFERENCE
A.
AIRGRAMS: AIDTOA
TELEGRAMS: STATE
MEMORANDA:

B. ACTION REFERENCE DATE
MM | DD | YY

15. CLEARANCES

	TYPED NAME	TITLE	DATE	INITIALS
A.				
B.				
C.				
D.				
E.				
F.				

16. RESPONSIBLE BUREAU SIGNATURE
Hugh N. Hasse

RECORD COPY

17. ACTION DATE
MM | DD | YY

AID 1330-8 (6-76)

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT REVIEW PAPER FACESHEET

TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE ("X" appropriate box)
[X] Original [ ] Change [ ] Add [ ] Delete

PRP

DOCUMENT CODE 2

2. COUNTRY/ENTITY
PERU

3. DOCUMENT REVISION NUMBER

4. PROJECT NUMBER
527-22-690-148

5. BUREAU
a. Symbol: LA
b. Code: 3

6. PROPOSED PP SUBMISSION DATE
mo. 01 yr. 77

7. PROJECT TITLE - SHORT (stay within brackets)
[Education Service Centers]

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
a. INITIAL FY 77 b. FINAL FY 77

9. ESTIMATED TOTAL COST ($000 or equivalent, $1 =)

a. FUNDING SOURCE	FIRST YEAR FY 77			ALL YEARS		
	b. FX	c. L/C	d. Total	e. FX	f. L/C	g. Total
AID APPROPRIATED TOTAL	3,000	6,500	9,500	3,000	6,500	9,500
(Grant)	(-)	(-)	(-)	(-)	(-)	(-)
(Loan)	(3,000)	(6,500)	(9,500)	(3,000)	(6,500)	(9,500)
Other U.S. 1.						
Other U.S. 2.						
HOST GOVERNMENT		6,000	6,000		6,000	6,000
OTHER DONOR(S)						
TOTALS	3,000	12,500	15,500	3,000	12,500	15,500

10. ESTIMATED COSTS/AID APPROPRIATED FUNDS ($000)

a. Appropriation (Alpha Code)	b. Primary Purpose Code	c. Primary Tech. Code	FY 77 d. Grant	FY 77 e. Loan	FY ___ f. Grant	FY ___ g. Loan	FY ___ h. Grant	FY ___ i. Loan	ALL YEARS j. Grant	ALL YEARS k. Loan
EH	530	600		9,500						9,500
		TOTALS		9,500						9,500

11. PROJECT PURPOSE(S) (stay within brackets) [ ] Check if different from PID

[To make educational services more accessible to students and adults in selected schools districts containing predominantly disadvantaged populations.]

12. WERE CHANGES MADE IN PID FACESHEET DATA, BLOCKS 12, 13, 14, or 15? IF YES, ATTACH CHANGED PID FACESHEET

[X] Yes [ ] No

13. PLANNING RESOURCE REQUIREMENTS (staff/funds)

1 Economist - 21 - 28 days

14. ORIGINATING OFFICE CLEARANCE

Signature: Frank Tinley

Title: Director, USAID/Peru

Date Signed: mo. 11 day 14 yr. 75

15. Date Received in AID/W, or For AID/W Documents, Date of Distribution
mo. day yr.

AID 1330-3 (7-75)

RECORD COPY

I. Priority and Relevance

The social and economic goals of the Government of Peru emphasize increased employment, increased production and "a social democracy of full participation". The Education Reform is one of the key instruments to achieving these goals, as indicated in the National Development Plan of 1971- 1975. The latest educational policy guidelines for the period 1975-1978 reaffirm the goals of the Education Reform described in the 1971-1975 plan.

The Education Reform is attempting to provide access for all Peruvians to a more relevant education. This objective has required a shift from a traditional, academic oriented education to one which is practical and work related. In order to accomplish the objectives of the Reform, the Ministry of Education (MOE) has initiated a decentralization of its administrative and planning apparatus and is attempting to address the critical deficiencies in the system (mainly in rural areas) at a more local level.

The Education Reform was based on a diagnostic study of the previous system which identified the following educational deficiencies as key problem areas: (1) inadequately trained and unmotivated teachers; (2) an urban bias to the curriculum; and (3) insufficient educational material and equipment.

Immediately after the Reform Law was passed steps were taken to retrain and reorient all teachers. This effort continues. A new practical, work oriented curriculum which takes into account rural-urban and regional differences is also being developed. While the deficiency in educational materials and equipment was known in general terms, efforts only recently have been made to estimate the magnitude of the problem. A MOE study already underway and scheduled for completion in January 1976 will provide data on the status of instructional materials throughout the country. This study will be used to plan for and provide better educational materials and equipment in areas where they are most needed.

While results are not yet available from the study some appreciation for the size of the problem can be derivedfrom an analysis of MOE per capita expenditures on educational materials and equipment. In the 1975-1976 MOE biennial budget on a per student per year basis $ .13 will be spent on teaching and audio visual equipment, $ .88 on workshop equipment, less than $ .01 on books and $ .16 on other educational materials.

Direct confirmation of the deficiency of educational materials and equipment was gained from a visit to a fairly typical rural Nucleo Educativo Comunal (NEC) [1] during the preparation of this PRP. The majority of the 25 schools visited do not have sufficient reading and other educational material and equipment and tools to permit students to participate actively in the learning process. While a few of the teachers in the NEC make effective use of locally available resources and other material aids to complement their instruction, the majority lack the understanding and resources to effectively conduct classes utilizing such teaching aids.

To provide every school in Peru with even a minimum of equipment appears to be financially prohibitive, since currently 20% of the GOP budget goes to the MOE and anticipated rising enrollments and salary levels alone will place a substantial burden on the Education budget. The GOP is currently studying the feasibility of utilizing existing community facilities such as public libraries, factories, workshops, and municipal buildings to double as education facilities, when these are available in order to provide improved instruction and education services. Another approach, where facilities and educational services are totally inadequate or unavailable is to construct and equip centralized education service units to serve teachers and students at all levels of education for the entire NEC.

The search for cost-effective solutions to the educational services problem was indicated as an appropriate area for USAID support of the educational reform in the Sector Assessment. A MOE prefeasibility study completed in March 1975 suggested that a concept of centralized services should be explored as a means to minimize education costs. Accordingly, a more definitive AID financed feasibility study to determine the applicability of the Service Center concept is about to be initiated. The study will build on the MOE study and will assess the facility problem on a national basis. It will study more intensively specific zones and NEC's to provide the basis for a determination of approaches in addressing the education services problem. The results of the study will be integrated into the Sector Assessment and also form part of the basis for the Project Paper.

1/ A NEC is an education administrative unit with defined geographical boundaries similar to a school district. There are 819 such units throughout the country. The NEC is governed by a locally elected school board (CONSECOM) which is responsible for the administration and coordination of all education activities of the area. NECs function within a decentralized administrative framework consisting of 33 zones, 9 regions, and the MOE.

II. PROJECT DESCRIPTION

A. Background

The goal of USAID programs in the education sector is "to make the education system more responsive to the needs of Peruvians". The purpose of the project proposed herein is to make educational services more accessible to students and adults in selected NECs containing predominantly disadvantaged populations. Educational services, as defined in this paper, refer to instructional facilities, equipment and educational materials. Both goal and purpose of the proposed project are fully consistent with the GOP's socio-economic goals previously described.

The Peruvian Education System is divided into three levels: i) Initial Education (pre primary); ii) Basic Regular (grades 1-9) which is divided into three cycles corresponding to grades 1-3, 4-6, and 7-9; iii) Superior Education (grades 10-12 and University). In addition the system offers literacy courses, vocational training and other non-formal programs to adults and out-of-school youth.

