

AGENCY FOR INTERNATIONAL DEVELOPMENT  
BUREAU FOR TECHNICAL ASSISTANCE  
OFFICE OF EDUCATION AND HUMAN RESOURCES

CONFERENCE  
ON  
A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

March 22-24, 1972

AGENDA

Wednesday, March 22

Monroe Room  
Key Bridge Marriott Motel  
Rosslyn, Virginia

6:30 - 8:00

Reception and Dinner

8:00 - 10:00

A General View of Changing Problems and Priorities in  
Development: New Aid Concepts and Strategies  
Discussion Leader: Joel Bernstein  
Technical Assistance Bureau, AID

Thursday, March 23

Conference Room "C"  
Pan American Health Organization Building  
23rd and Virginia Avenue, N.W.  
Washington, D.C.

8:45 - 9:00

Objectives of the Conference  
John Hilliard  
Technical Assistance Bureau, AID

9:00 - 10:30

Educational Technology  
Chairman: Clifford Block  
Technical Assistance Bureau, AID  
Discussion Leaders: Sidney Tickton - The Academy for Educa-  
tional Development  
Robert Branson - Florida State University  
Wilbur Schram - Stanford University

11:00 - 12:30

Non-Formal Education  
Chairman: W. Steen McCall  
Technical Assistance Bureau, AID  
Discussion Leaders: Cole Brembeck - Michigan State University  
Thomas La Belle - University of California  
at Los Angeles

- 12:30 - 2:00           Luncheon: Jefferson Room  
                          8th Floor  
                          New State Building
- Speaker: Duncan Ballantine  
                          World Bank
- 2:30 - 3:30           Educational Measurement and Finance  
                          Chairman: Robert Schmeding  
                                  Technical Assistance Bureau, AID  
                          Discussion Leaders: Manuel Zymelman - Harvard University  
  Charles Benson - University of California  
  at Berkeley
- 4:00 - 5:30           Relationships of These Activities to A.I.D. Education  
                          Projects and Objectives  
                          Chairman: John Hilliard  
                                  Technical Assistance Bureau, AID  
                          Discussion Leaders: Louis Sleeper - Latin America  
  Princeton Lyman - Africa  
  William Williams - Asia
- Friday, March 24   Georgetown Room "C"  
                          Key Bridge Marriott Motel  
                          Rosslyn, Virginia
- 8:45 - 10:30          Inter-relationships of Educational Technology, Non-Formal  
                          Education and Educational Measurement and Finance  
                          Practical Linkages, Research and Experimentation  
                          Chairman: W. Steen McCall  
                                  Technical Assistance Bureau  
                          Discussants: Douglas Ensminger  
  University of Missouri  
  Frederick Harbison  
  Princeton University
- 11:00 - 12:30         Improving Communications, Administrative Arrangements and  
                          Mutual Support (1) among Grantees, Contractors and  
                          Consultants (2) between AID, Grantees, Contractors and  
                          Consultants. Discussion of Specific Objectives, Arrangements  
                          and Problems  
                          Chairman: John Hilliard  
                                  Technical Assistance Bureau  
                          Discussants: Ralph Smuckler  
  Michigan State University  
  X Curtis Barker  
  Technical Assistance Bureau, AID
- 12:30 - 2:00          Luncheon  
                          Conclusions and Next Steps  
                          Adjournment of Conference
- 2:00 - 4:00           Individual Discussions, as desired

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PRELIMINARY LIST OF DOCUMENTS

<u>Paper No.</u>	<u>Subject</u>
1	Reform of the U.S. Economic Assistance Program (Memorandum for A.I.D. Employees from The Administrator of January 24, 1972)
2	Selected AID Reorganization Information (Notices of February 1 and 17, 1972)
3	The Rationale for the Key Problem Areas
4	Draft Working Paper on Educational Technology
5	Action Program and Work Plan: Non-Formal Education
6	Action Program and Work Plan: Educational Finance and Measurement
7	Inventory Classification of Activities in Educational Finance (A.I.D. Contract with Harvard University-Scope of Work)
8	Inventory-Classification of Activities in Educational Finance (By Harvard University)
9	Non-Formal Education (A.I.D. Contract with Michigan State University-Scope of Work)
10	Non-Formal Education (By Michigan State University)
11	Effective Alternatives to Processes of Traditional Education (A.I.D. Sec. 211-d grant to the University of California at Los Angeles.)
12	Effective Alternatives to Processes of Traditional Education (By the University of California at Los Angeles)
13	Utilizing Technology in Education Programs for LDCs (A.I.D. Sec. 211-d grant to Florida State University)

- 14 Utilizing Technology in Education Programs for LDCs  
(By Florida State University)
- 15 Analytical Services in Relating Communications  
Technology to Development (A.I.D. contract with the  
Academy for Educational Development - Scope of Work)
- 16 Analytical Services in Relating Communications  
Technology to Development (By Academy for Educational  
Development)
- 17 Information Preparation and Dissimination - Educational  
Broadcasting (A.I.D. contract with the Academy for  
Educational Development - Scope of Work)
- 18 Information Preparation and Dissimination - Educational  
Broadcasting (By Academy for Educational Development)
- 19 Evaluation of Educational TV Project (A.I.D. contract  
with the Academy for Educational Development - Scope  
of Work)
- 20 Evaluation of Educational TV Project (By Academy for  
Educational Development)
- 21 Effectiveness and Cost Efficiency of Instructional  
Technology (A.I.D. research grant to Stanford University -  
Scope of Work)
- 22 Effectiveness and Cost Efficiency of Instructional Technology  
(By Stanford University)
- 23 Schematic for Sector Strategy
- 24 Precip of Urban Affairs Analysis
- 25 The Financing of Educational Expenditure 1970-80  
(UNESCO 1971)
- 26 Education - Sector Working Paper (World Bank September 1971)

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TITLE: Reform of the U.S. Economic Assistance Program  
(Memorandum for A.I.D. Employees from the Administrator of  
January 24, 1972)

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

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March 22-24, 1972

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON

January 24, 1972

OFFICE OF  
THE ADMINISTRATOR

MEMORANDUM FOR A. I. D. EMPLOYEES

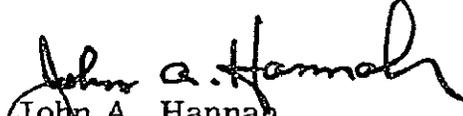
During 1971, this Agency began a number of program and administrative reforms to initiate a transition toward a full response to the President's policy for U. S. foreign assistance in the 1970s. That policy was spelled out in a special message to Congress in September, 1970 and in the submissions of proposed new foreign assistance legislation in April, 1971.

In the fall of 1971, when it became clear that Congress would postpone action on the President's proposed legislation, we embarked on an accelerated and basic internal reform.

The attached paper contains our decisions on immediate program and related organizational changes. The paper outlines goals and directions for the Agency and takes the beginning steps down the road toward these goals. The end objective is a redirected economic assistance program.

We expect the changes called for in this paper to be implemented quickly. Some can be instituted immediately. Mr. Williams will be in charge of this implementation process. Your attention is directed to a statement we made in the paper concerning A. I. D. personnel: "The need for reorganization and change is due to external circumstances and not to lack of performance on the part of A. I. D. employees." Throughout this reorganization we will insist that equity and full regard for past loyal performance and employee rights will be strictly observed.

We want to thank all of those who have participated in the examination of our programs, particularly Deputy Administrator Maury Williams and those who worked with the Task Force headed by Ernie Stern. Many thoughtful comments have been received from staffs in Washington and from those in the field. The process of reform launched by this paper will not end with it. Your ideas for further improvements and changes will be welcomed in the months ahead.

  
John A. Hannah

Attachment

## REFORM OF THE U.S. ECONOMIC ASSISTANCE PROGRAM

### 1. Purpose and Importance of Economic Assistance

In his statement of April 21, 1971, President Nixon called for "an effective U.S. foreign assistance program for the 1970s. It is our objective to work for peace, not only in our time but for future generations, and we can make no better investment toward that end than to participate fully in an international effort . . . to help the people in the poorer countries fulfill their aspirations for justice, dignity and a better life."

"... The prospects for a peaceful world will be greatly enhanced if the two-thirds of humanity who live in these countries see hope for adequate food, shelter, education and employment in peaceful progress rather than revolution."

"... We do not have all the answers to the questions of poverty, nor adequate resources to meet all the needs of mankind. We do possess the greatest scientific and technological capacity, and the most prosperous dynamic economy, of any nation in history. More importantly, we have, as a vital element of the American character, a humanitarian zeal to help improve the lives of our fellow men."

With these words, the President affirmed that the U.S. would continue to play its part in a great international development effort to help the people in the poorer countries help themselves achieve lives of better quality.

In order to carry out the purposes of the foreign assistance program, the President called for broader participation by private groups in the execution of the program and for enhanced efficiency to assure its greatest possible effectiveness. He called for improved management, a lower American overseas presence, and concentration of our special capabilities in technology and science to help meet basic human needs. The President proposed a reorganization of the aid program which is under continuing review by the Congress. The Foreign Assistance Authorization Act passed in December by the Senate and scheduled to be voted on by the House next week provides a continuing authorization for A.I.D. through Fiscal Year 1973, with the exception of Military and Supporting Assistance that are authorized through Fiscal '72.

2. Progress of Reform to Date

In response to the President's policy, A.I.D. has put into practice numerous reforms which increase the efficiency and

effectiveness of A.I.D. 's operations and strengthen the ability of the United States to contribute to the development process. In particular:

-- The creation and operation of the Auditor General's programs have helped us give special emphasis to systems which assure program effectiveness.

-- A.I.D. 's administration of security economic assistance is clearly separated from economic and humanitarian assistance within the framework of existing legislation.

-- A.I.D. 's technical assistance program is being reshaped to achieve greater responsiveness to the priorities of less developed countries with concentration in the major priority sectors of agriculture and food production, education, public health and population, and public administration.

-- A systematic effort is underway to engage American private organizations more effectively in the application of American technical and scientific capabilities to help the less developed countries (LDC's).

-- The staff of A.I.D. has been reduced by almost 30% from the beginning of Fiscal Year 1969 through the first half of Fiscal Year 1972.

-- Many A.I.D. field missions have made substantial progress in concentrating overseas assistance activities in major priority areas and in reducing staff.

--A beginning has been made in centralizing A.I.D. lending operations in the Washington regional bureaus.

-- Progress in these reforms will continue.

### 3. The Need for Further Major Reforms

Further progress in adapting the foreign aid program to the President's new approaches for the 1970s requires changes in A.I.D.'s program operations and organization in Washington.

The operational structure of A.I.D. in Washington has remained essentially unchanged since 1961. At that time the United States provided the lion's share of development assistance, and assumed a strong leadership role in helping other countries to formulate overall economic policies and programs. This strongly

directive style of foreign aid and stepped-up transfer of American resources to the poor countries became an important factor in our foreign relations. The Agency was organized with these objectives in view. It was structured to directly manage large assistance programs through administratively semi-autonomous regional bureaus with a strong emphasis on foreign policy objectives in specific countries. Technical and program support staffs were duplicated in each regional bureau in the overriding interest of central country program and policy management. This made good sense when A.I.D. was the predominant leader both in advising foreign governments on development policies and in the transfer of technical and capital resources. But times have changed since the early 1960s.

The 1960s witnessed marked progress in the LDC's. Their political leaders and technical experts - whose numbers and experience are growing - gained new national awareness of the need to manage their own affairs. Demands for greater economic independence and social justice have assumed increasing urgency as people in the LDC's have realized that starvation, poverty and ignorance are not God-ordained for them and their children. Growing experience and sensitivities among

leaders of the LDC's have overtaken the earlier more directive styles of management for foreign assistance operations. We can place greater reliance on LDC initiatives to identify priorities for assistance and to play a larger role in planning and managing their development programs.

Substantial advances in development were made in the last decade but there also emerged increasingly complex problems. There were important increases in production in most countries. New technological discoveries, and applications in agriculture and food technology created the prospect that starvation and malnutrition could be prevented. At the same time, over-population, urban concentration, depredations against the environment and swelling numbers of marginally employed and unemployed became growing world problems.

The prospects for new technological developments, as well as the increasingly complex problems, call for more sophisticated application of knowledge and skills, and broader cooperation across national frontiers. No longer is the straight transfer of resources in a properly programmed country context a sufficient condition to assure progress in development. Scientific application and the search for new solutions in assistance programs demand professional

skills and innovation of the first order. These solutions will require significantly new approaches in our financing and management of research, and the diffusion of information and technology. We will, for example, attempt increasingly to direct our efforts to finding solutions to problems common to many countries rather than, as in the past, continue to focus our endeavors in a nearly exclusive country-by-country approach.

Another important change is the fact that the U.S. is not as predominant in the development assistance field as it once was. A broad international system for sharing the responsibility for development assistance and for coordinating donor country effort is emerging. It will be a major purpose of A.I.D. in the future to encourage the further development of this system.

U.S. resources made available for development assistance have declined in absolute amounts over the past decade. While the U.S. is still the largest contributor, relative to total resources it ranks well below most other Western industrialized countries in its relative contribution to development assistance. The rapid growth of assistance from other developed countries has been significant, both in bilateral programs and in the growth of international and regional

financing institutions. Today the U.S. is a major participant in a widely shared international effort to encourage the LDC's to proceed with the mobilization of their own resources for development and to provide assistance in a multilateral framework. A.I.D. has the analytical skills, broad knowledge and first-hand experience with economic and social problems to make meaningful contributions to the development policies and programs of the international organizations.

Other important changes which have occurred since the early sixties affecting the U.S. relations with other countries include: the growth of new centers of economic and political power, the rapid pace of social and technological changes, the increasing emphasis on man's relations with his environment, and the sharper and still growing disparity between the affluent advanced countries where one-third of the world's people live and the disadvantaged two-thirds of the world's people who live in the LDC's - too many of them enslaved by hunger, squalor and ignorance.

The implications of these broad trends and changes for American policy and interests in the 1970s cannot be fully perceived, but it is clear that A.I.D. programs, operations, and organization, originally developed to serve the needs of the early 1960s, can be improved by a conscious adaptation to the world of today and tomorrow.

4. Redirection of Program Operations and Organization

A more collaborative style of assistance which recognizes that the people of the developing countries are at the center of development cooperation programs is the keystone of this redirected program. We will extend this assistance style to all our activities so that U.S. assistance programs in the developing countries will operate under guidelines mutually agreed with the developing countries.

Broad participation by American private groups in the practical work of development will be an important means to facilitate the transfer of American experience and know-how to people who need and want our help. Qualified private professional, business, educational, non-profit and voluntary organizations can play a larger role in carrying out development work by collaboration as partners in the U.S. assistance program.

American universities have played a major role in assistance programs. They have helped train tens of thousands of developing country professional and technical personnel, a large portion of whom are now in important leadership roles. There have been increasing benefits on the U.S. side from the universities' experience overseas.

The task ahead is to find fresh ways of relating the innovative, creative and knowledgeable individuals and institutions in our society --all kinds of institutions--to developing country individuals and institutions in such a way that the quality of the lives and the productive capacities of people in these countries can be improved. The assistance techniques must adjust to the changing realities in the developing countries. The preferred mode is joint problem solving by LDC and American personnel.

Increasingly, A. I. D.'s role will be to plan development programs, to help to fund private organizations to design and execute development activities in collaboration with experts and institutions in the developing country and A. I. D., then to monitor the progress and results.

Private groups are increasingly developing the competence, experience and skills necessary to execute development activities with a minimum of direct U.S. Government supervision. Their enlistment in development work allows for the contribution of talents and experience which otherwise would not be available to developing countries.