The primary target audience of this project will be the students and teachers of the first six years of the Basic Regular programs. However, the project will also seek to maximize facility utilization and will therefore serve adults through special programs as well. In the case of the larger Service Centers described below, a variety of services will be offered to all educational levels and all members of a community, including the provision of laboratories and workshops for the third cycle (grades 7-9) of Basic Regular Education and for Superior Education (where no such facilities are planned).

B. Functions of an Education Service Center

Education Service Centers may have several forms and functions depending upon the needs of communities, school and population distributions, transportation, the availability of other education facilities, the imagination of community and educational leaders and the participation of private and public organizations.

At the PID stage, it had been assumed that all Service Centers would function by bringing students to the Center where educational services would be provided. We have now concluded that in rural areas with dispersed populations bringing students to Centers may not be feasible given the relatively high costs of

transportation. The possibility of building a transportation element into the project design (e.g. loan-financing of buses and vehicles) was rejected during the course of project development, given the high cost this would entail for all the NECs expected to participate, as well as chronic vehicle maintenance problems in rural areas of the country.

Based on the visit made to a rural NEC, we now foresee Service Centers performing essentially two major functions. The first deals with an outreach capability whereby students' needs would be addressed through the development and provision of instructional materials and assistance to teachers in their respective schools. The second function relates to the original idea as conceived in the PID. Students would be directly served in those areas where a minimum of 500 children from several schools would be able to reach the Center by walking from their homes (within 1 hour). This second function can also apply to Service Centers in urban areas where substantial student and adult populations would be able to use the Center. In order to simplify the description of each type of Center to be established in this project, three models are being proposed. The simplest model would exclusively perform an outreach function and is referred to as a Model A Center. The second model, a Model B Center, will serve a minimum of 500 students in a rural area. The third model (Model C) is exclusively designed to serve populations in urban areas. Under the project, such centers would only be developed in low income areas. Considerable variations of each model are expected to be developed and will be presented in more detail in the PP.

C. Basic Models

1. Model A

The least costly Service Center being proposed is designed to serve the needs of teachers, and indirectly students, in the sparsely populated areas where there is no general access nor ease of travel by a sufficient number (500) of students to a central location. This type of Center would likely be located in the main administrative office of the NEC and serve students and teachers in Basic Regular Education by: a) storing, designing, producing, distributing and lending education materials and equipment to individual schools; b) providing Center staff consisting of two and possibly three education specialists to assure design, production, distribution and use of the services by working directly with individual teachers in the NEC; and c) providing a children's book lending service to the various schools.

Specially selected Center staff will mainly function as teacher supervisors travelling periodically to each school to assist teachers in determining their essential educational materials requirements, and subsequently follow through to assure that teachers are provided the materials. The staff will also assist teachers in developing and utilizing such locally available resources as clay, reeds, wood, etc., to bring about a more practical orientation to classes without incurring additional costs. In addition, Center staff will assist in the distribution of locally available resources in order to insure that such resources are available to all schools.

2. Model B

A second model Service Center, will serve a minimum of 500 students and consist minimally of a basic structure providing one common classroom, containing a 1,000-volume library, one combination science/biology laboratory to accomodate 40-45 students, and one combination manual arts/agriculture workshop also for 40-45 students. Sufficient land will be available at the site to allow for physical education activities, experimental garden plots and other agriculture activities. Additional laboratory space and workshop space would be added as student enrollments demand.

This type of Center will be organized to facilitate the teaching of science and pre-vocational subjects in Basic Regular Education (grades 1-6). During the feasibility study, efforts will be made to determine the demand on the facility by adults and possible techniques to be employed in maximizing community use of the facility. The feasibility study will also determine the most appropriate scheduling of students' classes and adult programs and how center activities may be coordinated with community resources. Students attending schools in close proximity to the Service Centers (less than one hour at no cost) will attend the Center in groups and participate in practical instructional programs called for in the curriculum but not available at their respective schools.

Center staff will be selected according to their abilities and be provided increased incentives if necessary to work at the Center. Training in the practical application of theory in science, agriculture and mechanical arts will be provided under the project. Center staff will guide and monitor the learning experiences of students taking advantage of Center facilities and thereby provide for more practical and relevant educational experiences for the student.

Variations in this type of Center are likely and depend on the concentrations of population groups in the NEC. For example, the possibility exists that a Model A and a Model B Center will be combined in a single unit which could be located away from the NEC headquarters.

3. Model C

A third type of Center is being proposed for more heavily populated, low income urban areas1/ and could include all of the functions described in Models A and B. In addition it will concentrate within one complex, a variety of educational programs for students from pre-school age through the formal school system and to adults and out-of-school youth. This Center, based on the Learning Resource Center concept now being utilized in some developed countries, will provide a variety of education and community services to the entire community.

The potential of Model C Centers to maximize facility utilization and result in per student cost economies will be studied intensively during the next 12 months. It is currently envisaged that such Centers would offer the following basic facilities: science laboratories serving Basic and Superior Education; workshops for the various vocational trades offered in Basic and Superior Education and non-formal vocational programs; a library and audio visual section containing most, if not all, audio and visual materials in the community; a nursery and pre-school center for initial education programs; three classrooms which could be modified to serve as a 200 seat auditorium for community meetings; and sufficient land for agriculture and physical education activities.

In addition, the Centers described above would organize and coordinate subject related field trips for students and encourage community participation in offering relevant educational experiences.

1/ For example in the two educational regions that are being considered as project areas the distribution of cities in excess of 20,000 is as follows:
20,000-50,000: Cerro de Pasco, Ayacucho, Huanuco, Jauja, Tarma, Quillabamba;
50,000-100,000: La Oroya;
100,000-250,000: Cuzco, Huancayo.
Type C Centers will be selected from these cities.

D. Project Components

The project will finance the construction of approximately 40 Model A, 55 Model B, 40 A and B combination, and up to six Model C Education Service Centers in approximately 86 NECs. To the extent possible, other Model B Centers will be developed from existing facilities which also may require some construction modification. Financing will be provided for materials, engineering and construction fees. Prototype architectural plans will be available from work about to be initiated under the AID/GOP feasibility study.

U. S. and Third Country as well as in-country training and orientation programs will be carried out. A minimal number of MOE and Service Center Staff will be recipients of training programs outside of Peru, amounting to approximately 20 man years for 30 people. It is anticipated that most programs of this nature will be offered to MOE regional personnel and Model C Center Staff. Training will be made available in administering Learning Resource Centers, the utilization of individualized instruction approaches, designing and developing instructional materials and planning educational facilities.

In-country training programs totalling 100 man years will be organized by the MOE with participation by the Service Center directors. The programs will provide a general orientation for 400 teachers and administrators working in schools which will utilize the Education Service Centers. Approximately 200 Center maintenance personnel will also receive in-country training in repair work, facility maintenance, furniture repair and grounds maintenance.

Commodities provided under this project will equip the three types of Service Centers to carry out their functions. Model A Centers will require such items as duplicating equipment, woodworking and art supplies for making educational materials, paper, poster board, maps, charts and children's books costing approximately $4,000 per Center. The Model B Center will require 1,000 children's books, basic science laboratory equipment, hand tools for woodworking and industrial trades, hand operated agricultural tools and equipment, maps, charts, etc., at approximately $11,000 per Center.

Model C Centers will require the most elaborate and most expensive equipment. The estimate to equip these with laboratory, workshop and other equipment is $68,000 per Center.

U.S. and Third Country technical assistance will be required during project implementation. Advisors will assist GOP officials in organizing and carrying out in-country training programs, developing educational specifications for the Service Centers, and evaluating the operations of the various types of Centers.

E. Critical Assumptions

Annex I contains a preliminary project logical framework. The key assumptions for purpose and goal attainment are indicated below.

1. Assumptions to Achieving Goal

The assumptions to achieving the stated goal of making the education system more responsive to the needs of the majority of Peruvians are:

1) The GOP is committed to the concept of developing relevant education programs for disadvantaged Peruvians.

2) Sufficient resources will be forthcoming to implement educational programs in areas containing disadvantaged populations.

2. Assumptions to the Achievement of Purpose

The assumptions critical to achieving the project's purpose of making educational services more accessible to students in selected NECs containing predominantly disadvantaged populations are stated below. Assumptions 2, 3 and 5 will be studied as part of the feasibility study; the validity of 1 and 4 will also be tested during the intensive review.

1) NEC administrative staff as well as those from the CONSECOM will cooperate to improve educational services using Service Centers.

2) A commitment exists to maintain Centers and replace equipment as needed.

3) Sufficient resources will be forthcoming to pay salaries of Center staff.

4) Public and private sector non-educational institutions will make their facilities available to students.

5) Adults will take advantage of the services provided in the Centers.

F. Geographic Focus of Project and Site Selection Process

In order to estimate on a national basis the total number of NECs which could have at least one Service Center, the 819 NECs in the country were tentatively classified into categories; and a preliminary determination of the most appropriate type of Service Center Model was made.

Type of NEC 1/	Number	Likely Service Center Model
Urban	152	C
Urban/Squatter Settlement	37	C
Rural Accessible Concentrated	285	B, A
Rural Accessible Dispersed	169	A
Rural Inaccessible	176	-
	819	

1/ Urban - A NEC located in a population center containing more than 20,000 residents.

Urban/Squatter Settlement - A NEC located adjacent to an urban center.

Rural Accessible Concentrated - A NEC which i) does not contain any population center greater than 20,000; ii) is largely agricultural; iii) has year round roads; and iv) the majority of whose schools can be reached within one hour from the NEC office.

Rural Accessible Dispersed - Same as above but the majority of whose schools are more than one hour by vehicle from the NEC office.

Rural Inaccessible - A rural NEC which has no roads or lacks all-weather roads and the majority of whose schools are more than one hour from the NEC office.

Based on this classification it would appear that 663 NECs (all but the 176 which are inaccessible) could have at least one Service Center. USAID and the GOP have tentatively agreed that for administrative, logistical and technical purposes it is advisable for the project to focus on 2 or 3 of the disadvantaged educational regions of Peru. Using as criteria level of illiteracy, degree of monolingualism in one of the indigenous languages (Quechua or Aymara) and enrollment as a percentage of the school age population, the Huancayo, and Cuzco, educational regions have been tentatively identified as potential project areas. These educational regions are among the most disadvantaged in both educational as well as overall development measures. For example, preliminary investigations of these regions indicate that nearly all of the departments in these regions 1/ fall within the lowest one-third of the country when ranked according to per capita income. Moreover, they have among the highest percentage of populations residing in rural areas and the highest concentration of employment in the agriculture sector.

These regions also have been selected in order to benefit from coordination with other USAID projects operating in these areas, including the Bilingual, Non-Formal and Planning projects in education and the Irrigation and Rural Enterprises Development projects in agriculture.

The Cuzco and Huancayo regions which have been reviewed during the preparation of the PRP together contain approximately 233 NECs distributed in the following categories:

Urban	33
Rural Accessible Concentrated	69
Rural Accessible Dispersed	61
Rural Inaccessible	70
	233

1/ All of the departments of Cuzco, Apurimac, Madre de Dios, Junin, and Pasco and most of the provinces in the departments of Ayacucho, Huanuco and Huancavelica.

In 1975, these 233 NECs had 27,400 pre-primary students, 631,900 primary and basic regular students, 137,200 secondary students, 60,100 literacy program students and 30,300 basic labor education (non-formal) students.

It is anticipated that the resources to be provided under the proposed project could provide coverage to approximately 86 of the NECs in the selected regions. No Service Centers are likely to be built in those NECs categorized as inaccessible.

The process of selecting sites for Centers and determining the size and type of Center will be based on an analysis of the NECs within the selected regions. The analysis will determine those NECs which are most disadvantaged. In addition to need, population density, proximity between schools, and acceptability of the concept of Service Centers by teachers and community residents will be among the criteria used to determine where Centers are established, and which model is most appropriate.

III. AID and Other Relevant Experience

Most of the experience with Educational Service Centers has taken place in developed countries where they are generally called Learning Resource Centers (LRCs). LRCs often exist within individual schools or can serve more than one school at a time. In addition they usually serve non-school populations providing educational, recreational, social, and community services to a variety of groups within the community. The latter type of facility which combines multiple facilities serving diverse populations has been best developed in Wales. The success of the Welsh Model is due to several factors including:

1. Grouping of several facilities at one site resulting in economies of scale.
2. Most users avail themselves of several facilities.
3. The interaction and cooperation between users has positive effects on learning and somewhat reduces the need for salaried staff.
4. Individualization of instruction permits users to learn at their own pace often without the need for intervention by a teacher.

While the complexity of the Welsh Model would make it difficult to apply directly to Peru, it would appear that some of the above factors can be applied on a smaller scale to a service center functioning in Peru.

Relatively little experience with educational service centers has taken place within the developing world. The only exceptions are Malaysia and Brazil where experimentation with such centers is relatively recent. During the development of the PP more detailed information will be obtained on the experiments with service centers in the countries mentioned above.

AID has not had direct experience with the service center concept. However a somewhat similar program involving a nucleo primary school system, consisting of a regional school and its surrounding satellite schools has been successful in Guatemala. This regional satellite concept is also being tried in Bolivia. These programs in Guatemala and Bolivia are similar to the proposed service centers for Peru in that they concentrate services in a centralized facility where the radius of influence extends beyond the limits of the individual school. The experience gained from such programs will be examined during the course of further development of the proposed project.

IV. Beneficiaries

The primary beneficiaries of this project will be the residents in the approximately 86 NECs in which one or more Service Centers are located. The residents of NEC 12 in the Third Education Region, which was visited during the preparation of this PRP, are typical of the likely beneficiaries of the project. Approximately 15,000 people reside in the NEC; of these about 4,400 were attending school on a full-time basis in 1974. All of NEC 12 is rural. The largest population center is about 5,000 inhabitants. Most centers, however, consist of smaller clusters of approximately 500 people. Over 70 per cent of the economically active population in the NEC is engaged in agricultural activities; average per capita income in the area is estimated at $ 125 per year; less than 14 per cent of the homes in the NEC have electricity, over 85 per cent of homes do not have internal plumbing and less than 35% of the population own radios. Approximately 60 per cent of the adult population (above age 15) is illiterate. 1/

The majority of Project beneficiaries live in similar socio-economic conditions, typified by marginally economic agriculture and both physical and social alienation from the "modern" sectors of Peru which are almost exclusively concentrated in the urban coastal areas and larger populated centers of the sierra. In the past, this modern elite was the locus of virtually all important policy decision-making, and programs and policies conceived in a modern urban setting were uniformly applied throughout the country. The education sector was no exception, with the result that the bulk of less privileged rural school systems were provided with learning methods and tools which frequently had no relation to their actual social and economic conditions and/or aspirations - thus widening even further social and cultural alienation. Low student retention rates and learning levels became a basic output of the previous system.

Students who are affected by Service Centers are expected to benefit by receiving a more practical, relevant, work-oriented education, designed in accordance with particular socio-economic circumstances of the region in which they live, which will better prepare them for life and decrease levels of social alienation. Other users of the centers should be able to improve their level of literacy, learn home and work related skills and thereby improve employment opportunities or abilities to deal with day-to-day problems.

1/ These characteristics of the population of NEC 12 were extracted from the 1972 Peruvian National Census.