A. I. D. has been making progress in engaging private groups, by contract, to carry out a greater share of the overseas development work. The Agency will experiment further with new techniques to encourage more direct professional collaboration between developing country and American institutions.

A. I. D. is experimenting with block grants directly to developing countries who engage American private groups for agreed upon development work. Alternatively grants are provided to U. S. non-profit organizations to carry out development activities. In these cases the U. S. Government's role is that of a financing intermediary. More needs to be done in developing techniques which simplify the administration of aid and reduce overhead in personnel and administrative costs.

Strengthening programs of Population and Humanitarian Assistance will be a major thrust of the redirected A. I. D. program.  
A new Bureau for Population and Humanitarian Assistance will be established within A. I. D.

A. There is a need to reinforce the humanitarian efforts of the United States, both public and private, through improved coordination and working relations with the varied and numerous voluntary non-profit organizations.

In recent years American voluntary agencies have expanded their capabilities and activities beyond narrow traditional humanitarian relief. Their potential for broadened relief and development capabilities is not being fully realized. The new Bureau will formulate an improved program of support to help voluntary agencies plan development-oriented programs in collaboration with developing country objectives

and institutions.

B. The new Bureau for Population and Humanitarian Assistance will bring together under central direction programs for: Voluntary Overseas Activities, Disaster Relief, General Relief and Rehabilitation, Food Resources administered by A. I. D. under PL 480 Title II Grants and the Population Activities of A. I. D.

Grouping these activities in a single Bureau recognizes that the MAJOR PERSISTENT DISASTERS TODAY ARE HUNGER -- half the world's children go to bed hungry -- and THE PRESSURE OF POPULATION ON A LIMITED ENVIRONMENT AND RESOURCES. In these broad areas of humanitarian concern -- as well as helping with shorter term natural and man-made disasters -- private agencies have an important role to play.

C. The immediate disaster relief capability within the Agency will be upgraded and strengthened. Experience this past year in dealing with assistance for the Pakistan disasters demonstrated the need for: higher level policy direction within the U. S. Government, better means of coordinating public and private responses, and, when appropriate, operational approaches to coordinate U. S. relief activities through the United Nations. The new Assistant Administrator for Population and Humanitarian Assistance will be charged with these responsibilities.

D. Problems of population growth and birth control are the most pressing of all and population will continue to receive the highest priority.

A central office of Population in the new Bureau will assume the responsibilities now carried out by the population staff of the Technical Assistance Bureau and the population staffs of the regional bureaus. A single office in A. I. D. charged with population assistance policy, research and operations on a global basis will provide a strengthened and coordinated response to population problems.

The Office of Population will be responsible for planning, developing and monitoring the implementation of all population projects. Regional Bureaus will retain responsibility for participating in the approval of country and regional population strategies and for reviewing all proposed population projects from the standpoint of appropriateness to specific country or regional needs. Population staff may be seconded from the Population Office to the Regional Bureaus to help fill their liaison and review needs. All new projects will be approved by the Administrator's office in order to assure conformity with Agency policy and regional and technical feasibility.

E. The new Bureau for Population and Humanitarian Assistance will provide more effective management and a broader image for U.S. humanitarian programs by consolidating activities which concern the

most urgent needs of people -- help in immediate disasters, hunger and over-population. The new Bureau takes account of the important role which voluntary non-profit organizations are already playing in the broader humanitarian areas and will seek to encourage fuller and better use of their potential.

F. Programming economic assistance more directly to meet basic human needs, rather than primarily for over-all country growth, will be an essential feature of our redirected A. I. D. American long-term interests require that there be increased well-being in the less developed world. We have learned that if development is truly to occur -- it has meaning only to the extent that genuine benefits accrue to those in the lower levels of the social and economic order. We believe that the United States through its assistance programs has a unique and significant contribution to make in bettering the condition of people and we will focus our programs directly upon helping improve their lot. We will seek to do this by increasingly applying our country's best technological, management and research capabilities to helping solve their problems.

We have singled out areas of special concentration such as agriculture and food production, education, population, and public health where improvements will directly touch upon the lives of hundreds of millions and in which the United States has much to offer. A. I. D. accepts as its greatest challenge for the future

effectively bringing to bear on these great human problems the best American know-how, planning and management skills.

Most of A. I. D. 's technical assistance projects address basic human needs in the developing countries. Their effectiveness will be increased if technical and capital projects are integral parts of carefully developed sector strategies which draw on the best professional experience and are related to broad regional trends in the specialized fields. A. I. D. has a distinctive advantage in being able to concentrate both capital and technical assistance resources on key sector objectives.

The effectiveness of A. I. D. 's projects will be increased if their planning and execution can count on stability and continuity of effort. Major human problems require persistent effort for many years to reach project goals. Longer term approaches to problems and budgeting will be sought, within the limits of Congressional appropriation policies and procedures.

Adoption of sector strategies will improve A. I. D. analysis, enable better project selection, and provide a sound basis for attention to development policy issues and priorities. By focussing on major sectoral problems it should prove easier to engage the best professional talent in A. I. D. programs.

G. In the transitional period immediately ahead, the Regional Bureau leadership will have an opportunity to redirect their program planning and implementation responsibilities in sectoral terms related to the broad regional areas of their concern.

The future role of the Regional Bureaus will be primarily in:

- sector analysis combining capital, technical, food and other assistance resources.
- refining sector strategies and project design.
- oversight and monitoring of program and project implementation.
- maintaining country expertise where there are major A. I. D. operations.
- representing A. I. D. in country, regional and consultative organizations.
- supervising Agency field offices.

To carry out these responsibilities the Regional Bureaus will continue to report directly to the A. I. D. Administrator. They will retain their program, loan, and technical staff capacities but they should assure that these staffs integrate effectively in the new sectoral context. They will look elsewhere for supporting services which lend themselves to centralization. Thus the Regional Bureaus will rely

on a new Bureau for Program Services for commodity procurement, contracting, engineering, and management support services, as they now look to central offices for personnel and participant training services.

Relieving the Regional Bureaus of program support functions will free them to concentrate on the substantive aspects of sectoral analysis, planning and monitoring implementation. They will draw on the Technical Assistance Bureau for assistance in assuring that the best available technical analysis is employed in these tasks -- using resources both within and outside the Agency.

To assure continued Regional Bureau authority over programs in their respective areas, Regional Assistant Administrators' approval will be required for new programs and projects.

To meet the concern of the Regional Bureaus for responsiveness and adequacy of service from centralized offices several

mechanisms will be employed. Bureaus may retain one or two persons to provide advice in bureau management and to provide liaison with central management offices. As mutually agreed between the Regional Bureaus and the Bureau for Program Services, a limited number of specialists (e.g., engineers, commodity procurement officers, contracting officers) may be detailed from Program Services to specific Regional Bureaus to provide in-house advisory capability and continuity in the Regional Bureaus. Such details will be limited to special circumstances where the Regional Bureau workload and portfolio justifies such an arrangement. These arrangements will be kept under continuing review to assure the most effective and efficient deployment of manpower.

Regional Assistant Administrators will participate in the evaluation of the quality and timeliness of the service performance of the heads of the several central program support offices.

H. The Near East South Asia Bureau and the Office of East Asia Development will be combined in a single Bureau for Asia.

I. A new Bureau for Program Services will consolidate and centralize program and management support functions throughout A. I. D., and the staffs and responsibilities for these functions will be moved to the Program Services Bureau from the regional and other Bureaus and offices. This service-oriented Bureau will provide responsive central support to the Agency as a whole in the following areas:

- a major wing for Program Support will include central offices for: training, contracts, commodity procurement and engineering;
- a second major wing for Management Support will include central offices for: Controller, Personnel, Management Analysis, Data Systems, and other administrative support functions.

Centralizing these common support functions will:

- assure greater consistency of Agency policies in dealings with outside organizations. This is important in contracting and procurement where A. I. D. has been criticized for five regional "faces" in its dealings with commercial firms, universities, foundations and private organizations.
- permit flexibility to respond more quickly to the requirements for service throughout the Agency.

- facilitate more effective professional service to the Agency as a whole. This will provide greater opportunity for upgrading of professional competence and for career mobility within each professional group.
- achieve more efficient use of manpower through the consolidation of similar and in some respects duplicating functions and staffs and by eliminating unnecessary overhead, thus permitting a gradual but significant reduction in the number of positions required.
- facilitate Agency-wide reforms and simplification in policy and operating procedures in the "common services" area.

A consolidated approach to common support functions will be a more effective and less costly way of meeting Agency needs:

Housing and American Schools and Hospitals will also report to the Assistant Administrator for Program Support.

J. Personnel Management during the transition will prove difficult. The reorganized A. I. D. over a period of time could achieve economies in personnel of up to 20-25 percent of A. I. D. 's present American staff and at the same time realize an effective assistance operation consonant with the policy needs of the 1970s. These results in economy and efficiency will only be possible if the Agency receives authorities from the Congress to

effect an orderly reduction in staff by incentives for selective retirement of eligible personnel. The alternative of an enforced reduction-in-force, under established procedures, would be destructive of Agency effectiveness and would not permit redirection of the Agency with the quality staff which is essential for the achievement of a better directed and more effective economic assistance program.

The Agency administration is determined to deal with A. I. D. personnel throughout the reorganization with equity and full regard for past loyal performance and rights of A. I. D. employees. The need for reorganization and change is due to external circumstances and not to lack of performance on the part of A. I. D. employees. The overall performance of A. I. D. employees under difficult and frequently trying circumstances has been exceptional. It is this solid bedrock of skilled and dedicated personnel which makes possible the redirection and adaptation of the Agency to the changing needs of the 1970s.

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5. Research and Innovation: The search for more effective techniques and adaptation of advanced technologies must occupy a prominent position in all A. I. D. 's development operations. The unprecedented and complex problems facing developing countries call for application of more sophisticated knowledge and skills in our assistance programs than have been seen applied

in the past. As the Stern Committee stated in its report of December 13, 1971, "... we must devote a much greater share of our talents, effort and finances to help find answers to the critical development problems." Application of the research recommendations of this report will strengthen A. I. D. 's role as an innovator in development. They include:

- articulating a comprehensive research philosophy;
- increasing the efforts of both U. S. public and private research institutions on critical developing country problems;
- an increase in A. I. D. 's efforts particularly in areas of applied research concerned with innovative application of technology and new forms of institutional development;
- more emphasis on strengthening the capacity of developing country research institutions and personnel;
- encouraging selected international research institutions linked to institutions in the developing countries;
- more systematic evaluation of A. I. D. financed research to get better returns in terms of utilization in the developing countries.

A. I. D. 's central concept in furthering development of the research capabilities of the poor countries will be the welding and strengthening of worldwide networks of institutions doing comparable research. By

promoting linkages between the comparatively modest research investments that are feasible in developing countries and the research knowledge and capabilities built up by heavy investments over many years in the U.S., other developed countries and the international research institutes, A.I.D. will help to make research efforts in the developing countries more productive than they could otherwise be and will accelerate the growth of research capability in these countries. The research capabilities of the U.S. have much to offer and can be brought to bear on developing country problems most effectively and economically by this approach.

The Technical Assistance Bureau of A. I. D. is the focal point for articulating technical assistance policy and strategies which will permit a coordinated employment of A. I. D. 's resources in research, institutional grants, and major pilot programs in innovative approaches to the solution of critically key problems of development.

Technical and Regional Bureau activities will be coordinated. More sharply focusing Regional Bureau programs on sector strategies will offer the Technical Assistance Bureau new opportunities to provide

professional leadership and to adapt problem solving approaches into most of A. I. D.'s operations. The Technical Assistance Bureau, started as a pioneering effort in technical innovation, is now charged with the major task of providing professional leadership in research, program development, and technical assistance policy for agency-wide application.

6. Economic Supporting Assistance under existing legislation is administered as a separate Bureau of A. I. D. essentially concerned with programs in South East Asian countries. We continue to hope that Congress will eventually separate Supporting Assistance from A. I. D. The Bureau will be fully subject to central A. I. D. policy and direction as long as it remains part of A. I. D.

Centralization of program and management support services and engineering will apply to the Supporting Assistance Bureau in the same way as other regional bureaus.

The Supporting Assistance Bureau will speed its consideration of program approaches to enhance the reconstruction and economic self-reliance of the South East Asian countries.

7. Dollar repayable capital loans continue to be an important element of assistance in the redirected A. I. D. program. The U. S. plays an essential part through the bilateral lending program. This program participates in the funding consortia led by the World Bank and in consultative groups for many of the LDCs. Increasing use is being made of new sector programming techniques effectively combining capital loan and grant technical assistance in addressing basic human needs. Capital loans are a key resource in this sector focus.

8. Greater central policy and program direction will be exercised. In the past the Regional Assistant Administrators have had great autonomy in program decisions under broad policy guidance from the Administrator and within the framework of detailed manual orders - in an attempt to maintain conformity among the autonomous bureaus. With greater centralization of policy and program direction,

the system of Agency manual orders will be replaced by a series of Policy Determinations issued by the Administrator together with specialized handbooks on supporting operations.

To assist the Administrator in the redirection of the Agency's program, an Administrator's Advisory Council composed of senior officers of the Agency, will regularly consider broad program or operational issues and act to speed the process of internal staff review.

A Project Approval Committee, under the leadership of the Deputy Administrator, will assure that proposed projects support Agency policy and objectives. A major task of the Committee will be to review proposed new projects to assure that they conform to the Administrator's guidelines for sector concentration, adapt to key problem solving objectives, infuse applicable research and training, and achieve maximum economies in the delivery of A.I.D. resources. The Deputy Administrator will maintain oversight of proposed loans before their submission to the inter-agency Development Loan Committee.