V. FACTORS AFFECTING PROJECT FEASIBILITY

A. Economic Analysis

1. Costs/Student of the Planned Services.

The capital and recurrent expenditures required to produce each basic type of educational service have been estimated on the basis of typical models for the three types of service centers. Those estimates, shown in Annex II, Exhibit A, indicate that the capital and annual recurrent costs associated with the materials production and distribution function (Model A) for an average-sized NEC would be about $18,000 and $9,000 respectively. On the basis of an estimated 3,800 primary students being served and a 25 year amortization of capital, the total annual cost/student would be about $2.50.

The capital and recurrent costs associated with the teaching of science and pre-vocational subjects (Model B) will vary depending on the number of students able to utilize the Center. A preliminary analysis of the number of students that can be served by one unit of each basic resource (i.e. a teacher, a lab, and a workshop) suggests that there would be few economies of scale after 500 students are utilizing the center. The total and per student costs would rise as second units of each resource had to be added, after which average per student costs would fall back to the level achieved at the 500 students-served level. (See Annex II, Exhibit C) Assuming one lab, one workshop, and two teachers, the capital cost would be approximately $29,000 and the annual recurrent costs $7,300. Assuming efficient utilization of the Center's resources, the cost of the science and pre-vocational education at the Center is estimated at $7.70-$16.50/student. This wide range reflects the uncertainty about the extent to which the Center will permit existing teachers who are free when their students are at the Center to be utilized for other educational activities. (See Annex II, Exhibit B)

The capital and recurrent expenditures required for each of the larger, more complex Service Centers in urban areas (Model C) are estimated at $400,000 and $75,000 respectively. Because of the varied functions of these centers, cost/student figures are not meaningful. Many people who are not studying in any formal education program are expected to utilize the facilities. Therefore, the average number of hours/user is impossible to accurately predict at this stage.

However, a rough idea about the user cost/hour can be obtained by looking at the total costs and making some assumptions about utilization. With capital and recurrent costs of $400,000 and $75,000 respectively, and assuming an average amortization period of 25 years, total cost/year would be about $91,000.

The capacity of such a Model C Center is about 560 users at one time. (This does not include the athletic facilities.) The Center might reasonably be expected to operate from 8 A.M. to 9 P.M.,

six days a week. This would suggest a maximum capacity of more than 2.2 million user-hours per year. More realistically, if we assume that the Center will operate at an average of one-fourth to one-half of physical capacity, the Center would provide 546,000-1,092,000 user hours. The user cost/hour would fall between $ 0.08 and $ 0.17.

2. Cost-Effectiveness

The proposed project will expand the total level of educational resources available and spread those additional resources among as many disadvantaged students as possible 1/. Investing in the education of those students which have the least well trained teachers and the lowest level of facilities and materials directly improves the equity of the distribution of government services. It is also likely to produce the greatest possible educational effects if, as is reasonable to assume, there are decreasing marginal returns to educational inputs.

The Mission has considered several alternatives ways of providing the desired services to the same population. At the PID stage, for example, it was hoped that large Centers which students would attend periodically could be used to serve both urban and most rural areas. It was hoped that an infrastructure of that type could offer significant economies of scale. Subsequent analysis has suggested that such multi-purpose centers do offer opportunities for providing services at reduced costs in urban areas. However, the costs and travel time required make such a solution unattractive for areas of low population density.

1/ The needs of Peruvians who now receive an even lower level of educational infestment, i.e. those who have no access to schooling, are being addressed through an A.I.D.-assisted non-formal education program.

Another conceivable alternative would be to expand the Model B concept so that those students within a one hour walk of a Service Center would take all of their primary education at the Center. This organizational model would have the added advantage of eliminating the need in those geographic areas for one teacher to teach several grades simultaneously. Although this centralization of schools is not consistent with the U.S. model of neighborhood schools, it may offer economies of scale in rural areas of Peru. One problem with this approach is that many students in outlying areas who would be willing to walk one hour to and from the Service Center once or twice a week may stay at home rather than walk that distance five times a week. The most serious and overriding obstacle is that withdrawing teachers from rural areas, even when they would be stationed nearby, would meet with strenuous political opposition. For this reason, the alternative is not considered feasible.

A third alternative would be to disperse all additional resources evenly among rural schools. The proposed project does intend that instructional materials and teacher support services be dispersed to each rural primary school through Model A type Service Centers. Rather than disperse all resources, the project also includes the creation of small resource center (Model B) which could serve several schools for the teaching of science and pre-vocational subjects. To teach this subject material in every primary school, at a level satisfactory to achieve GOP goals would require: (i) reliance on many rural teachers who, even with additional training, could not compare with the specially selected and trained teachers that can be prepared to staff the Service Centers; and (ii) either a reduction in instructional equipment and supplies per school to teach these subjects or a greatly increased expenditure. Even if the GOP could provide sufficient financial resources to provide every school with the desired quality of teaching and level of materials and equipment, the small number of children in many schools would make such a solution inefficient. Only by reducing the quality of the education (from the planned level) would it be financially feasible to teach the new curriculum in each school.

Among the possibilities not yet fully investigated is the utilization of existing and planned facilities and teachers jointly by primary schools, ESEPs, Basic Labor Education, and various non-formal programs. During the intensive review the Mission and GOP intend to continue their exploration for more efficient ways to provide educational services to low income groups.

3. Economic/Financial Feasibility

During the course of the intensive review, the Mission in conjunction with the MOE, will conduct a series of analyses designed to test the economic and financial feasibility of the various Project components. These analyses will include:

a. Development of selection criteria to insure that each selected Service Center will, in fact, consistently be able to serve the minimum numbers of students and/or outlying rural schools necessary to insure per student costs consistent with Project expectations. A study of transportation facilities, important to the success of Model A 'outreach' Centers, will be included. On the basis of these, and other criteria, NECs will be selected for Project implementation.

b. Cash flow analyses will be conducted in NECs judged to be representative of each of the three Service Center Models to determine total financial resources and programming needs to insure Project success. These will then be reviewed with MOE officials for consistency with the Ministry's budgetary capabilities.

c. A detailed economic survey of the selected education regions will accompany in-depth profiles of five to ten NECs, in order to help determine what types of Center activities would be most consistent with each region's basic economic activities.

d. The Mission will study the cost-effectiveness of the proposed Project, (both on an overall program and per student expenditure basis) to provide an economic basis for determining whether the Project is the most cost-effective way of achieving desired results.

B. Financial Analysis

Based upon preliminary calculations of increased per student costs in NECs participating in the Project, the MOE will be faced with the necessity of increasing expenditure allotments to selected NECs as well as increasing general support facilities and personnel to the NECs at the level of the MOE in Lima.

The GOP has, over the past years, demonstrated a continuing high level of concern for the Education Sector, as witnessed by the following Budget figures:**

Year	MOE Budget*	MOE Budget as % of Total GOP Budget
1971	$25,011,500	
		19%
1972	$28,568,500	
1973	$29,586,200	
		18%
1974	$32,841,200	
1975	$39,712,800	
		20%
1976	$52,084,800	

The increased amounts needed by the MOE for successful implementation of the project would not appear to be inconsistent with the GOP level of support to the sector. During the intensive review, an analysis of the recurrent budget of the MOE will be conducted to determine: i) the impact of the project on the overall budget, and ii) the likelihood of adequate and timely MOE financial support in view of other sector priorities.

C. Social Feasibility

Several problems have been identified as having a potentially negative impact on the achievement of project objectives. Although a detailed analysis of these problems must await the initiation of the feasibility study, the field trip taken to the rural NEC in Cuzco in preparation for the PRP gave preliminary indications that these problems are manageable. The problems include:

1. Teachers or children who might use the Education Service Centers, being unfamiliar with the idea of sharing facilities, might be reluctant to use Center facilities. Evidence from Cuzco indicates that this is not likely to be a major problem. Teachers in NEC 12

* US $1.00 = S/.43.38

** From 1971 on the GOP Annual Budget has been presented on a Biennal basis; costs have been disaggregated on a yearly basis, but the percentage of total GOP budget is given for the two-year period.

indicated that they would use the Center if transportation were not an obstacle. In addition, a tradition of shared facilities already exists in many areas of rural Peru. For example, the facilities available at the rural normal school in Urubamba (department of Cuzco) have for several years been used by neighboring teachers and students of cooperatives and indigenous communities. The fact that throughout much of rural Peru sharing is the norm, increases the probability that community residents will make use of appropriate facilities.

2. Teachers, school directors and parents of students may resist the transfer of school material and equipment from schools to the service center. Conditions in NEC 12 in the Third Education Region demonstrated quite clearly that at least in most rural NECs this problem will not materialize because very few schools have anything of sufficient value that would merit transfering to the Service Center.

In those cases where this problem does materialize, most likely in urban areas, the transfer of material and equipment will not be attempted until the Service Center is already in operation. Once users from a particular school or community begin deriving benefits from the Service Center, they are more likely to permit the transfer of some of the material and equipment to the Service Center.

D. Integration of Women

While it is not possible at this stage to define the impact of this project on the integration of women in the development process, facilities at Service Centers will be equally open to females and males. Women from the community will be encouraged to use Center facilities, and in the design of such facilities, the particular needs of women in different socio-economic environments will be assessed, and construction and equipping of the Centers will reflect these assessments. For instance if in a particular area it is found that a significant percentage of women are engaged in artisan activities, a Center might add an artisan workshop where basic instruction could be programmed among Center activities. If a sufficient number of women make use of the Centers and are convinced of the economic and social utility of its resources, this may have the effect of demonstrating the value of education for women and encourage more parents to send their daughters to school. 1/

Project evaluation will include a specific component which will permit a determination of the impact of the project on women. Records will be kept on the sex of Service Center clients, both in the formal and non-formal programs and on what services or facilities are used by females and males. Data will also be collected on the number of female recipients of training and those selected to work in or become directors of Service Centers.

E. Technical Feasibility

1. Pedagogical

Most research on the impact of physical facilities (buildings, materials and equipment) on student achievement is based on data from developed countries and is equivocal. The conclusions usually are based, however, on studies comparing schools having minimal facilities with those having some level above the minimum. This assumption of minimal facilities in most schools in Peru is not valid. It is not unreasonable to assume that providing some minimal level of facilities will have some positive impact on student achievement. It is also highly unlikely that work oriented education programs can be offered without even the minimum of basic tools and equipment. Evidence from seven developing countries has demonstrated that applying educational resources to low income groups

---

1/ At all levels of education in Peru females make up less than 50% of the school population.

can help raise their average student achievement, reduce dropout rates, and be a step towards achieving educational equity. 1/

2. Engineering and Environmental

At this stage of project development, no unusual technical problems are foreseen which would prohibit construction of Centers within a four-year time frame. Local materials are readily available for the type of structures contemplated, and to simplify construction, consideration will be given to the utilization of pre-fabricated components as the architectural plans are developed under the feasibility study. Actual construction, we expect, will be undertaken by local firms. An in-depth review of technical and environmental considerations will be undertaken during the intensive review, and included within the Project Paper. The environmental assessment will conform to the guidelines of PD-63.

1/ Anita A. Summers and Barbara Wolfe, "Equality of Educational Opportunity Quantified: A Production Function Approach," Federal Reserve Bank of Philadelphia Research Paper, December 1974 and IBRD Staff Working Paper No. 201, March 1975.

VI. OTHER DONOR ACTIVITIES

Chapter VI of the Sector Assessment details the activities of other donor agencies within the education sector during recent years. As noted, grant funds during the 1968-1974 period were largely directed toward university education to strengthen graduate and undergraduate programs in the physical and social sciences. Loan assistance during that period amounted to almost $58 million dollars including: i) a $24 million World Bank loan to construct and equip superior education ESEP-schools[1/]; ii) loans totalling $28 million from the Hungarian government to purchase equipment for basic and professional schools and universities throughout the country; iii) a $2 million loan from Netherlands for equipment for San Marcos University; and iv) a $3.9 million loan from France for Educational T.V. equipment.

As indicated in the Assessment, new grant projects planned or underway for 1975-1976 have largely been redirected away from higher education to Basic Education and ESEP programs. The Assessment lists a number of approved projects from such donors as UNICEF, UNESCO, UNDP, OAS, Holland, IDB, Germany, France, Ford Foundation, Canada, Japan and the Inter-American Foundation.

Other donor, proposed new loan projects are limited, to our knowledge, to a possible IDB loan to reconstruct and/or relocate the Agricultural University "La Molina".

The proposed A.I.D. Loan does not duplicate any of the on-going or planned activity of other donors. None of the larger type C Service Centers will be constructed where they might duplicate services being provided by existing or planned ESEPs. Coordination will continue to be maintained during the intensive review of the project to interchange ideas and seek ways for the various programs to become more mutually supportive.

VII. FINANCIAL PLAN

Estimates of the capital and recurrent costs have been made for each of the three service center models discussed above. These estimates are shown in Annex II. The size of Centers A and B is the minimum size at which economies of scale can be obtained. The actual size of centers may often be larger than this minimum efficient size. Costs for Model A and B Centers are based on Mission estimates. Model C cost estimates are based primarily on a recently completed pre-feasibility study. The estimates shown in the financial plan are based on the assumption that the project would provide in approximately 86 NECS about 40 Model A Centers, 55 Model B Centers, 40 Centers with

---

1/ Education institutions established by the reform for providing grades 10-12.

F I N A N C I A L P L A N
(in thousands of US dollars)

	U S E S					SOURCES	
	Model As	Model Bs	Model Cs	Central Admin. and other	Totals	AID	GOP
Capital Costs	1,440	3,315	2,400	690	7,845	6,831	1,014
Construction	(600)	(1,235)	(1,260)	-	(3,095)	(2,475)	(620)
Equipment	(320)	(1,045)	(408)	-	(1,773)	(1,773)	-
Furniture	(40)	(180)	(180)	-	(400)	(400)	-
Books	-	(285)	(90)	-	(375)	(375)	-
Contingencies	(120)	(130)	(102)	(300)	(652)	(558)	(94)
Technical Assistance	(112)	(138)	(210)	(40)	(500)	(500)	-
Training	(248)	(302)	(150)	(50)	(750)	(450)	(300)
Research and Evaluation	-	-	-	300	(300)	(300)	-
Operating Costs	1,448	1,388	900	250	3,986	-	3,986
Personnel	(768)	(912)	(636)	(200)	(2,516)	-	(2,516)
Supplies	(480)	(333)	(120)	(25)	(958)	-	(958)
Transportation	(160)	-	-	(25)	(185)	-	(185)
Maintenance	(40)	(48)	(120)	-	(208)	-	(208)
Library Books	-	(95)	(12)	-	(107)	-	(107)
Research and Evaluation	-	-	(12)	-	(12)	-	(12)
Inflation Costs (est. 11.0%/year)	-	-	-	3,669	3,669	2,669	1,000
Total Costs	2,888	4,703	3,300	4,609	15,500	9,500	6,000

All figures above inflation line item are estimated in constant 1975 dollars.

both A and B functions, and 6 Model C Centers. Since the cost of a center with both A and B functions is expected to equal the sum of what a center of each type would cost separately, we have divided the 40 joint centers into 40 additional Models As and 40 additional Model Bs. The budget is thus expressed in terms of 80 Model A Centers, 95 Model B Centers, and 6 Model C Centers for calculation purposes. As indicated above, it is probable that some of the A and B type Centers will be larger than the prototype Centers shown. However, this would not substantially affect the number of students served or the cost/student. There may also be some shifting of resources between types of centers depending upon the results of the feasibility study.