9. A strengthened Program and Policy Coordination Bureau (PPC) will assist the Administrator in achieving more effective central direction of A.I.D.'s program. PPC, in addition to its present responsibilities, will include:

- a consolidated Budget Office combining the staffs now concerned with budgeting in the Office of the Controller and in PPC. The new office will work with the Controller in devising an integrated system for financial planning, budgeting, accounting and reporting. The integrated and revised system will focus on shifting from a country to sector emphasis;

- a Technical Assistance staff to provide a central point for processing Agency projects to assure consistency with policy and sector objectives and serve as secretariat to the Project Approval Committee for central project review and approval;

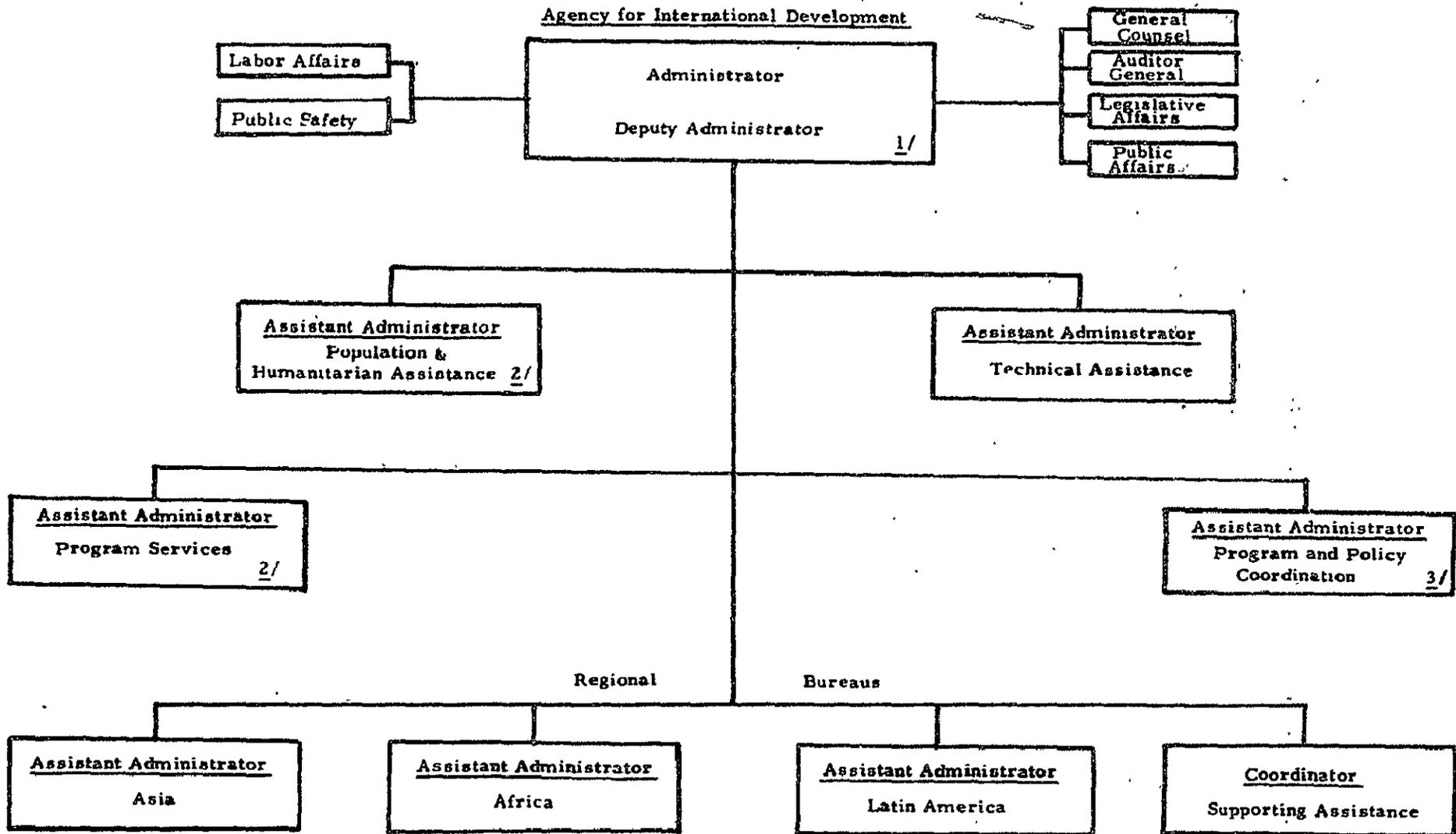
- the staff of the Office of Evaluation;

- a strengthened policy analysis office;

- a strengthened international assistance coordination office.

10. The redirected agency will hopefully assume a more important role within the U.S. Government on coordination of major U.S. financial, trade and international development policies related to U.S. Government objectives in the developing countries. This enhanced role flows logically from A.I.D.'s analytical skills and experience, the

broadened policy context of the redirected A.I.D. program and the President's policy to relate assistance, bilaterally and multilaterally, to overall economic policy relationships with the developing countries.



1/ Includes Director of Equal Opportunity Programs.

2/ See Attached chart.

3/ Includes evaluation function and consolidates PPC and A/CONT budget functions.

Assistant Administrator  
Population and  
Humanitarian Assistance

Grant Food  
for Peace 1/

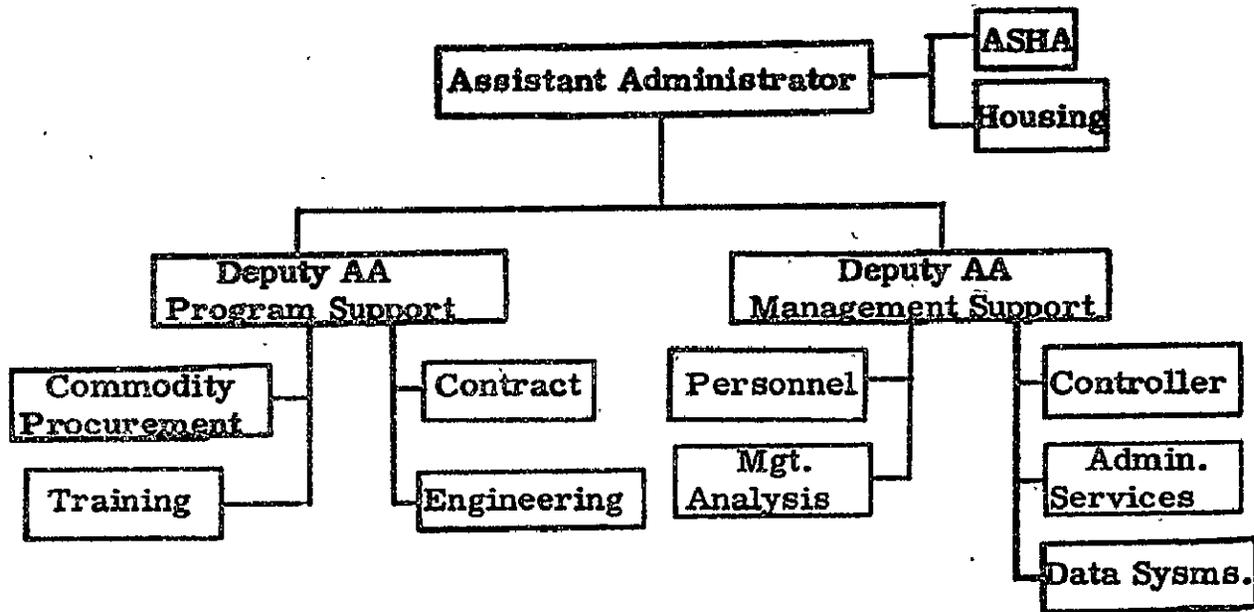
Population

Disaster  
Relief

Private Over-  
seas Programs

1/ PL 480 Title II

1/18/72



TITLE: Selected AID Reorganization Information  
(Notices of February 1 and 17, 1972)

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

March 22-24, 1972

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

OFFICE OF  
THE ADMINISTRATOR

A. I. D. General Notice  
February 1, 1972  
A/AID

SUBJECT: Establishment of Administrator's Advisory Council

As part of the implementation of A. I. D. 's internal reform plan announced January 24, 1972, there is established an Advisory Council to provide for systematic review of major policy and program issues. The Council will assist in strengthening central direction of Agency programs, speeding the decision-making process within the Agency and improving the dissemination of information on major policy decisions.

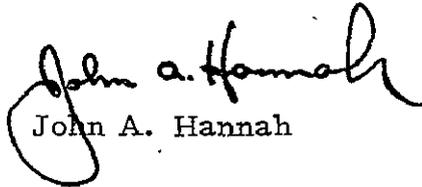
The Council will be chaired by the Administrator. Its membership will consist of the Deputy Administrator, all Assistant Administrators, the General Counsel, the Auditor General, the Director, Office of Legislative Affairs, and the Director, Office of Public Affairs.

The Executive Secretary of the Agency will notify members of meeting times, inform them of the agenda for each meeting, and assign responsibility for preparation of papers. Major decisions made by the Administrator in the course of or as a result of Council deliberations will be disseminated by the Executive Secretary.

While there will be no rigid restrictions on the subjects to be considered by the Council, its consideration normally will be devoted to major Agency and development-related issues within the U. S. Government and in international organizations. These include overall program policies and sector strategies; positions on issues before international financial and development institutions; overall programming, budgeting, and Congressional Presentation matters; and major operational and administrative issues. Senior Agency officers should inform the Executive Secretary of issues which may be appropriate for consideration by the Council.

2

The Executive Secretary may issue, from time to time for the guidance of members, supplementary instructions and information on the operation of the Council.

  
John A. Hannah

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A. I. D. List H, Position 5

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WASHINGTON, D. C. 20523

OFFICE OF  
THE ADMINISTRATOR

A. I. D. General Notice  
February 1, 1972  
A/AID

SUBJECT: Establishment of Project Approval Committee

As part of the implementation of A. I. D. 's internal reform plan announced January 24, 1972, there is established a Project Approval Committee under the chairmanship of the Deputy Administrator. Committee membership, while it will vary according to the type of activity under review, generally will comprise the proposing Bureau or Office, all Regional Bureaus, the Bureau for Program and Policy Coordination, the Bureau for Technical Assistance, the Bureau for Program and Management Services, and other Bureaus or Offices as appropriate. The Assistant Administrator for Program and Policy Coordination will serve as Secretary of the Committee.

The purpose of the Committee is to assure that proposed projects support Agency policy and objectives. As part of its functions, the Committee will review loan, grant, P. L. 480, and housing investment guaranty proposals to assure that they conform to Agency guidelines for sector concentration, contribute to key problem-solving objectives, infuse applicable research and training, and achieve maximum efficiency in the delivery of A. I. D. resources.

Because of the number of projects involved, it would not be practical--nor in keeping with the need to expedite the Agency's business--to submit all projects to the Committee. Therefore, the Committee will review by "exception." The Committee Secretary will screen projects to be reviewed by the Committee. The projects to be reviewed will be those that:

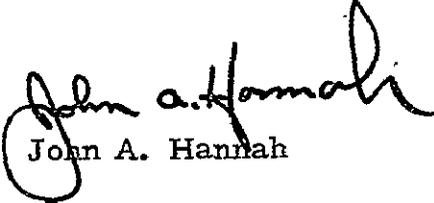
- (1) are of significant size or by themselves raise important policy issues;
- (2) are representative of a number of projects that raise policy issues;
- (3) seek to break new ground, or present new innovative approaches;
- (4) raise difficult management or implementation problems;

(5) are new population projects; or

(6) such additional projects as required to provide a representative sample from each operating Bureau or Office should projects falling in the above categories be insufficient.

In addition to the projects selected for review by the Committee Secretary, the Committee will review any project that, in the opinion of the originating Bureau or Office, should be placed before the Committee.

The Committee Secretary (AA/PPC) will issue shortly detailed guidance for the project review process.

  
John A. Hannah

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A. I. D. General Notice  
February 1, 1972  
A/AID

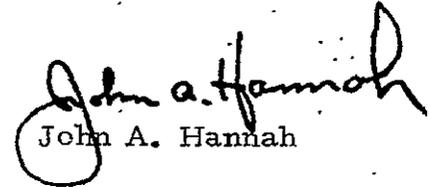
SUBJECT: Establishment of the Bureau for Population and  
Humanitarian Assistance

As part of the implementation of A. I. D. 's internal reform plan announced January 24, 1972, there is established a new Bureau for Population and Humanitarian Assistance. Dr. Jarold A. Kieffer is designated as Acting Assistant Administrator for Population and Humanitarian Assistance (AA/PHA). Mrs. Harriett S. Crowley is designated as Deputy Assistant Administrator (acting).

The new Bureau for Population and Humanitarian Assistance will consolidate activities which concern the most urgent needs of people -- help in immediate disasters, hunger, and overpopulation. It will reinforce the humanitarian efforts of the United States, both public and private, through improved coordination and working relations with the varied and numerous nongovernment organizations with overseas humanitarian and development programs. The Bureau will bring together, under central direction, programs for voluntary overseas activities, disaster relief, general relief and rehabilitation, food resources administered by A. I. D. under P. L. 480 Title II grants, cooperatives, and the population activities of A. I. D.

The Assistant Administrator for Population and Humanitarian Assistance is responsible for developing organization and staffing plans, delegations of authority (in consultation with the General Counsel), revised operating procedures, and other necessary implementation plans for the new Bureau. In discharging this responsibility, the AA/PHA will collaborate with the Assistant Administrator for Program and Management Services and the Regional Bureaus and will consult with the Bureau for Technical Assistance, the Office of Food for Peace, and the Office of Private Overseas Programs.

As promptly as practicable, the AA/PHA will submit to the Deputy Administrator for his approval the reorganization plan required for the new Bureau to begin operating. Existing functional and personnel assignments and delegations of authority will continue unchanged until further notice.

  
John A. Hannah

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WASHINGTON, D. C. 20523

OFFICE OF  
THE ADMINISTRATOR

A. I. D. General Notice  
February 1, 1972  
A/AID

SUBJECT: Establishment of the Bureau for Program and  
Management Services

As part of the implementation of A. I. D. 's internal reform plan announced January 24, 1972, there is established a new Bureau for Program and Management Services. Mr. James F. Campbell is designated Assistant Administrator for Program and Management Services (AA/SER). He will be assisted by a Deputy Assistant Administrator for Program Support, Mr. Willard H. Meinecke, and a Deputy Assistant Administrator for Management Support, Mr. James E. Williams (acting).

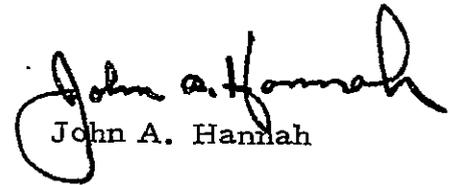
The Bureau for Program and Management Services will consolidate and centralize Agency program and management support services. This service-oriented Bureau will provide responsive central support to the Agency as a whole in the areas of participant training, contract services, commodity procurement, engineering, controller, personnel, management planning, data systems, and administrative support services.

The Bureau also will administer the Agency's worldwide programs for Housing and for American Schools and Hospitals Abroad.

The Assistant Administrator for Program and Management Services will continue to discharge the responsibilities formerly held by him as Assistant Administrator for Administration. In addition, he is responsible for developing, with the full participation of the Regional Bureaus and other Bureaus and Offices, organization and staffing plans, delegations of authority (in consultation with the General Counsel), revised operating procedures, and other necessary implementation plans for the new Bureau. The AA/SER, the Regional Bureaus, and

other Bureaus and Offices will concurrently reach mutual agreement with regard to the Bureaus' requirements for both in-house management support capability and specialist capability (e. g., engineering, procurement, and contracting).

As promptly as practicable, the AA/SER will submit to the Deputy Administrator for his approval the reorganization plan required for the new Bureau to begin operating. Existing functional and personnel assignments and delegations of authority will continue unchanged until further notice, with the exception that effective this date, all delegations and redelegations referring to the Assistant Administrator for Administration are being modified to refer instead to the Assistant Administrator for Program and Management Services.

  
John A. Hannah

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OFFICE OF  
THE ADMINISTRATOR

A. I. D. General Notice  
February 1, 1972  
A/AID

SUBJECT: Establishment of the Bureau for Asia

As part of the implementation of A. I. D.'s internal reform plan announced January 24, 1972, there is established a new Bureau for Asia. Mr. Donald G. MacDonald is designated Assistant Administrator for Asia (AA/ASIA).

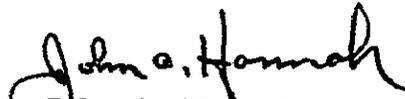
The new Bureau for Asia combines the development programs currently administered by the Bureau for Near East and South Asia and those administered by the Office of East Asia Development Programs (programs in Indonesia, Philippines, Korea, and limited or residual activities in Malaysia, Singapore, Hong Kong/Macao, Ryukyu Islands, Taiwan, and Burma).

In order immediately to assign responsibility for these programs to the Assistant Administrator for Asia, existing delegations of authority are being revised as of this date.

The Assistant Administrator for Asia is responsible, in collaboration with the Assistant Administrator for Program and Management Services, for developing organization and staffing plans, revised redelegations of authority (in consultation with the General Counsel), revised operating procedures, and other necessary implementation plans for the new Bureau. In discharging this responsibility, the AA/ASIA will consult with the Supporting Assistance Bureau.

As promptly as practicable, the AA/ASIA will submit to the Deputy Administrator for his approval the reorganization plans for the new Bureau. Existing functional and personnel assignments, redelegations of authority, and support services from the Supporting

Assistance Bureau, will continue unchanged until further notice .  
except that the Assistant Administrator for Asia will redelegate,  
effective this date, appropriate authorities to the Director, Office  
of East Asia Development Programs.