It was further assumed that on the average most Service Centers would be in operation two years during the life of the project, i.e. that two years operating budgets would be included in the project costs. All operating costs will be paid by the GOP.

Total project costs are presently estimated at $15.5 million of which $9.5 million would be provided by the proposed AID loan. 38.7% of total costs would thus be contributed by the GOP, exceeding the statutory requirement. Including Service Center operating costs for more than two years would greatly increase this percentage. Foreign exchange expenditures under the project are estimated at $3.0 million and will be financed entirely from the A.I.D. contribution.

A.I.D. loan disbursements are expected to occur fairly evenly over a four-year period. The intensive review will analyze the suitability of the fixed cost reimbursement method, particularly for the construction component of the project.

VIII. IMPLEMENTATION PLAN

The Borrower will be the Government of Peru (GOP) acting through the Ministry of Economy and Finance (MEF). The Executing Agency will be the Ministry of Education (MOE) which will utilize a Special Projects Division for day-to-day project implementation responsibilities. The Ministry has proposed that an existing project unit charged with implementing the World Bank's Education Loan be expanded and elevated to a Division level for the purpose of implementing capital projects such as the proposed A.I.D. loan. At present, this unit is organized into three operating departments (technical, education, and administration) under the leadership of an executive director. The unit is now capably staffed with 45 people with the following specialties: 1 director, 8 architects, 16 draftsmen, 8 engineers, 2 facility and equipment specialists, 1 training specialist, 1 lawyer, 1 accountant, and 7 administrative/clerical personnel. The Ministry recognizes that

additional staff for this unit will be necessary if its responsibilities are increased.

During intensive review, the Mission will weigh the advantages and disadvantages and staffing implications of building upon this existing unit, establishing a new special group, or assigning A.I.D. loan implementation duties to one of the existing Ministerial operational directorates. At present, the proposal to build upon the World Bank unit appears to offer administrative advantages; however, it will be essential to coordinate with the World Bank to determine whether it would have any objections to an expansion of this unit's role.

Wherever the special unit is ultimately established, it will be necessary to ensure the coordination of Service Center activities with other education development efforts. To achieve this, the Ministry intends to establish an advisory committee with representation from the four General Directorates of the MOE (Pre-School and Basic Education, Basic Labor and Professional Training, Superior Education, and Extension Education), the Sectorial Planning Office, the two Regional Offices in which selected NECs are located, and INIDE (Instituto Nacional de Investigación y Desarrollo de la Educación). The latter is a decentralized unit of the MOE and is generally responsible for research, curriculum and materials developments, and in-service teacher training programs.

The MOE is considered capable of implementing the proposed project, and the Project Committee does not foresee any severe administrative difficulties in further project development or implementation. In the two years since authorization of the World Bank Loan, the MOE has acquired valuable experience in the implementation of externally-financed projects and has demonstrated its readiness to assign top quality professionals to such projects on a full time basis. Therefore, to the extent possible, primary responsibility for administering the project will be left to the MOE with operational control being a function of the NEC directorate. USAID's role is expected to be principally one of monitoring loan performance.

IX. PROJECT DEVELOPMENT SCHEDULE

The basic task to be undertaken during intensive review will be the initiation and completion of the Education Service Center Feasibility Study being funded under the Decentralizing Education Planning Project. The services of a learning resource consultant (3MM), an educational technology/cost analyst (2MM), an education materials specialist (1MM), will be financed under the study, as well as local contracts with Peruvian educators, sociologists, and facility specialists to test the feasibility of the project under Peruvian

conditions. Key actions to complete the study are identified below:

Action	Completion date
1. Review of MOE facility and materials study	February 1976
2. Global survey of selected regions, determination of educationally disadvantaged zones, inventory of existing facilities within the zones, and selection of NECs for inclusion in proposed project.	March 1976
3. In-depth socio-economic study of selected NECs (5-10).	May 1976
4. Cost analysis of proposed project versus alternatives.	July 1976
5. Prototype architectural plans developed and equipment needs identified.	August 1976
6. Feasibility study printed and reproduced.	September 1976

Following completion of the feasibility study, the Project Committee estimates that 3 months will be required to complete the Project Paper, with submission to AID/W by January 1977. To assist in drafting the PP, the TDY assistance of an economist from LA/DR is requested for three to four weeks during the last quarter of calendar year 1976.

Annex 1

Goal

To make the education system more responsive to the needs of the majority of Peruvians.

Objectively Verifiable Indicators

1. Level of school enrollment increases from ____% to ____% of school age population.
2. Student drop out rate decreases from ____% to _____%.
3. Level of employment of school graduates increases from ____% to _____%.

Means of Verification

1. MOE education data.
2. MOE education data.
3. MOE and Ministry of Labor employment data.

Purpose

To make educational services more accessible to students and adults in selected zones containing predominantly disadvantaged populations.

Conditions Expected at End of Project

1. _____students from _____ schools in _____ NECs utilizing facilities provided by _____ centers. — 1. MOE education data.
2. _____ classrooms from _____ schools using kits of science, reading and mathematics materials, manual arts tools and agricultural equipment. — 2. MOE on site observation
3. _____ adults in non-formal programs utilizing facilities provided by centers. — 3. On site observation.
4. _____ Peruvians with specialities in _____, _____ and _____ and located in _____ carrying on additional training with minimal outside assistance. — 4. On site observation.
5. Staff of _____ people with specialities in _____, _____ and operating _____ service centers without outside assistance. — 5. On site observation.
6. MOE planning for expansion of centers beyond original _____, making necessary budget provisions for expansion. — 6. MOE data and cost comparisons.
7. Availability of facilities, services and equipment to _____ students from disadvantaged backgrounds increases from _____ to _____ in NECs with centers. — 7. On site observation.
8. Evaluation of _____ service centers to determine replicability of center concept to other regions. — 8. Evaluation report.

Outputs

	1977	1978	1979	1980	
1. ___14___ education service centers constructed and equipped with facilities and supplies.					1. MOE education data.
2. ___92___ kits of science, reading and mathematics materials, manual arts tools and agricultural equipment designed, produced and distributed.					2. On site observation.
3. Trained personnel for centers a. administrative b. instructional c. maintenance	To be determined by Prefeasibility Study				3. MOE records.
4. Trained users of centers: a. Teachers b. School directors and others from NEC					4. MOE records.
5. Training unit in centralized MOE office capable of providing upgrading and new training for service center personnel.					5. MOE records.
6. ___4___ architectural plans and models developed for additional education service centers to be built beyond original project area. a sample of					6. MOE records.
7. Detailed socio-economic profiles prepared for/___10___ NECs which contain service centers.					7. MOE records.
8. Operational manual for service centers produced and distributed to ___14___ centers.					8. On site observation.

Inputs - Summary (Expenditures)

	Total US/GOP	1977 US/GOP	1978 US/GOP	1969 US/GOP	1980 US/GOP	
1. Technical Assistance U.S. & Third Country curriculum/equipment specialist architectural specialist A & E Services education specifications specialist plant maintenance specialist learning resource center specialist training specialist	(See financial Plan)					1. AID/MLA records.
2. Participant training for center staff: administrative instructional maintenance						2. AID records.
3. GOP personnel: a. teachers b. school directors & others from NEC						3. MOE records.
4. Construction - Centers and other school modifications						4. AID/MOE records.
5. Commodities - school equipment supplies book and periodicals						5. AID records.
6. Other Costs - Research and Evaluation						6. AID/MOE records.
7. Contingencies	Assumes 12% annual inflation.					7. AID/MOE records.

Assumptions Linking Project Purpose to Goal

1. The GOP is committed to the concept of developing relevant education programs for disadvantaged Peruvians.
2. Sufficient resources will be forthcoming from the GOP and other donors to implement educational programs in areas where disadvantaged populations reside.

Assumption Linking Outputs to Project Purpose

1. NEC administrative staff as well as those from community school boards will cooperate to improve educational services using service centers.
2. The private costs of transportation and student opportunity costs will not be a deterrent to using/centers. Model C
3. A commitment exists to maintain centers and replace equipment as needed.
4. Sufficient resources will be forthcoming to pay salaries of center staff.
5. Public and private sector non educational institutions will make their facilities available to students.
6. Adults will take advantage of the services provided in the centers.

Assumptions Linking Inputs to Outputs

1. Sufficient number of qualified candidates are available for training.
2. A construction capability exists within Peru to ensure completion of the service centers within the stated time period.
3. Construction materials continue to be available at reasonable prices.
4. Prices for school equipment remain reasonable.
5. Foreign expertise is available to assist with the adaptation of the service center concept to Peruvian conditions.

BEST AVAILABLE COPY

Pro Forma Capital Budgets

by Type of Service Center

Model A: Instructional Materials Production and Distribution ... $18,000

Construction* $7,500

Work area $4,000
Office 1,500
Storage area 2,000

Furniture ..... $ 500

Equipment and books $4,000

Training $3,100

Technical Assistance $1,400

Contingencies $1,500

Model B: Science and Pre-Vocational Education $35,000

Construction* $13,000

Laboratory $4,000
Workshop 4,000
Library/Classroom 4,000
Kitchen 1,000

Furniture ..... $ 2,000

Equipment $11,000

Laboratory $5,000
Workshop 5,000
Kitchen 1,000

Books ..... $ 3,000

Training ..... $ 3,180

Technical Assistance ..... $ 1,450

Contingencies ..... $ 1,370

---

* Assumes $75./m^2

Model C:	Multi-Purpose Urban Learning Centers			$400,000
	Construction**		$210,000	
	Multiple-Use Laboratories (2)	$43,000		
	Carpentry Shop	10,800		
	Construction Trades Shop	9,600		
	Electrical Shop	7,900		
	Artisan Crafts Shop	7,800		
	Sewing Room	7,800		
	Classrooms (2 for 40 students)	10,500		
	Classroom (1 for 100 students)	11,800		
	Library	16,000		
	Audio-Visual Equipment Storage Area	5,000		
	Administration	4,900		
	Maintenance & Protection	8,300		
	Bathrooms	15,600		
	Circulation	36,000		
	* Athletic facilities	15,000		
	Equipment		$ 68,000	
	Furniture		$ 30,000	
	Books		$ 15,000	
	Technical Assistance		$ 35,000	
	Training		$ 25,000	
	Contingencies		$ 17,000	

** Assumes $89./m^2

* Provided by GOP

Pro Forma
Service Center Operating Budget

Model A:	Instructional Materials Production and Distribution			$ 9,050
	Personnel		$4,800	
	Materials Prod. Specialist	$2,200		
	Materials Prod./Teaching Specialist	2,200		
	Custodian/Guard (1/2)	400		
	Supplies and Utilities		$3,000	
	Transportation		$1,000	
	Maintenance		$ 250	
Model B:	Science and Pre-Vocational Training			$ 7,300
	Personnel		$4,800	
	Lab Teacher	$2,200		
	Workshop Teacher	2,200		
	Custodian/Guard (1/2)	400		
	Supplies and Utilities		$1,750	
	Lab Supplies	$ 500		
	Workshop Supplies	500		
	Office Supplies	250		
	Utilities	500		
	Books (Library)		$ 500	
	Maintenance		$ 250	
Model C:	Multi-Purpose Urban Learning Centers			$75,000
	Personnel		$53,000	
	Director	$7,000		
	Instructional Staff (12)	36,000		
	Clerical Staff	10,000		
	Supplies (Net)		$10,000	
	Books		$ 1,000	
	Maintenance, Protection and Utilities		$10,000	
	Training		$ 1,000	
	Research and Evaluation		$ 1,000	

Estimated Cost/Student

Model A: Instructional Materials Production and Distribution

1. Capital Costs
   Total Capital Cost $18,000
   Annualized Capital Cost ($18,000/25 years) ..... $ 720
   Capital Cost/Student ($600/3,800 students) ..... $ 0.19

2. Recurrent Costs
   Total Recurrent Costs (3,800 students) ..... $ 9,050
   Recurrent Cost/Student ($9,050/3,800) ..... $ 2.38

3. Total Costs
   Capital Cost/Student ..... $ 0.19
   Recurrent Cost/Student ..... $ 2.38
   Total Costs/Student ..... $ 2.57

Model B: Science and Pre-Vocational Training

1. Capital Costs
   Total Capital Costs $35,000
   Annualized Capital Cost ($35,000/25 years) ..... $ 1,400
   Capital Cost/Student ($1,450/500 students) ..... $ 2.80

2. Recurrent Costs

   Assumption a: No offsetting savings.
   Total Recurrent Costs ..... $ 7,300
   Recurrent Costs/Student (7,300 /500 students)..... $ 14.60

   Assumption b: Time of regular teachers "freed-up" for other community activities when their students are at the Service Center is equal to one regular teacher ($2,200)
   Total Recurrent Costs ($7,300-$2,200) ..... $ 5,100
   Recurrent Cost/Student ($5,100/500 students) ..... $ 10.20

   Assumption c: Time of regular teachers "freed-up" for other community activities when their students are at the Service Center is equivalent to two regular teachers ($4,400)
   Total Recurrent Costs ($7,300 - $4,400)..... $ 2,900
   Recurrent Costs/Student ($2,400/500 students) ..... $ 5.80

3. Total Costs

Assumption	a	b	c
Capital Costs/Student	$2.80	$2.80	$2.80
Recurrent Cost/Student	14.60	10.20	5.80
Total Cost/Student	$17.40	$13.00	$8.60

Service Center Capacity Analysis: Science and Pre-Vocational Education

A. Assumptions

1. Teaching loads will not exceed 24 class hours/week.

2. Labs and workshops can be utilized up to 40 hours/week for regular primary school teaching.

3. The number of hours students will utilize the Center will be approximately as follows:

Table 1

Use of Service Center by Grades

Grade	Science Lab	Workshop	Library
1	1 hour	1 hour	1/2
2	1 hour	2 hours	1/2
3	1 hour	2 hours	1/2
4	1 hour	3 hours	1/2
5	3 hours	5 hours	1
6	3 hours	5 hours	2

4. Teachers whose students are using the Center will supervise library use and assist in other activities.

5. Class size will average 40 students.

6. Library work will be supervised by a regular teacher whose students are temporarily using the Center.

B. Analysis

The following table shows a typical grade distribution of 500 rural primary school students and the amount of time they would spend at the Center.

Table 2

Use of Service Center by Grade by 500 Students

Grade	Enrollment	STUDENT HOURS Science Lab	Workshop	Library
1	175	175	175	87
2	125	125	250	63
3	75	75	150	37
4	50	50	150	25
5	50	150	250	25
6	25	75	125	13
Total 1-6	500	650	1100	250

1,750 students hours in labs or workshops

$$\frac{\text{1,750 students hrs.}}{\text{38 students per class}} = \text{46 classes}$$

$$\frac{\text{46 classes}}{\text{2 teachers}} = \text{23 classes/teacher}$$

Given the relative emphases of the curriculum between science and pre-vocational subjects 29 of the 46 classes would be pre-vocational courses given in the workshops and 17 would be science classes given in the lab. two teachers could handle this teaching load provided that the science teacher could also teach some of the pre-vocational classes. It is believed that science teachers could easily become sufficiently versatile to teach practical courses in agriculture. The following tables provide rough estimates of the number of teachers and physical facilities that would be required to serve different sized student populations depending on the versatility of the science teacher.