  
John A. Hannah

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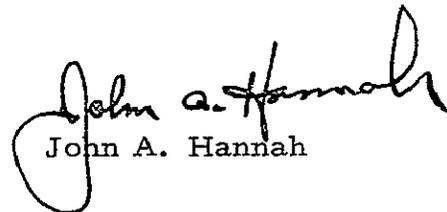
A. I. D. General Notice  
February 1, 1972  
A/AID

SUBJECT: Transfer of Functions to the Bureau for Program  
and Policy Coordination

As part of the implementation of A. I. D. 's internal reform plan announced January 24, 1972, the Bureau of Program and Policy Coordination will be reorganized to include the Office of Program Evaluation, A/AID, and those functions in the Office of the Controller concerned with budgeting. This action will strengthen central program direction and provide a basis for the development of a more effective and integrated system for planning, budgeting, and evaluation.

The Assistant Administrator for Program and Policy Coordination is responsible, in collaboration with the Assistant Administrator for Program and Management Services, for developing organization and staffing plans, delegations of authority (in consultation with the General Counsel), revised operating procedures, and other necessary implementation plans for the reorganization. In discharging this responsibility, the AA/PPC will consult with the Office of Program Evaluation and the Office of the Controller.

As promptly as practicable, the AA/PPC will submit to the Deputy Administrator for his approval the reorganization plan required to effect these changes. Existing functional and personnel assignments and delegations of authority shall continue unchanged until further notice.

  
John A. Hannah

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D. C. 20523

OFFICE OF  
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A.I.D. General Notice  
February 17, 1972  
A/AID  
Issue date: 2-24-72

SUBJECT: A.I.D. Organizational Chart

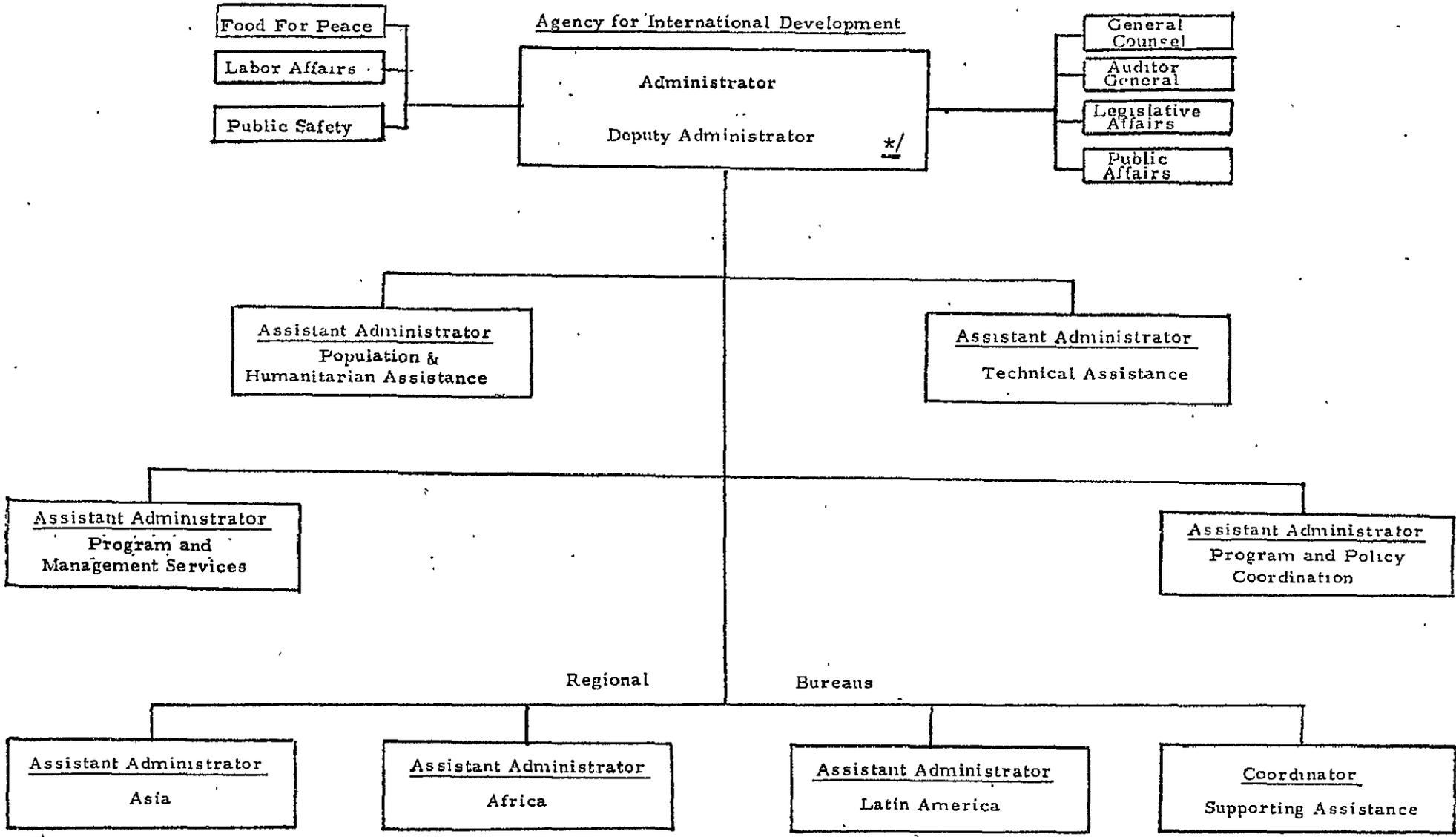
The attached organizational chart reflects the Administrator's Reform Plan of January 24, 1972.

This chart replaces Attachment A to M.O. 201.3 and is to be used as the official chart of the Agency.

Attachment:  
Organizational Chart

DISTRIBUTION:

- A.I.D. List H, Position 5
- A.I.D. List B-1 (Circulate 1 copy to every 5 employees)



\* / Includes Director of Equal Opportunity Programs.

TITLE: The Rationale for the Key Problem Areas

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

MARCH 22-24, 1972

AA/TA

8/30/71

## I. The Rationale for the Key Problem Areas

### INTRODUCTION

TAB's key problem areas were identified through a year long process of successive analyses, consultations, conferences and reviews of drafts of KPA papers -- involving a wide range of specialized and overall development program expertise inside and outside the Agency. The approach was to identify the most pervasive and important impediments to improvement of the well being of the peoples of the LDC's, given their known wants. Other important criteria were prospects for effective action by assistance agencies (particularly the USG) to support LDC efforts to reduce these impediments, substantial field and regional bureau interest in the problems, and the extent that external technical assistance needs were likely to be met from non-USG sources. The scope had to be narrowed further to be manageable within the resources prospectively available to TAB. After several rounds of staff level discussions with the regional bureaus and other offices, the Technical Assistance Executive Committee concurred in the final selection of the KPA's.

Since the selection was intended to provide both administrative and program guidance to TAB on where to focus its continuing work in depth to mobilize additional knowledge and expertise needed by A.I.D. to provide high quality responses to LDC desires for technical assistance, some important subject areas meeting the foregoing criteria were excluded. These were subjects that were expected to be of continuing importance for U.S. assistance but that could be handled more-or-less adequately by drawing existing knowledge and expertise "off-the-shelf" through regional bureau contracting or by use of "centers of excellence" maintained for Agency-wide use by TAB contracts, i.e., without undertaking the building of new knowledge and expertise and the special dissemination efforts contemplated for the KPA's.

The field responses to the selections, and the responses (and emulation) of other assistance agencies have confirmed the validity of the choices. However, they will need continuing review to evaluate whether the expectations on demand for and delivery of effective action are proving out after appropriate testing periods, and in the light of changes in LDC priorities and in other donors' provision of TA.

The specific rationale for each of the key problem areas selected is sketched broadly below. These rationales are developed much more fully in the KPA paper for each sector. This memorandum does not deal with the all important means of getting the KPA work done and making it effective in touching the lives of LDC peoples, which is described elsewhere. Nor does it consider the extensive lateral work with other public and private assistance organizations.

## AGRICULTURE AND FISHERIES

This sector has most of the people and output of the LDC's. This will be the case for a long time. It provides a major prospective source for national savings to permit development investment, and the principal market for expanding national production. About 1/3 of the Agency's TA falls in this sector. The problem of feeding the LDC peoples adequately remains the foremost concern of the decades ahead, along with the twin problem of excessive rates of population growth. In addressing these, the closely interrelated problems of improving rural employment opportunities and income distribution are major issues.

The foregoing factors and application of the general criteria for selecting KPA's led to a wider band of KPA activity in agriculture than in other fields, except population.

### (1) Lack of sector analysis and agricultural economics capability

A principal cause of the slow response of LDC agriculture to increased food needs and of much wasted investment in agriculture has been the lack of LDC capacity to understand well and to intervene skillfully to affect the dynamics of the rural sector, including the employment, income distribution and other social effects of alternative types of development. There has been little capability to identify investment and research priorities in the light of:

- alternative marketing and technological possibilities,
- strategic points of policy or operational intervention to bring about desired changes in production and marketing along socially sound lines,
- the likely outcomes throughout the economy of alternative policy courses affecting agricultural concerns.

The following cycle has been quite common in individual LDC's: political concern about inadequate food supply, or rural income or instability, or about population flow to cities -- decisions to invest more to meet these concerns -- poor results because of the incapacity noted above -- disillusionment and apathy until some new sense of crisis -- then another similar round.

The missing capabilities identified here are generally in the domain of the agricultural economist. In the LDC's there has been comparatively little understanding of agricultural economics functions, little organizational and procedural provision for their use, and not much well trained personnel. The KPA work is intended to help efforts to reduce all three of these gaps. To a large extent, the process should involve "learning by doing together" (i.e., collaborative sector analysis work and discussion by U.S. and LDC practitioners) rather than by "telling how." It builds on a modest start already made by A.I.D. and other assistance agencies. There is a trend of growing LDC interest and a growing stock of experience and trained personnel there on which to build. The U.S. has by far the largest supply of development oriented agricultural economists and of experience in this field of work in LDC's.

A.I.D. efforts are expected to include: work to strengthen methodologies for rural sector analysis in LDC's, LDC personnel training, strengthening of U.S. capability to respond to LDC requests for short term help in making sector analyses, and dissemination of ideas and understanding on institutional development needed to increase LDC agricultural economics capabilities.

(2) Inadequate LDC agricultural research capabilities (particular focus needed on strengthening worldwide research networks, and on food crop production including high protein crops).

The lack of suitable technological packages for LDC agriculture has been universally recognized as a principal impediment to rapid progress towards more adequate food supplies. Given U.S. pre-eminence in agricultural research, the already sizeable U.S. effort was identified for further emphasis. The stress is on strengthening the LDC's own capabilities for developing suitable technological packages for their local needs. This is being done by: (a) supporting efforts to establish worldwide "networks" of research on LDC agricultural needs, particularly on the most important food crops and protein sources and on a few major factors affecting all crops; (b) supporting key units in these networks at the LDC country, regional, international and U.S. levels; (c) strengthening linkages within and between the networks in order to make the research efforts more productive; and (d) "tilting" the whole system so as to generate as much support as possible for the building of LDC research capabilities. This is the most efficient way both to produce the needed technological improvements rapidly and to build the needed LDC institutional capacity. It permits rapid results for LDC farmers from the very modest resources that LDC's can invest in agricultural research.

Another feature of the current approach is to encourage increased financing in this field from international and developed country assistance organizations and to support closer international coordination of donor and LDC efforts. We envisage expanding international "networks" of production oriented research, analysis and technical assistance, well integrated and supported by improved information management systems.

(3) Lack of water and tropical soil management capabilities

The series of expert forums and consultations convened by TAB revealed wide agreement -- confirmed in FAO, Bellagio and other conferences -- that these closely interrelated factors, largely neglected in the past, are a major impediment to the advance of LDC agriculture. They inhibit both increasing production from presently cultivated lands and the efficient use of presently unused acreage. The tropics -- with their year round growing season and vast supplies of unused and poorly used water and land -- should have a great food producing potential if farmers can get good command of the soil and water resources, in the right combinations with each other and with improved cropping systems that facilitate soil fertility management.

There is, in fact, a worldwide gap in knowledge of the agronomic characteristics and use potentials of tropical soils, and in knowledge and operating capabilities for effective management in agriculture of available water supplies. There has

been French, Belgian and other research in the past, but the Belgian capabilities have been largely dissipated and the French are limited. The U.S. has the largest and best base of soil sciences and water management expertise on which to build the needed grasp of tropical situations. The intended thrust of A.I.D. program efforts is via the "networks" concept described above (including international collaboration) and the building of LDC institutional capabilities, but good progress in this area also requires some investment in adding a tropical capabilities dimension to the major existing U.S. expertise on soils and water in order to permit the most effective collaboration of the U.S. experts with their LDC colleagues.

(4) Inadequate capabilities for expanding the economic role of livestock

FAO and Bellagio forums have also urged increased donor and LDC efforts in the livestock area. As LDC agriculture becomes commercialized, raising the living standards of farmers (or even having rural incomes keep pace with rising rural populations) will depend to a considerable extent on expansion of higher value crops, such as livestock. Livestock expansion also will help meet nutritional needs. Suitable ruminant livestock production could permit economic use of vast land areas that otherwise would not be economically used. Possibly the most important reason for the current emphasis is the likelihood that ruminant livestock production (i.e., putting land to pasture as a part of cropping rotations) is going to be an important requirement for establishing, in much of the humid tropics where soil leeching and erosion are major problems, continuous farming systems that have long term stability and are economically sound.

The economic prospects of tropical livestock production will be improving steadily due to rapidly growing world markets and rapidly improving technologies (falling costs) affecting long distance transport of perishables. The need is not simply for more animals -- indeed some places have too many for efficient production. Nor is it simply for more high quality animals. The wide range of difficult marketing problems requires a new stress on comprehensive vertical approaches that integrate all of the measures needed to put more meat in people's mouths. That is why the KPA has been rephrased to emphasize that the key bottlenecks to progress go beyond the breeding of better animals and conquering livestock diseases.

What's Left Out?

Does the comparatively broad KPA range described above mean that there really has not been much concentration of effort within TAB's agricultural program? In fact, TAB's KPA focus does by-pass many of the agricultural sub-activity areas that have had major TA attention by this Agency over the years and that are still present in Mission programs (and also in the programs of the FAO and other donors). These omissions include extension, agricultural education, credit, cooperatives and other rural institutional development (we are making tentative probes in the agro-business area), farm management, poultry and swine, forestry, marine fisheries, agricultural engineering and many kinds of research and crop coverage. Limited attention is provided for some of these elements and in various agricultural input and crop protection areas through maintenance of

"centers of excellence" that can service Agency-wide field requests on an "off-the-shelf" basis. Despite these omissions, cursory review suggests that about 70% of current mission agriculture projects have a major concern with one or more of the KPA's. The current need is to strengthen the base of knowledge and expertise that can be deployed to support LDC efforts to improve food production, rather than to make any substantial adjustments up or down in TAB's topical coverage.

## HEALTH

Development is meaningful to the extent that it improves the lives of the bulk of the people of the LDC's. Their two most basic needs are opportunities for productive employment (to provide means to acquire food, shelter and clothing and meet other material and psychological needs) and personal health, broadly defined as satisfactory adjustment of the individual to his internal and external environment. A.I.D.'s 40 some client governments are spending about \$15 billion annually on health services. This expenditure has little effect on the lives of most people. Service delivery systems reach 10% of the people or less. The copying of developed country health apparatus has been expensive and inappropriate, and has had comparatively little to do with reductions in mortality or ill health in the LDC's.

The KPA analysis sought a fresh view of this TA sector, starting with an analysis of the historical interactions of health and development. Although development assistance programmers generally have recognized that health was important to people and ought to be promoted, they have often been troubled by an inability to identify many activities with a HEALTH label that were very cost effective in providing much lasting and widespread improvement in LDC health and that were given high priorities by the LDC's. It could be and was argued that the best contributions to LDC health came from investments in other sectors:

Applying the general KPA selection criteria to a dozen or so potential activity areas that emerged from an analysis of the interrelations of health and development, three problem areas were selected as the highest priority, i.e., as activity areas in which TAB efforts to innovate and backstop mission efforts would be likely to achieve the most in helping LDC's to improve the health of their people. Work and progress on these three KPA's should interact.

### (1) Inadequate local health delivery systems

The purpose here is to help interested LDC's to develop, via operational research and sizeable pilot efforts, new types of multi-purpose systems to deliver the most important basic health services at the local level on a cost effective basis, and within LDC budgetary capabilities. The complex of services that meets this set of criteria will vary from place to place, but the group of greatest current interest, because of their mutual support and compatibility and very high health and development priority, includes family planning and limited maternity services, some basic environmental and other preventive health measures (including communicable disease protection), and nutrition services. The client

"centers of excellence" that can service Agency-wide field requests on an "off-the-shelf" basis. Despite these omissions, cursory review suggests that about 70% of current mission agriculture projects have a major concern with one or more of the KPA's. The current need is to strengthen the base of knowledge and expertise that can be deployed to support LDC efforts to improve food production, rather than to make any substantial adjustments up or down in TAB's topical coverage.

## HEALTH

Development is meaningful to the extent that it improves the lives of the bulk of the people of the LDC's. Their two most basic needs are opportunities for productive employment (to provide means to acquire food, shelter and clothing and meet other material and psychological needs) and personal health, broadly defined as satisfactory adjustment of the individual to his internal and external environment. A.I.D.'s 40 some client governments are spending about \$15 billion annually on health services. This expenditure has little effect on the lives of most people. Service delivery systems reach 10% of the people or less. The copying of developed country health apparatus has been expensive and inappropriate, and has had comparatively little to do with reductions in mortality or ill health in the LDC's.

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group is primarily mothers and children. It may develop that some other basic services could be delivered to the same clientele at minimal cost (e.g., some functional literacy training or other informal education).

Part of the experimentation involves the organization of suitable medical back-up networks for the local service systems, considering that the latter should be primarily or entirely para-medical. This harnessing of the western medical apparatus in each country would make it much more productive in actually improving the country's health, and would reduce much of the waste in present health expenditures. Its sophisticated capabilities should be used, as much as possible, on this "wholesale" or higher echelon basis, leaving the retail or primary echelon services to a simpler apparatus.

The hypothesis is that by combining a compatible group of local level services, keeping them simple and sticking to the most essential, simplifying and reorganizing functions, using existing private service personnel (including traditional and no-cost-to-government functionaries where feasible), making more efficient use of existing medical, family planning and nutrition services, etc., the cost of providing mass services can be greatly reduced and can be brought, at some significant level of local service, within the present budget reach of most LDC's. Some small A.I.D. research and more recent analyses of actual and potential delivery systems tend to support this hypothesis. The thrust of the KPA work is to encourage and support more definitive development and trial of alternative systems on a large enough scale to really demonstrate what is feasible.

## (2) Inefficient utilization of energy and nutrients from food eaten

This problem area stands at the crossroads of a number of others.

A substantial portion of the food eaten by LDC peoples does them no good (i.e., there is much more wastage within the body of the energy and nutrients in the food that is eaten than occurs in developed countries: one of our current project efforts is to find out how much is lost -- perhaps it is 15-30%). Conversely, more food must be produced to provide the same human sustenance. Thus the ever precarious food/people ratio is affected significantly by this factor. The main reason for this food wastage is intestinal infection, which burns calories through fever and reduces the absorptive efficiency of the intestinal walls.

The condition of malabsorption is a major cause of malnutrition, particularly during the critical post-weaning period. Even if adequate protein is eaten, it cannot get through to the child's body in the minimum essential amounts for body building and disease resistance. In many cases, no amount of food will offset this. And of course this inability of the body to absorb food values efficiently is a major factor in the general level of morbidity, debility and susceptibility to fatal disease of the population at large. Morbidity in turn saps the initiative and productivity going into economic and social pursuits.

The hypothesis of the KPA work is that this malabsorption problem can be reduced substantially by reasonably simple direct measures that LDC's can effect, even though much of the cause is related to the general level of development. The thrust of current efforts is to establish more clearly and

provide a basis for educating LDC leaders on the actual extent and nature of the problem, and to identify and assist interested LDC's with installation of some direct measures to reduce the malabsorption. Part of the current hypothesis is that the most effective remedial concentration is on provision of clean water and better disposal of human waste. Knowledge of low cost alternatives to the standard capital-intensive water and sewage facilities will be identified, expanded, improved and disseminated. Local educational and supervisory services in this field might well be built into the multi-purpose, local health delivery systems being explored in the first KPA.

### (3) Lack of capability for health analyses and planning

The KPA paper concluded that perhaps the biggest part of the LDC's health problem, or at least of doing something about it, was inability to perceive its nature. This explains at least part of the heavy waste of health expenditures noted earlier.

There appears to be growing interest in LDC's in figuring out how to tackle their health problems better, and some appreciation of their lack of trained people for this task. Work in the third KPA will provide response capabilities for LDC's seeking health planning training and consulting services -- drawing on some methodologies developed under prior projects and in more recent TA/H work, and on a variety of U.S. expertise that is especially tuned to LDC type needs. Among other things, improved LDC health planning should embrace broad family planning and nutrition services, local multi-purpose service structures, and the development and use of cadres of para-medical personnel needed for particular LDC situations. The approach will stress the integration of health planning with national development planning.

### NUTRITION

The central purpose here is of course part of the basic purpose of assisting LDC's to improve the health and productivity of their people. More specific purposes include reduction of child death rates, for its own sake and as a basis for ultimate reduction of birth rates and population stabilization.

Programs with a medical or health label have seldom dealt with nutrition as a primary, or direct goal. Programs with a Nutrition label ordinarily have dealt with only a quite limited part of the range of significant activities -- mainly those involving analysis of the physiology and human significance of nutrition, and promotion of nutrition awareness and the use of more nutritious foods. The total of A.I.D. activities with a Nutrition label is small. There are relatively few discrete mission projects, as distinguished from global programs of intermediary organizations. The Agency's technical backstopping for programs in this field is provided almost entirely through TAB's Office of Nutrition.

The KPA identification in this field reflects continuing efforts over the past two years to select the highest pay-off types of Nutrition programs, through a combination of consultative and analytical procedures within and outside A.I.D. and some program evaluation and research projects. The result has been improved

focusing in the three activity areas described below.

(1) Non-availability of highly nutritious food products at low cost to consumers

Since malnutrition is primarily a plight of the poor, it has been difficult to address the problem without either increasing purchasing power or providing nutritious foods at costs approximating those of traditionally consumed foods. Program focus in this area involves the latter approach and is based primarily on a range of interesting prospects that have opened up -- largely due to A.I.D. initiatives -- for practical ways to fortify basic foods such as cereals for mass consumption. A variation is work to explore the nutritional impact and feasibility of increasing the use of particular combinations of common foods already available. A more tenuous prospect, being explored, is the development of practical means to accelerate the production and sale of nutritious food products in LDC's .

(2) Difficulty in reaching pre-school children

This is the prime target group for improved nutrition, along with their mothers during the pregnancy and lactation periods. Here is where nutrient levels absorbed into the body make the most difference in the well being of LDC peoples. Thus our program efforts need to and are beginning to focus on the special problems of reaching this group. This ties in to MCH work pursued in the health and family planning contexts.

(3) Lack of awareness and motivation of the power structure and consumers

Widespread lack of awareness, knowledge and concern about nutrition -- its nature, significance and what can be done about it -- slows to a walk the application of practical alleviating measures in LDC's. Thus educational efforts have a high priority. TAB's efforts are being concentrated on identification, improvement and dissemination to user organizations of the educational techniques and materials that have proved most successful, and on devising appropriate techniques to motivate leaders to consider nutritional problems in the national planning process. Educational efforts also support directly the activities in the other two KPA's.

Towards a Broader Nutrition Strategy

In working ahead with various KPA's, TAB has developed a better appreciation of the breadth of action that can have major effects on the nutrition of LDC peoples, and has taken some preliminary steps towards analyses of the comparative significance and possible interactions of diverse types of activities. These overlap many activity fields. Our intent is to develop an overview and comprehensive nutrition strategy, or at least a preliminary cut, for Agency consideration. To illustrate the range of relevant approaches:

- agricultural research efforts are putting very heavy stress on breeding better nutrient content into basic food crops and on increasing the availability of high protein crops (including fish and livestock);

- the KPA work in health features an attack on the problem of malabsorption of the nourishment already present in LDC food supplies, as well as the development of better and more widespread service systems that can improve the local practices affecting nutrition, including family gardens;
- Nutrition programs, with a capital "N", are supporting experiments with nutrient fortification of basic foods as well as the more traditional type educational and child feeding efforts;
- Some support for this latter type of activity might come from KPA work on non-formal education and educational use of modern communications technologies, and on building operational management capabilities for development service delivery systems;
- better child spacing as the result of family planning programs tends to improve the nutrition of mothers and children;
- PL 480 Title II programs support school lunch, MCH and other efforts to encourage LDC's to provide more nutritious diets for vulnerable population groups.

Thus our KPA approach in nutrition is evolving towards an inter-field strategy designed to help A.I.D. focus and intensify its efforts to assist LDC's to overcome their widespread nutritional deficiencies.

### EDUCATION

As in agriculture, about 1/3 of A.I.D.'s TA (excluding population) is in this field. Although enrollments in primary schools have more than doubled since 1950 and have quadrupled in secondary and higher education, the LDC's still have more school age children outside of school than inside. In most LDC's two out of three adults are illiterate - in some countries seven or eight out of ten. Social and political pressures for broader educational opportunities continue to rise. National education budgets have doubled several times since 1950, increasing much faster than GNP, so that they absorb ever-rising percentages of public funds. The latter trend can not continue. Moreover, in general, the quality of education has not kept pace with the tremendous quantitative expansion.

Demographic trends are aggravating the problems. 1/3 of the LDC population is in the 5-16 school age compared to 1/5 in the developed countries, and this disparity will widen in the 1970's. At the same time, the number who have been "educated" is rising faster than the jobs in government and the modern sector for which they can qualify or aspire. Thus there are major qualitative as well as quantitative problems to be overcome in LDC education.

These facts pose a grave dilemma for the LDC's -- the social and political requirements for providing more knowledge of a more suitable type to rapidly rising numbers of children (and adults) in the decades ahead can not be met by multiplying the elements in current educational systems. Recognizing the massiveness of the problem and the very small TAB resources, the KPA paper decided to focus on a comparatively narrow band of TA work aimed at exploring

new or little used solutions to the basic dilemma. This would leave the bulk of the standard types of educational TA to "off-the-shelf" implementation by A.I.D.'s regional bureaus and to other TA organizations. TAB is concentrating on the following three interrelated areas, working with and through relevant country projects.

(1) Lack of adequate educational technology

The working hypothesis of this KPA is that the traditional educational syndrome of teacher/pupil/classroom organized for rote learning must be changed radically. The hypothesis further is that the reform stress must be on reorganizing the learning process to bring about faster learning and better retention of more relevant knowledge, and also to bring useable knowledge of good quality to where the learners are so as to reduce the economic and social costs of congregating and uprooting them for educational purposes. This is the only hope for producing more and better learning at lower unit cost. The focus is on better tools and improved organization of their use for learning purposes.

This approach via educational technology shows promise in two directions. Work thus far suggests that basic reorganization and careful interrelating of the learning systems and content within the graded school systems can reduce the quantitative and particularly the qualitative problems facing LDC's. Probably the greatest promise of new educational technologies is their use in systems to create, on a cost effective basis, significant learning opportunities for the large populations who are outside the formal school system -- most of whom will have no significant formal educational experience.

The problems are very difficult, and solutions will not come easily or rapidly. However, there is a comparatively large amount of LDC interest and wide range of project opportunities for innovative work with pilot efforts in educational technology -- opportunities for both knowledge building and dissemination activities.

(2) Poor use of potentials of non-formal education

At best, half or more of the primary school age children in LDC's will be out of school, for many years to come. And there are large needs and demands for new learning by other age groups to facilitate their participating more satisfactorily in the modernizing life of their countries.

Experience in developed and developing countries suggests that there are large untapped potentials in the LDC's for organized provision of significant learning opportunities outside of the graded school systems. It is estimated that about half of the organized education in the U.S. is of this informal or out-of-school type, whereas it is a much smaller percentage in LDC's. This type of education may present the best opportunities for achieving both relevance and minimum drain on public budgets; it tends to start up in response to felt demands for specific types of knowledge and to cease as these demands wane, and it is comparatively susceptible to private financing.

Work in this KPA is intended to tap the worldwide experience and the growing interest of some LDCs in informal education through joint efforts to adapt the more successful approaches that seem relevant to the various LDC situations, and perhaps to invent some new ones. The great breadth and variety of this field makes it difficult to identify where and how to focus A.I.D. efforts for best results. The early TAB efforts will probe for the likely high pay-off areas in which to focus. As the work proceeds in informal education, it will take advantage of improved learning systems that result from efforts in the field of educational technology. It should also apply and provide experience for efforts to measure comparative cost effectiveness of alternative educational investments and to identify better methods of financing education.

(3) Lack of adequate techniques for education finance and for measurement of cost effectiveness

As in the other broad activity fields (agriculture, health, etc.), the KPA analysis and consultations in education suggested that weakness in LDC planning capabilities -- identification of goals and priorities, of efficient means for achieving them, etc. -- was a major impediment to progress. However, further discussion in the TAEC and elsewhere in A.I.D. suggested that a broad scale A.I.D. approach to educational planning, so labeled, probably would not be received as well or be as effective in LDC's as a more pinpointed approach to selected problems which were both important and less sensitive subjects for external assistance. In addition to work on the other two KPA's, which does get involved in major segments of educational planning via primarily technical rather than policy approaches, high priority was given to two other technique-oriented approaches to improvement of educational planning.

One is concerned with the almost total lack of any methodology in LDC educational planning for comparing the educational impacts of alternative inputs -- for knowing which kinds of programs generally get the best results for given purposes in specific situations (comparative cost per unit or level of result), and for assessing actual performance of specific programs on the basis of costs and results. (This weakness may be great in developed countries as well, but the LDC's can afford it less in the face of their comparatively greater shortage of educational resources to meet their needs.)

Growing professional interest in this type of problem in the U.S. and the recent development of our stock of measurement techniques and skilled people, plus the growing LDC interest in making both ends of the budget equation meet, is opening new opportunities for fruitful collaboration. There is a wide consensus that making progress in this new field will be both difficult and deserving of high priority. The ability to measure or make comparative assessment of results per level of educational inputs depends partly on development of learning systems that permit such assessments (e.g., better specification of goals and control of the inputs), so that there needs to be an interaction between work on this KPA and that in educational technology.

The other element of the overall educational problem singled out for special attention is the lack of an adequately broad financing base. Among the various developed and developing countries, a great variety of techniques are employed

for financing education. LDC education needs much more money. It will still need more after it gets all that it can from government budgets. The work in this KPA is intended to spread the awareness of alternative financing possibilities and to provide assistance in adapting such experience to local needs. Such work needs to take full account of the interdependence between the types of educational systems being used (particularly who controls them or determines their content) and how they can be financed: thus, there is significant interdependence between the work here and that on the other two KPA's.