Table 3A

Resource Required at Service Center - Specialized Teacher Assumption

(Assumes each teacher can only teach in his/her area of speciality)

primary Level Students Using Service Center	0-436	437-738	739-872	873-1308	1309-1476	1477-1744	1744-2180
Science Lab and Teacher	1	1	2	2	2	3	3
Workshop and Teacher	1	2	2	3	4	4	5

Table 3B

Resources Required at Service Center - Versatile Teacher Assumption
(Assumes science teacher can also teach workshop)

Primary Level Students Using Center	0-548	549-822	823-1,096	1,097-1,370	1,370-1644	1645-1918	1919-2192
Teachers Req	2	3	4	5	6	7	8
Labs and Workshops	(as above)						

527-0148
5270148-(9)
PO-[illegible]

UNITED STATES GOVERNMENT

Memorandum

TO : Mr. Hassan Hassan
LA/DR

DATE: January 18, 1977

0148

FROM : Barry N. Heyman
Human Resources Division

SUBJECT: Initial Environmental Examination for FY 1977 Education Service Center Loan Project

As per STATE 312111, which requested submission of IEEs for FY 1977 projects, attached please find the original and one copy of the Mission's IEE for the Education Service Center Loan project. I would appreciate your submitting it to the Bureau's Environmental Coordinator in LA/DR.

encl. a/s

RECORD COPY

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

ANNEX III

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: PERU

Project Title: Education Service Centers
Project No. 527-22-690-148

Funding: FY 1977 - $10,000,000 (Loan)

IEE Prepared by: **Date:** January 13, 1977

Mr. Barry Heyman, USAID/Peru/HRD
Mr. Carl Leonard, USAID/Peru/CAP
Mr. Dallas D. Fowler, USAID/Peru/Environmental Coordinator

Environmental Action Recommended:

The USAID/Peru project committee for the Education Service Center project has undertaken a complete Initial Environmental Examination (IEE) of the environmental impact aspects of the project and has arrived at a recommendation for a Negative Determination, as indicated in page 3 Threshold Decision section of the IEE.

Concurrence: Date: January 14, 1977

I have reviewed the Initial Environmental Examination prepared by the project committee and concur in the Threshold Decision recommendation for a Negative Determination.

Donald R. Finberg
Director, USAID/Peru

I. Examination of Nature, Scope and Magnitude of Environmental Impacts

a) Description of Project

This project supports the Government of Peru's education reform efforts to make the education system more responsive to the needs of disadvantaged Peruvians. The specific purpose of the project is to make educational services more accessible to students and adults in Peruvian school districts containing predominantly disadvantaged populations.

To provide every school in Peru with even a minimum of education equipment and services appears to be financially prohibitive, since the Ministry of Education (MOE) budget already represents a large portion of the GOP budget and the MOE budget itself is largely used to pay for personnel costs. The GOP is currently studying the feasibility of utilizing existing community facilities such as factories and municipal buildings to double as educational facilities, when these are available, in order to provide improved instruction and education services. Another approach, where educational facilities and services are inadequate or unavailable, is to construct and equip centralized Education Service Centers to serve students, teachers and other residents within the school district.

This project will demonstrate the validity of the concept of centralized services as a means for improving the maldistribution of educational facilities and services and for remedying in some places the lack of facilities and services. Education Service Centers may have several forms and functions depending upon community needs, school and population distributions and growth rates, existing transportation services, the availability of other education facilities, the imagination of community and education leaders, and the participation and cooperation of private and public organizations. Since the project is aimed at school districts containing predominantly disadvantaged populations, the vast majority of Service Centers will be located in other than urban areas (communities under 20,000). Service Centers will perform essentially two functions. The first deals with an outreach capability whereby students' needs would be addressed through the development, production, distribution and provision of instructional materials and assistance to teachers in their respective schools. The second function would directly serve students in those areas where a minimum of 500 children from several schools would be able to reach the Service Center by walking from their homes within one hour.

Three basic models for Service Centers are being proposed to describe the type of functions to be performed and the location of the centers. The simplest model would exclusively perform an outreach function in rural areas and would consist of either a one or two room building. The second model, also for rural areas, will consist of one common classroom, one science/biology laboratory and one manual arts/agriculture workshop. The third model, will be designed to serve population in urban areas and will contain three classrooms, several science laboratories, several workshops, a library and a nursery/pre-school education facility. Up to six of the urban Centers will be built, and over 100 of the rural Service Centers. It is contemplated that a significant number of Centers will be built using already existing buildings which will need some modifications. Local materials are readily available for the type of structures contemplated.

b) Identification and Evaluation of Environmental Impacts

In evaluating the possible environmental aspects of the project (see Impact Identification and Evaluation Form attached to this Annex) it is important to note the special nature and scope of this project. While a significant amount of construction is contemplated, the majority of structures will be small, often consisting only of modifications of existing structures, and therefore no significant effects are likely on the physical environment. While some land may be taken out of use in order to locate a school, this will be minimal and will be done only in areas where land is readily available.

The cultural impact of the project will be moderate and positive. The target population, because of its socio-economic position, is often isolated from the mainstream of Peruvian life. By making educational services and facilities more accessible to students, teachers and other members of the community, it is hoped that those who benefit will play a more participatory role in national development. It is anticipated that those who use the Service Centers will acquire necessary skills for obtaining productive employment. To the extent that this project is successful, it should have a similar impact on a wider scale since success would be likely to lead to a national program.

II. Recommendation for Environmental Action

As indicated above, and in the Impact Identification and Evaluation Form, attached, there will be no adverse impacts on the environment

resulting from this project. This is an educational program which has little direct impact on the physical environment. There is no need for any further environmental examination beyond that undertaken and provided above and in the attachment to this Annex.

Threshold Decision: For the reasons cited above, the Mission recommends a Negative Determination.

IMPACT IDENTIFICATION AND EVALUATION FORM

	Impact Identification and Evaluation 1/
A. LAND USE	
1. Changing the character of the land through:	
a. Increasing the population	N
b. Extracting natural resources	N
c. Land clearing	N
d. Changing soil character	N
2. Altering natural defenses	N
3. Foreclosing important uses	L
4. Jeopardizing man or his works	N
5. Other factors	
_____	_____
_____	_____
B. WATER QUALITY	
1. Physical state of water	N
2. Chemical and biological states	N
3. Ecological balance	N
4. Other factors	
_____	_____
_____	_____

1/ Use the following symbols: N - No environmental impact
L - Little environmental impact
M - Moderate environmental impact
H - High environmental impact
U - Unknown environmental impact

IMPACT IDENTIFICATION AND EVALUATION FORM (Cont'd)

C. ATMOSPHERIC

1. Air additives	N
2. Air pollution	N
3. Noise pollution	N
4. Other factors	
_____	_____
_____	_____

D. NATURAL RESOURCES

1. Diversion, altered use of water	N
2. Irreversible, inefficient commitments	N
3. Other factors	
_____	_____
_____	_____

E. CULTURAL

1. Altering physical symbols	N
2. Dilution of cultural traditions	M
3. Other factors	
_____	_____
_____	_____

F. SOCIOECONOMIC

1. Changes in economic/employment patterns	L - M
2. Changes in population	N
3. Changes in cultural patterns	N
4. Other factors	
_____	_____
_____	_____

IMPACT IDENTIFICATION AND EVALUATION FORM (Cont'd)

G. HEALTH

1. Changing a natural environment	L
2. Eliminating an ecosystem element	N
3. Other factors	

H. GENERAL

1. International impacts	N
2. Controversial impacts	N
3. Larger program impacts	L
4. Other factors	

I. OTHER POSSIBLE IMPACTS (not listed above)

	NONE