### DEVELOPMENT ADMINISTRATION

Developed and developing country personnel experienced with LDC activities are often asked "what is the principal bottleneck to more rapid LDC development?" By far the most frequent response from both groups is "lack of management capabilities", or words to that effect. This general problem recognition has existed from the beginning of development assistance. Yet, the feeling persists that somehow this need has not been addressed very effectively.

To oversimplify, there have been two principal approaches. The predominant approach has been implicit in the general run of development projects, which tend to convey ideas and experience on how to organize and administer better the activities under consideration. The other, explicit approach has largely concerned itself with the establishment or strengthening of schools of business and public administration -- along U.S. lines. In public administration, there also has been considerable O&M type work with government departments.

Each of these approaches is valid, but each has its limitations. The implicit approach has usually dealt rather weakly and often inappropriately with the actual management needs -- through both inattention and lack of expertise by those involved. The explicit approaches have tended to apply management techniques that were not sufficiently adapted to LDC needs, and the specialized schools of administration have tended to be isolated from the main stream of training to which the actual managers were exposed.

However, whatever the limitations of past approaches, it should be recognized that tens of thousands of LDC managers have in fact learned a great deal about how to run things better -- perhaps primarily from their trial and error experience but also from the direct and indirect effects of technical assistance over the years. Moreover, many U.S. and foreign studies, including an interesting analysis in 1967/68 by Esman and Montgomery of technical assistance priorities for the future, have identified capabilities for operational problem solving and for organizing action programs as a particular American genius. This suggests the desirability of further but more carefully structured TA efforts by the U.S. in development administration.

In exploring where to apply a very limited TAB resource so as to give the greatest impetus to efforts to reduce management bottlenecks to LDC advancement, the successive stages of development and review of the KPA paper in this field narrowed the focus down to the following two KPA's.

(1) Lack of operational management capabilities in key development activities

The approach here is to bring specially tailored training in suitable management skills to the most convenient institutional locations at which present and prospective operational managers in key development sectors actually obtain their training in their subject field, rather than assuming that they will somehow get to special management schools and adapt what they learn to the particular needs of their kind of work. In this way, more relevant types of training will actually reach more people who can make practical use of it, per unit of investment in management training.

The early concentration is in agriculture. There is a modest concurrent effort to develop applications of modern management approaches that are of general use in training managers of LDC enterprises and in other public sectors. The latter will build on existing bases of LDC competence in business schools or other schools of administration, or industrial productivity centers. Project management and organizing techniques are among the management techniques included.

The agricultural management work draws on the best experience with modern management techniques to identify those with the greatest utility in the planning, organization, direction and evaluation of agricultural activities (not at the farm level), and to provide practical training in the application of these techniques to agricultural managerial and decision-making problems encountered in LDC's by selected categories of agricultural executives, in the context of their organizations and environments. U.S. contractors and LDC collaborators will put their combined experience and knowledge to use in LDC institutions selected for their relatively high potentials for teaching, in-service training, consulting and research that will actually reach agricultural managers. Efforts will be made to draw in the considerable expertise of selected LDC modern management training institutions in which there have been past TA investments but which have been comparatively isolated from the real training needs in agriculture.

Similarly, collaborative U.S.-LDC efforts, working through LDC institutions, will move out into "action" institutions and programs to improve the quality of management, according to Regional and country priorities. (e.g., LA thus far is interested in agri-business approaches, as well as the management of special small farmer modernization programs, while AFR prefers to concentrate on the management problems of public services to small farm holders.) The approach to management improvement at the central agriculture ministry level is still being formulated.

(2) Lack of capability for local action

When the question of management bottlenecks in LDC's is pursued with knowledgeable people to identify the main problem areas, the discussion usually notes that the many LDC national programs that depend for their fulfillment on action at the local level typically founder on a lack of capability to organize and administer effective action programs at that level. While the reference is usually to public programs, this incapacity also weakens and forestalls private programs for local development.

There has been much experience with efforts to overcome this problem -- perhaps more unsuccessful than successful experience. Recognizing its pervasiveness and great importance, the KPA analysis concluded that renewed efforts were desirable:

- to analyze the experience to date to seek identification of factors causing success and failure,
- to develop hypothesis about the best ways to obtain effective local action,
- to assist operational experiments and pilot efforts with promising approaches to strengthening significant types of local action capability in typical LDC situations,
- to disseminate significant findings widely to wherever they are most likely to be used. A.I.D.'s limited "reach" puts a premium on collaboration with other interested organizations.

The project activities will be concerned with the establishment of effective mechanisms for the delivery of resources to local groups, and the development of their capabilities to use these and other resources available to them through improved forms of organization and cooperation. In the spirit of Title IX, there is particular concern for strengthening capabilities for productive collective action that benefits those engaged in it -- both to mobilize better the latent talent and energy that abounds on the local level and to improve distributive justice and social morale. This is the essence of making development meaningful for the bulk of the people of the LDC's.

#### SCIENCE AND TECHNOLOGY

Over the years, apart from important biological science work in agriculture and health and engineering work on construction projects, A.I.D. and its predecessor agencies have done comparatively little to mobilize the hard science and engineering knowledge and expertise of the U.S. to work on LDC development problems and on building relevant LDC functional capabilities in in these fields. There are exceptions, but they are just that.

During the 1960's, as LDC development proceeded and began coping with more and more complicated problems, as some LDC capabilities began to emerge in the foregoing field, and as the interest of the relevant U.S. professional communities in LDC development gradually rose, there emerged an increasing array of criticisms of A.I.D. neglect of the potentials of science and technology to help carry out its mandate, and a series of reports and recommendations for closing this gap in A.I.D.'s program range and capabilities. After some limited Agency efforts in the mid-1960's and further reviews in 1968/69, A.I.D. decided to make a more substantial effort to mobilize U.S. science and technology capabilities in support of LDC development efforts.

The first two steps were to work out an agreement for long term, substantial budget support for a multi-purpose NAS program, and to incorporate a Science and Technology office and program component in the TAB, which was just then being designed.

Meanwhile, LDC interest in collaboration with the U.S. in science and technology has increased significantly during the past two years. This has been particularly marked in Latin America, where it induced a special Presidential program initiative in response, but also in selected countries elsewhere. In addition this theme has become a continuing agenda item for DAC, and technology generation and transfer debates now dominate many meetings of UN bodies and regional organizations. This growing LDC interest is due in part to their comparatively ready receptivity to externally stimulated advances in the physical and engineering sciences as contrasted to a frequent hesitancy to adopt imported social technologies. The recent Presidential foreign aid message called for a new emphasis on science and technology, with specific recognition of the importance of industrial technology.

Given the relative lack of prior experience in this field, the initial program strategy for TAB/OST (starting in the latter part of FY 1970) has been to analyze a wide range of previously little-explored potentials for fruitful development work, to begin some innovative probes via small and generally short term projects on problems in which LDC's wanted help, and to organize evaluative and consultative activities -- in order to gain experience and learn more about the actual potentials for high pay-off TA activities in science and technology. This was to be followed by a programming process akin to that which produced the KPA analysis for other activity fields, building on some of this early experience and other relevant background and drawing on the views of U.S. and LDC experts and development practitioners to seek a consensus on desirable new areas of concentration for A.I.D. programs.

This process of strategy review and priority determination is under way. It includes a series of conferences with U.S. and LDC experts and consultations with A.I.D. and other personnel in the field, and is being programmed in close consultation with regional bureaus. It is expected to produce -- by early 1972 -- a set of recommendations on priorities for the overall Agency program in the fields of transfer and diffusion of industrial technology, use of LDC natural resources, and development of R&D infrastructure (excluding those aspects of agriculture, health and other R&D fields covered adequately within other sector programs)

#### POPULATION

The top Agency and Congressional priority for this field and the reasons for it are well known. The whole field can properly be regarded as a Key Problem Area, given this priority and the mandate to expand activity and induce other agency and LDC efforts as broadly and rapidly as feasible and consistent with sound projects. TAB's Office of Population has a special responsibility (described in M.O. 1612.57) for providing overall guidance and leadership to Agency programs in this field.

Over the past year or so, there has been a good deal of work to delineate a program strategy -- providing the logic for the components, their interactions, and priorities for emphasis taking into account the potential activities of other assistance organizations. (See Nov. 1970 "Report on A.I.D.'s Population Program Assistance in Relation to Envisaged Worldwide Needs" and the August 1971 "Office of Population Program Strategy for 1972".) The program activities fall into the following purpose groupings, apart from budget support to the overall UN population program, viz., development of adequate:

- (1) demographic and social data,
- (2) population policy and understanding of population dynamics,
- (3) means of fertility control,
- (4) systems for delivery of family planning services,
- (5) systems for delivery of information/knowledge,
- (6) multi-purpose institutional capacity and utilization.

Although there are both regional and inter-regional projects in all of these purpose categories, there is a natural division of labor and complementarity between them. TAB has the great bulk of projects in category (3), while Region/Mission activity is dominant in categories (1) and (2). Direct work with country family planning service systems -- categories (4) and (5) -- is handled through mission projects, while inter-regional projects handle most of the support for private intermediary organizations that provide services in these categories in the LDC's. As UN programs begin to build up, some divisions of labor and coordination arrangements are emerging there.

TITLE: Draft Working Paper on Educational Technology

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
BUREAU FOR TECHNICAL ASSISTANCE  
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DRAFT  
WORKING PAPER  
ON  
EDUCATIONAL TECHNOLOGY

International Seminar  
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## PREFACE

The purpose of this paper -- which is presented for your reaction at an initial draft stage -- is to examine in a very broad way some of the evolving concepts of educational technology, its current applications, and its potential for educational improvement in the developing countries, together with some possible methods for achieving that potential.

The ideas in this paper do not represent a "policy" of AID. Indeed, the only worldwide policy of AID in this area is to assist the developing countries in "exploring the potential" of the educational and communications technologies for development. The methods for such assistance can take many forms, appropriate to particular situations. We do, however, like all institutions, have an array of working assumptions which shape many of our activities in this field.

A further purpose of this paper is, therefore, to share with the members of the seminar our assumptions and our limited knowledge and experience, to identify some of the problems and issues which we believe to be important, and to seek your counsel and continuing association in developing educational technology as a major instrument of social and economic advancement.

Clifford H. Block  
Office of Education and Human  
Resources  
Bureau for Technical Assistance  
Agency for International Development

## "Educational Technology": A Working Definition

We will encompass two elements when we use the term "educational technology":

1. Devices for delivering informational and educational materials -- particularly the newer electronic media of television, films, radio, computers, et al., together with the older technologies such as textbooks.
2. A set of methodologies for organizing the content of the educational process. That is, "a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and nonhuman resources to bring about more effective instruction."<sup>1</sup>

In developing country applications, both elements are vital. A fundamental problem is to deliver learning opportunities to more people with less dependence on direct contact with highly trained purveyors of information -- teachers, extension workers, trainers. The sheer lack of adequate numbers of such people in the near future, the long time required to prepare skilled teachers or trainers, and the prohibitively high cost of paying for adequate numbers of such teachers and trainers makes this search for new delivery methods almost mandatory.

In addition, it is our conviction that present instructional methods are inadequate, that the cost effectiveness of traditional education is extremely low, and that mass education of high quality, even in wealthy countries, can be achieved only through the use of learning methodologies more effective than those in common use today.

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1. Report, Commission on Instructional Technology, Committee on Education and Labor, House, GPO, Washington, March, 1970 Page 5

## I. APPLICATIONS

The potential applications of the newer media systems are almost limitless -- encompassing, in reality, all of the areas where human learning (of skills, of information, and of attitudes) are important -- ranging from the upgrading of the specialized training of physicians, scholars or industrial managers to the providing of basic education and information to the nonliterate rural families of the world.

However, for strategic purposes development assistance agencies must make a selection of a few important areas where their limited professional and financial resources can be efficiently concentrated to have an impact. Obviously, the selection of such priority areas must accord with, and largely be generated by, the development objectives of the group of developing nations.

A.I.D. is now primarily concentrating its attention in educational technology on two major areas: the expansion and improvement of formal schooling, particularly from grades one through nine; and an increase in the access to information and basic education of rural families and the urban poor, through non-formal (out-of-school) actions.

The basic reasons for these choices are simply that (1) these populations are of crucial importance to social, economic and political development, and (2) progress in both areas is now critically impeded either by the inadequacy of present systems -- lack of qualified teachers, suitable curriculum, materials, and methodology -- or by the total absence of such systems.

For education carried out within schools, potential of educational technology lies in achieving systems which have:

- 1. Lower unit costs than conventional systems.
- 2. Greater efficiency in learning, resulting in faster average progression through the school system.
- 3. Reduced requirements for trained teachers and administrators.
- 4. Ability to deliver education to a greater number of learners.
- 5. Ability to deliver more relevant educational experience both for the individual and for achieving national development.
- 6. Ability to build into the educational system some mechanisms for continuing improvement, through relating educational practices more closely to learning effectiveness.
- 7. Ability to effect educational change far more rapidly than through conventional systems.

In its application to development problems requiring learning out of school, the communications technologies are perhaps even more impressive in their potential ability to:

- 1. Reach nonliterate or semiliterate populations with useful information and education.
- 2. Enable key institutions in a country to communicate directly with the majority of the population and so increase the effectiveness of many kinds of development programs.
- 3. Enable people in one part of a country to learn about other segments of their nation and to bring to development a greater sense of national identity.
- 4. Extend the effective reach of development field agents in agriculture, family planning, health and other areas.
- 5. Provide governments with a means to receive far more feedback on their programs from the populations they serve.
- 6. Facilitate administration of virtually every development sector within a country.

7. Accelerate the modernization process in rural, otherwise isolated communities simply through the availability of a mass of information.

## II. STATE OF THE ART

An assessment of activities aimed at achieving these potentials must start with a review of the current state of the art, which is represented in research, experimental projects and operational practices.

### Research

Fundamental research could well produce breakthroughs during the next decade, but it would be folly to try to predict what these will be. Among the many fields which we must watch where such breakthroughs could occur are the study of cognitive styles; the conditions of learning and problem solving (both environmental and physiological); intellectual development in early childhood; bio-feedback effects on individual intellectual and emotional control; attitude formation; the extension of behavioral studies on the conditions of reinforcement; and several areas of brain research.

It is likely that, in our time, new knowledge from one or more of these fields will revolutionize educational practice. The implications for policy are not precise, for current systems cannot be designed to accommodate as yet unborn discoveries. Perhaps we can, however, strive to make systems remain open to experimentation with radically new practices, so that the next waves of innovation will encounter less institutional resistance than is the case at present.

There is a vast body of on-going applied research, primarily from the industrialized countries, which is applicable to such problems as media effectiveness, feedback systems, methods for individualizing instructional pace and content, defining objectives behaviorally, and many other elements of deciding upon and designing an instructional technology system. Those studies dealing with the media are summarized best in the many works of Wilbur Schramm and his colleagues, particularly in Schramm and Chu, Learning from Television: What the Research Says, which summarizes the key generalizations from several hundred studies of the use of the media in education. A complete list is presented in Appendix B.

Another stream of applied research of high significance is associated with programmed instruction and its descendents, computer-assisted and computer-managed instruction. The application of principles of learning to educational practice in this research are of profound importance to the development of this field. We would not endeavor to summarize them, but merely to conclude that a working knowledge of how to precisely control the conditions of learning, for a maximum rate of individual learning, is rapidly growing. The conditions of stimulus presentation, reinforcement, feedback and practice, are all being better understood. Many of these techniques have been well developed in operational form, incidentally, for training purposes.

Finally, applied research in applying systems analysis to education may have major future payoff. In our view, the formal techniques of this methodology still require modification to fit the complex, difficult-to-

quantify, sector of education. However, even now the basic approach is useful in systematically analyzing problems and the different functions of systems, investigating alternative solutions, and deriving systems which take clearly into account inputs, instructions among system components, and outputs.

From this great array of research on learning processes and on media effects, two fundamental conclusions stand out:

1. We can teach almost anyone effectively -- by television or by other media -- if content is appropriately programmed in relation to individual abilities and motivations.
2. There are a substantial number of specific principles and methodologies to serve as guides for such effective programming, whether by mass media, individual media, or combination thereof.

In short, even though there are obvious differences among the media, virtually all can be reasonably effective instructionally.

The next question, then, for our purpose, is whether reasonable effectiveness can be achieved in actual systems, which are forced to cope with problems of delivering a whole series of learning experiences under less than optimal conditions to a wide range of learners.

#### Experimental Projects and Operational Projects

The translation of research findings and innovative ideas into

actual practice is, of course, the key step in tapping the potential of educational technology. AID has had a major interest in evaluating these experiences.

Appendix A contains descriptions of a number of the key experimental and operational projects influencing our thinking about the practical potential of various technological approaches. In brief, these suggest the following about the current state of affairs:

For Within-School Education

1. Several projects are showing that, when television is used intensively as part of an integrated new system of educational inputs, change and improvement can be implemented quickly (El Salvador and Niger, particularly). The extent of improvement in learning effectiveness is not yet known, but appears to be very substantial. Earlier field trials had demonstrated the ineffectiveness of small-scale additive uses of educational technologies; being designed not to make much difference they, in fact, do not make much difference. Further, they do not stimulate the changes in basic teacher and student behavior that are essential for improving education in a significant way.
2. Implementation of the intensive, integrated model has been on a small scale to date (30,000 students in El Salvador). However, one such system has just started on a larger scale -- 15,000 first grade students the first year -- which will ultimately encompass several hundred thousand students. (Ivory Coast) It is aimed at major reduction in the unit cost of education by reducing the repeater and drop-out rates.
3. These systems are the precursors of other efforts to use a variety of instructional technologies in integrated, new, learning systems, carefully designed to achieve reforms, efficiencies, and cost reductions and, in some cases, to expand educational opportunities significantly (Korea, Brazil, among others).

4. One major research and development effort is beginning using a very low-cost technology, programmed instruction, for primary school upgrading (India). At the other end of the cost spectrum, computer-aided-instruction is being used for teacher upgrading (Spain).

#### For Out-of-School Education and Information

1. The experience in the use of the educational technologies for pre-college education and social development is slight, except for radio literacy programs and quite specialized uses in family planning, agriculture, etc. (India's Radio Rural Forum, for example)
2. At least two major projects are being firmly planned, however, both aimed at using the instructional technologies to make a significant difference in the lives of village people. (India's satellite experiment; Guatemala)

On the basis of current evidence and experience, we are encouraged in a basic operating assumption that educational systems utilizing the newer communications media and the concepts of instructional technology can be developed which have very significant advantages over present educational and human resource development systems.

We assume, furthermore, that the establishment of such systems can be made to initiate a process of continuing innovation, based on a linkage between educational practice and the scientific study of the effects of such practice on learning and behavior.

If these assumptions are tenable, the use of the educational technologies holds promise for alleviating some of the problems of development -- the lack of educational opportunity and access to useful information for most people, the great inefficiency and irrelevance of much of the education that does exist, and the prohibitively high unit cost.

### III. STRATEGIC DIRECTIONS

At this point, however, there are not yet extant complete effective systems of sufficiently broad scope and low enough cost to serve as models for developing countries. Thus we are engaged, with others, in searching for a strategy which will lead to the expeditious development of such systems with wide and reliable applicability to the problems faced by many developing countries. This search is at different stages for in-school and out-of-school learning systems.

#### In-School Applications

The evidence seems to be accumulating that there is a useful general strategy for effective in-school applications of the educational technologies -- namely, to use their introduction as a catalyst for achieving broad, systematic changes in the content, organization, methods -- and thereby, results -- of education and to use them as core instruments for delivering a major, integrating part of the instructional load. However, we are still at an early stage of practical experience with such systems, and major barriers must still be overcome if the promised potentials are to be attained. Among the key barriers are the following, in our view:

1. Inadequate experience with planning and administering large systems.
2. Inadequate experience in designing systems aimed at reducing cost (through use of less-trained teachers, increasing the number of students reached by one teacher, or increasing the rate of student progress through the system).

3. Inadequate methodologies for producing really effective instructional radio or television programs for instructional school activities.
4. Too little experience with tailoring educational content to differences among groups, regions, and individuals.
5. Too few trained planners, both in the developing world and elsewhere, and they are largely scattered, without an adequate institutional base.
6. Inadequate information about new approaches.
7. Problems of electrical power and reliability, and cost of electronic components.
8. Reluctance on the part of many countries to adopt the wholesale changes required to make new educational systems most productive.

#### Overcoming Barriers

Among the key activities of any program needed to overcome these and related barriers are the following categories of activity:

1. New ideas must be produced -- for new kinds of systems and/or ways to better make the components of current systems work. Such ideas can come from experimental research, from evaluating the way things are done in various countries, from systematic analysis, and (perhaps most productively) from the insights of individual creative people.
2. Key ideas must be communicated among those who make decisions on the character of educational programs. Today, the discredited supplementary approaches to instructional media are still being practiced; hardware is still being acquired before its use is understood.
3. Plans incorporating the best of the new ideas must then be developed to solve specific problems in specific countries.
4. Plans must be tested in the developing countries -- in pilot projects and research and development efforts.
5. Careful evaluations must be made of the costs, effects, and operational feasibility of these trials.

6. Full-scale operational projects must be undertaken to put the whole process to its final test. This will demand commitment from the highest levels of each developing nation.

The above process may not be sequential. Indeed, whether it should follow this sequence is one of the first strategic choices to be made. Most scientific researchers and rational planners believe that the process should follow approximately the sequence outlined above -- essentially, research and analysis, experimentation, small-scale trials, a pilot project, evaluation, and only then implementation through a large-scale operating system.

Another school of thought holds that an effective administrator should be given the power and resources to put a system into operation (with the implied high level of national commitment required to do so) and that a system should be made to work as quickly as possible, with "fine-tuning" improvements left as a second stage. The contrast with the prior strategy presents perhaps the most fundamental strategic choice that a nation interested in making changes through educational technology must face.

AID is currently supporting both approaches -- the former in Korea, for example, and the latter in El Salvador. Perhaps the common principle is that high commitment must be obtained if either approach is to achieve its ends. In the more "scientific," developmental approach, commitment to use the end result for an operational program must be maintained over a long period and, if the R&D is to be adequate, must be supported throughout by substantial funding -- i.e., the development period cannot

be viewed as an alternative to decision, but rather as a step in implementing a decision to create a major operational system, if the development succeeds.

The alternative approach, of course, has the risk of creating an inadequate system into which a country may be locked because of the heavy investment required. To date, however, it is this approach which has been instrumental to progress in this field.

No matter the approach, we reiterate our conviction that further progress within schools is basically dependent on an increase in the number of pilot and/or operational systems designed to achieve the major changes in education that were discussed earlier. Such actual operating systems are essential both for learning how to effectively create such systems and to serve as models for other countries.

#### Out-of-School Applications

There is the hope that, just as the systematic, intensive use of the instructional technologies for reform in education may be producing breakthroughs in formal education, a new departure, or new departures, in the use of communications for other development purposes will yield high payoff. However, these new strategies have yet to be developed and tested.

Almost everyone recognizes, on the one hand, the fundamental role that communications plays in creating a climate for change, in providing new ideas, and in providing some of the information needed to affect

changes in all communities. On the other hand, the use of communications has been sporadic, largely uninformed by analyses of effectiveness, not integrated with development efforts, and without a strategy. It is our assumption that, as in formal education, these methods can serve both as a catalyst for basic change and as an instrument for affecting some of those changes. Yet we have only very general notions at this point of how that might come about.

At this stage, the most significant barriers to progress are two very general and fundamental ones:

1. Our concepts are not fully formulated or tested;
2. Few countries feel they can commit resources needed to try out new approaches for mass education and information out of school.

There are only a few examples of programs where modern communications are used to make a real difference in current social development. This area will therefore require a great deal of new invention. The implementation of these inventions will, at first, appear to be high risk in character. However, the potential and probable pay-offs are so great that we believe such risks can legitimately be undertaken.

As a first effort we are exploring the implications of a somewhat different concept of the use of these technologies in education, namely to have the broad goal of increasing "access to information" rather than of simply providing education. Such a concept, of course, implies both development of the skills needed to seek out relevant information and the continuing availability of a bank of information at the local level.

The basic end result of activities in these fields is to have tested prototype systems which provide their target audience with the information they need at a time they need it, at reasonable cost, and at a place convenient to them.

In order to do this, prototype systems must be created over the next few years. In many cases these systems will be new in conception. Among the questions guiding the design of those projects will be the following:

- Can programming be integrated among development activities, so that messages in agricultural practice reinforce those in nutrition, basic education, etc.
- Can the behavioral definition of objectives, so much at the core of individualized systems of educational technology, yield similar gains in these other areas?
- Can the illiteracy barrier be leaped?
- What should the messages be? We know very little about what information can be valuable to large developing country populations and even less about how to effectively communicate that information.
- How can learning be facilitated with a minimum of local interpersonal assistance?

In most countries, it is simply not feasible to have a large structure of local monitors, even though communications theorists constantly cite their value. Much of the job will have to be done without the kind of organization and training that a system of local monitors would require. New methods must be developed for fulfilling the functions of such monitors, such as stimulating discussion of what has been learned, providing feedback to the producers of programs, and insuring organization at the point of reception.

- Where local monitors or development workers do exist, how can they be provided with the tools needed to enhance their work and increase their reach?

- To what degree can personnel and facilities of existing schools be used to affect cost savings?

In summary, it should be candidly faced that the potentials of educational technology have not yet been at all demonstrated for out-of-school applications. Conceptually and logically they hold equal or greater promise for the many learning requirements outside of school than for those within formal schools; however, sensible, sustained experimentation, research and evaluation will be required to produce models which demonstrate that this potential can, in fact, be achieved. The basic motivation for such continuing effort to make the newer educational media serve these purposes effectively is that for most developing countries there is no available alternative.

#### IV. THE FUTURE OF EDUCATIONAL TECHNOLOGY IN THE DEVELOPING COUNTRIES

The foregoing pages have suggested that use of the newer educational media represents the best potential for quantitative expansion and qualitative improvement of education, at acceptable cost, among the available options now in view. They also indicate that there are many difficult problems to be overcome if these potentials are to be realized.

Consequently, there are/certain fundamental issues confronting both developing countries and development assistance agencies, such as:

1. The kinds of policy and resource commitments the developing countries are prepared to make.
2. The kinds of policy and resource commitments the development assistance agencies are prepared to make.

3. The overall array of activities required over the next few years to realize the potentials of educational technology.
4. The special educational problems, interests, resources, and objectives of each developing country.
5. The special interests, resources and competence of each development assistance agency.
6. Effective ways and means of bringing to bear the joint efforts of developing countries and development assistance agencies in research, development, experimentation, and applications of educational technology.

It seems clear that the combined resources of the developing countries and development assistance agencies will be required for at least a decade to realize the potential of educational technology. It seems equally clear that unless this is done, the educational situation of the developing countries will probably be worse ten years from now than it is today.

#### AID Activities

Within this context, it may be of interest to the Seminar to have an indication of some of the more important activities in which AID is now engaging and which it expects to engage in the future, subject to review.

#### Project Planning Assistance

One of the great needs continues to be for the provision of expert assistance in planning projects. The term is used here not in the sense of "educational planning," involving largely the allocation of resources, although that is needed; instead, we refer to the planning involved in

deciding the kind of system to which a country could reasonably commit itself and how to go about implementing such a system.

This is an area in which no country, including the U.S., can claim any large measure of competence at the present. It can only be acquired and applied by learning with and from activities in cooperation with the developing countries and other development assistance agencies.

We propose to help provide the best talent available to developing nations, explore ways to further increase the numbers of people with such skills, and to work toward creating more institutional centers for such expertise. Substantively, we will continue to emphasize leadership from those sophisticated in the methodological aspects of instructional technology, rather than in the hardware aspects. We have attempted to compose planning teams combining such competencies as educational technology planning, instructional systems design, economics, systems analysis, teacher training, and instructional media knowledge. We no longer entrust initial planning to "television teams," "programmed instruction teams," etc.

Given the above, we nonetheless concede that unbiased, objective evaluation of alternative systems seems rarely possible. The development of formal planning methodologies clearly relating the special needs of countries to a wide range of options would be of major assistance.

### Information Development and Dissemination

AID will continue to place a priority emphasis on providing information to developing country planners that facilitates their use of instructional technologies. Thus the AID-funded program which has produced a film and handbook of educational technology, and an information and reference center, both at the Academy for Educational Development, will be continued at least through mid-1973. The further continuance of this activity will be dependent upon the support of other sponsors and users. Meanwhile, the information needs of the developing countries will have to be further assessed. A series of seminars centering on the film and handbook to take place throughout the developing world over the next 18 months will assist in the definition of needs.

It is clear that a network of information needs to be stimulated. The sharing of information between developing countries working with similar systems may be the most important link in such a network. We hope that over the next year a plan can be developed with the United Nations and other multilateral agencies and with other bilateral donors to facilitate the establishment of this kind of network.

We propose to help provide the best talent available to developing nations, explore ways to further increase the numbers of people with such skills, and to work toward creating more institutional centers for such expertise. Substantively, we will continue to emphasize leadership from those sophisticated in the methodological aspects of instructional technology, rather than in the hardware aspects.

### Institutional Development

AID has taken action to increase institutional capacity in the U.S. to assist the developing countries in this field. The recent \$1 million grant to Florida State University is the most significant effort to date, providing a developing country perspective for the work of its Center for Educational Technology. A similar grant made in 1970 to U.C.L.A. is providing resources for examining innovation in Latin American education including the use of instructional technologies. Finally, the array of study contracts in this and related fields have provided significantly greater institutional capacities at the Academy for Educational Development, Stanford University's Institute for Communications Research, Michigan State University (in the area of non-formal education) and to a lesser extent to several other institutions. In Population Communications the East-West Center is becoming a major resource through AID funding.

In spite of these efforts, the institutional framework for professional activity in this field is still thin. We would identify three areas where we would hope, working with other assistance agencies, to strengthen the institutional base over the next five years: First, we believe there is a need for a center parallel to that of Florida State with a greater focus on the use of mass communications and on communications theory. Second, we believe there is a need for another center which would concentrate on the practical problems associated with the produc-

tion of educational materials for the new media; i.e., the production of quality institutional television programs, increasing the institutional power of radio, and mechanisms for making more effective programmed instruction for application in developing country situations.

Third, there is an urgent need for the creation of greater institutional capacities within the developing world. At this point the small, emerging Center for Educational Innovation and Technology (sponsored by the Southeast Asia Ministers of Education Organization) and the O.A.S. Centers in educational broadcasting in Latin America are the only organized attempts to improve the institutional capacities within the developing countries for planning, research and technical assistance in the educational technologies. While linkages between the various U.S. and European Centers in this field, and institutions in developing countries are consciously being sought, the time will soon come when mechanisms will have to be developed to provide support to the developing country institutions directly.

We do not wish to encourage a proliferation of institutional capacities in this field until the need for them is more apparent. It is an important part of our strategic approach to this area that our stress is on the development of project plans first, with institutional development occurring later in relation to specific projects, planned or underway. We hope thereby to increase the usefulness of institutions as they do develop.

## Evaluation

AID has to date placed heavy emphasis on the importance of evaluating key field projects in educational technology. Thus, we have made a major investment in supporting evaluation of the El Salvador project, an evaluation program that is one of the most comprehensive ever undertaken of an educational innovation. Earlier, we funded the four volume series of case studies of the new media in education conducted by the International Institute for Educational Planning and published by UNESCO. It is basic to our approach to the use of the educational technologies that policy and practice be guided by objective evaluation of the effects of those practices, evaluation that attempts to maintain a focus on what and how efficiently the individual student is learning on the one hand, and on the other hand the costs of the system.

We will continue to make evaluation an integral part of every such system which we support. We will also continue to try to assess the relative costs and effects of other systems when countries themselves wish to make such assessments. Stanford University, for example, has just begun with AID support a study that will encompass at least six national systems using the new media with special emphasis on two factors: first, comparisons between systems utilizing different media for the same educational objectives; and second, assessments of the utility of lower cost, lower complexity technologies such as radio.

The kind of evaluation just described is a rather global kind, focusing on overall educational effects, attitudes, costs, and other

results of introducing an innovative system. We have become increasingly aware of a need for a more detailed kind of assessment of the educational effectiveness of particular elements of the educational system. For example, at one level it would be most important to know what the relative contribution to learning in a system may be of the classroom teacher, of the television or radio lesson, and the printed materials. With such knowledge, investments of effort and resources in one or the other element could be made with some awareness of effect.

At an even more detailed level, it would be most useful for operators of projects everywhere to be able to identify what elements in a television or radio program were contributing to its effectiveness or lack thereof. This degree of precision in feedback, however, is almost never practiced, except perhaps in such well controlled projects as "Sesame Street."

On the whole, it does not appear that there are adequate evaluative instruments available for making the kinds of discriminations that are needed by these kinds of detailed, feedback, related assessments. We may explore more fully methods for improving these assessments over the next several years.

It should be noted that our evaluation program does not encompass detailed comparisons between one medium and another for delivering a certain kind of instruction to a particular audience. We are not convinced of the utility of the several hundred experiments of this sort

which have been conducted largely in the U.S. and Europe, mainly because of the inability to adequately control the skill of the producers of the various media being compared. That is, a charismatic teacher on television may produce effective learning, while another teaching the same curriculum may be utterly ineffective. Thus, comparisons between television teaching, for example, and programmed instruction are likely to be very misleading unless repeated over a large number of conditions.

It should also be noted that we are not going to place major evaluative efforts on small supplementary uses of the media. Our interest is only in uses of technology that are aimed at making a very major difference in educational effectiveness, cost, or relevance.

While our evaluation program has utilized terms such as "cost effectiveness," we do not yet have a satisfactory understanding of how far such analyses can proceed. We do believe that by providing objective data on both costs and on educational effects, decision makers will be provided with the information they need to make judgments about the utility of various kinds of systems. We do anticipate that five years from now when such data are becoming available from El Salvador, Ivory Coast, Korea, perhaps India and Brazil, and a few other countries, we will be in a fairly strong position to suggest what kinds of educational effects and economies can be expected through current educational technology systems, given a certain level of investment.

#### Research

We are differentiating from evaluation a related class of projects consisting of experimental research. The overall aim of these projects

is to develop new or improved ways of utilizing the instructional technologies for developing country purposes. The kinds of activities that can be encompassed would range from quite specific research on a particular technique to small scale pilot projects which will test out new systems. To date there has been very little such research directed toward educational technology systems appropriate to developing countries.

We believe increased investments in such applied research are likely to have high payoff and that increased investments are therefore worthwhile. At the same time, we are aware that the design of such projects has been inadequately related to useful results for educational practitioners and that therefore new approaches should be developed. Through a study just being completed (Academy for Educational Development, Abt Associates) we are making a start at defining priority kinds of research in this field. This project has built on a number of prior contributions, including UNESCO's 1970 Volume on Educational Research Priorities.

During the next six months, AID will circulate throughout the professional community in the developing world and elsewhere a draft statement on research priorities based on the above study and other analyses.

AID's own funding for research of a generalizeable nature will continue to be severely limited. The role of other donor agencies will therefore be particularly critical in research although there does not appear to be a surfeit of research funding available anywhere.

However, perhaps the most productive kinds of experimental research are those closely related to a planned or ongoing operational project. Here, where immediate reliance for project payoff is apparent, funds are likely to be more readily available. For example, AID is making available a certain percentage (usually 5 percent) of its sector loan funding in education for research and development activities, particularly in Latin America. Brazil and Colombia already have a substantial allotment of such funding and have committed themselves to match it with equal funding and to develop a program for undertaking the appropriate research. In these countries, and in Korea and others where major commitments to develop alternative systems through educational technology can be made, major opportunities will exist for advancing the state of knowledge about and actual practice of effective application of educational technology systems.

We do not have available anywhere places where significant tryouts of new educational practices can be made on a fairly routine basis. This lack has retarded the developing and improvement of such systems because it compels them to remain at a theoretical stage until some institution makes a commitment to actually use the technology. The equivalent of the agricultural "test bed" or "experimental farm" that Wilbur Schramm had so long urged upon education still is not available. We frankly do not have a practical plan for establishing a set of such institutions. It is a gap that perhaps should have the attention of a number of development assistance agencies and developing countries.

At least as important, neither do we have situations which permit ready establishment of pilot projects of a moderate scale. These are needed for the same reasons as the more limited experimental farm analogues are required, to try out new and further develop techniques.

What may be needed is a source of funding that clearly recognizes the high risk inherent in the first year or two of operation of a pilot project. Now, this is a risk that most donor agencies cannot themselves take nor recommend to recipient countries. Thus, those pilot projects or first stages of operational projects that are attempted tend to be comparatively conservative adaptations of techniques in use elsewhere, rather than genuinely innovative systems.

The intellectual planning and the necessary hardware for more innovative systems do exist and are being further generated by new studies that we and others are undertaking. The lack seems to be in an appropriate mechanism for funding a project that may fail because it is untried but that, if it succeeds, may yield large benefits. If we assume this to be true, we may attempt to develop mechanisms for making possible this kind of funding.

#### Studies of Strategies and New Options

AID has had underway since July 1970 a series of studies, under the overall direction of the Academy for Educational Development, aimed at analyzing some of the questions which underlie AID decisions on strategy and program policy in this field. By September 1973 most of these will be completed.

Briefly, they encompass:

1. An analysis of research priorities in educational technology (with Abt Associates).
2. A review of policy issues surrounding the use of satellites for education and information in the developing countries.
3. A study of the educational implications of choices among various kinds of national broadcast systems (e.g., satellite/microwave; television/radio, etc.).
4. An analysis of the technoeconomic implications of satellites and other kinds of national broadcast systems (by Massachusetts Institute of Technology).
5. An analysis of activities that might optionally be undertaken, prior to satellite deployment, as a country prepares for an educational satellite experiment or operating system.
6. A series of studies aimed at suggesting new strategies for using communications effectively for reaching the rural family and the urban poor in developing countries, focusing on methods for producing changes in maternal and child health care, nutritional practices, basic intellectual skills, family planning practices, and agricultural practices (with George Washington University and others).

During 1972, as these studies near completion, our major concentration will be on transforming the ideas developed therein into a form likely to affect programs, practices, and policies. We are not yet certain how best to accomplish this. A certain first step, however, must be to try out these ideas with those likely to use them, developing-country professionals and decision-makers, as well as with other experts worldwide. Mechanisms for this dialogue have yet to be developed. We would like to bring together diverse groups of specialists to work with these ideas -- social scientists, advertising men, creative broadcasters, educators, policy makers and others, in the hope that from this ferment some operationally viable project plans will emerge.

We are convinced already that at least some of the strategic ideas which will emerge will be worth testing in pilot experiments or field projects. We hope, therefore, by mid-1972 to begin planning with a very few developing countries some projects that will carry into practice the most relevant of the ideas that have been produced.

In general, our thinking is that our own resources for studies of the sort described in this section may in the future be diverted largely to helping field tests get underway. It may be, however, that useful studies, either follow-ups or new studies, will emerge during the next year with higher priorities than are now apparent. Subjects for such studies will be defined largely by the developing country users, partly by changes in the state-of-the-art.

#### Coordination of Agencies Concerned with Development

AID is prepared to cooperate fully in a systematic effort to coordinate research, planning and action by the many developing countries and assistance agencies -- multilateral, bilateral, national -- concerned with this educational technology.

Of course, a considerable degree of inter-professional communication already exists, facilitated particularly when teams have been brought together to work on planning or evaluating projects. Undoubtedly this will remain a highly useful form of coordination. However, a greater awareness of the strategies, plans, and projects of other agencies is also likely to be beneficial.

We are not now proposing that a formal mechanism or a detailed common strategy be developed among the various development assistance agencies. However, the greater impact on the state-of-the-art of such close coordination argues in its favor. On the other hand, some diversity of concepts, funding criteria, and objectives may in the long run be more fruitful.

It is proposed, therefore, that this seminar consider the matter of improved coordination and suggest steps in that direction which might be taken in the immediate future.

#### Satellite Policy Studies

As yet we have no operating educational experience of note with satellites. Many countries are exploring the potentials, however. In addition to the aforementioned Indian experiment, one other is firmly planned in the U.S., using the same satellite. In addition, serious planning is underway for possible in-school projects in Brazil and in a consortium of other Latin American countries.

The great potential of satellite broadcasting makes it of intense interest to those countries or regional groupings of countries where population densities and geographic size may warrant its use. There is agreement that its major potential lies in the technology of the mid-1970s and later which will permit broadcasts to community and home television

receivers with low cost augmentation and antenna equipment -- perhaps a total cost of as low as \$200 per set required for the NASA ATS-F and ATS-6 series experimental satellites of 1973-75.

With this "direct" broadcast potential, satellites offer several advantages: immediate potential coverage of very large areas -- one or more countries in many cases; the ability to reach economically remote mountain or jungle areas as well as more developed areas; the ability to reach, with relevant programs, specialized groups scattered over a whole country. Ultimately, the capacity to carry a large number of television channels as well as many radio frequencies may add further to satellite attractiveness for some countries.

We will not here deal with the many questions of satellite vs. microwave transmission, allocation of radio frequencies, legal agreements, et al which make decisions in this area unusually complex. AID is preparing a background study of some of these issues, under contract, which will be circulated for general information by early 1972. However, it might be noted that:

1. We are -- by Congressional directive and by long conviction -- dedicated to seeing that the social development applications of satellites for the developing nations are fully explored.
2. We have taken the position on this, as in all of our educational technology efforts, that the matter of program content is a matter for local national control and that project planning initiative and responsibility rests with the developing nations.

3. We believe, with others, that successful use of educational satellites for development will be a demanding task. All of the problems of conventional broadcasting remain -- doing effective programming integrated with other educational and information elements, providing feedback to keep programs meaningful, organizing and training utilization experts for classrooms or village groups reducing receiver cost and maintenance, administering large systems, maintenance and reliability of power sources and reception equipment, etc.

With satellites, however, some of these problems are compounded by size. In particular, the management of a centralized system involving many people spread over a large area will require new forms of educational administration. Further, the heterogeneity of audiences will demand either radically more creative programming which can leap cultural, national, individual, and linguistic differences or, alternatively, methods for providing a sizeable proportion of more local programming.

These and other differences are probably surmountable. However, to do so will require a great innovative effort. It will take concentrated planning, research, and development, creative programming, flexible trails and candid evaluation by those nations attempting to use these powerful systems.

Two other matters must be noted. First, the concern about reception of unwanted transmissions from one country to another is, everyone recog-

nizes, a matter of serious concern. Second, there has been too little analysis to date of methods of financing educational and social development broadcasting through combining costs with uses of other sectors -- telecommunications in particular.

AID's role to date has been limited to some studies, described elsewhere, designed to spell out the potentials, problems, and preparatory stages relating to satellite broadcasting for education, together with participation in U.S. Government policy bodies in this area. The UN agencies have recently made a much more serious commitment through UNDP support of a detailed feasibility study for the Andean countries. The French government, too, has had a long-term interest in educational satellite potential for Africa. And both India and Brazil are making serious commitments to study and preparatory work for potential national systems.

AID's future role will be significantly determined by whether there is developing country interest in any U.S. involvement. We will, in any case, probably continue to conduct studies that illuminate options, problems and potential solutions. We will distribute our current studies by late 1972; they may provide some helpful guidance on planning, research, and policy questions.

We will also attempt to facilitate joint efforts during the early phases of development, associating projects elsewhere with similar efforts in the U.S. In 1973, for example, the ATS-F satellite is to be used for a U.S. educational experiment that will have to address many of the same questions that will be faced by India, Brazil, and the Andean countries. This first trial is an important opportunity for a process of learning together. Initially, we would hope to arrange a meeting of planners from these projects in 1972, to meet in the U.S. in the context of planning on the U.S. experiment. Should there be interest in such a meeting, we will also, of course, continue to participate in some of the various forums, national and international, discussing key policy issues in this area.

## V. CONCLUDING NOTE

It can reasonably be expected that within the next 2-5 years there will be a substantial increase in the number of countries which will wish to engage seriously in demonstration and pilot projects in educational technology. Probably a lesser number will wish to undertake full-scale operational projects as major national efforts at educational development.

As has been noted, it is crucial to real progress in educational technology that there be an increasing number of projects in both these categories. However, the problems inherent in them should not be minimized, and confront both the developing countries and the prospective assistance agencies.

First, initial investments in such projects (particularly full scale applications) are high; transition from an existing system to a radically different system tends to be unstable and frequently controversial; the time required for execution of this transition is relatively long -- perhaps five years as a minimum.

These problems demand a very high level, firm commitment on the part of the developing country of substantial resources for a number of years. If this is not forthcoming, it is highly questionable that the project should be initiated at all.

Assuming these conditions are met, the problems facing interested development assistance agencies are formidable. No such agency has

unlimited resources and in many instances, its resources of people properly qualified to assist such an enterprise are more limited than its funds.

These circumstances suggest consideration of some of the characteristics of projects which might merit the joint efforts and investments of development assistance agencies.

A. Demonstration and Pilot Projects

1. For applications within the school system, continued experimentation with systems using television will be important as systems are developed which are less reliant upon trained classroom teachers, which provide more opportunity for rapid student progress through the system, and in which operating costs can be reduced. Of greatest promise are systems like those planned in Korea, where television will be effectively tied into instructional modules keyed to the achievement of specific behavioral objectives.
2. Concurrently, we believe there should be expanded efforts to utilize other technologies, in appropriate combination, as the core of instructional systems, particularly technologies which are lower in both cost and operating complexity than television. Prime candidates at this time include radio, audio cassettes, microfiche, and printed forms of programmed instruction. To date, applications of these technologies have been solely in

the mode of supplements to instruction, rather than as the focal points of a coherent system of instruction. While there is question whether these technologies are dramatic enough and instructionally powerful enough to fulfill the role that television is playing in countries like El Salvador and Niger, a reasonable working hypothesis is that such a role is possible and that what is necessary is that they be used with a clear focus on the educational outcomes that are expected. This hypothesis may be of somewhat greater credibility if one considers the option of combining these technologies with some use of television or other equally motivating forms of communication.

3. For in-school applications, again, some trials should tentatively be planned near the end of this five-year period for the new video disc technologies or related video recording techniques, which hold promise of providing relatively inexpensive television lesson material with a greater degree of flexibility than is provided by conventional broadcasts, which must be broadcast at a certain time and which are constrained by limited television channel capacities.
4. As a secondary priority, a fuller investigation should be made of the prospect of demonstrating systems which can provide high quality, specialized instruction through whole courses or through more limited instruction modules distributed by various

of the instructional technologies -- video recording, programmed instruction, audio cassettes, or computer-assisted instruction. The comparatively high present cost of instruction at these levels, together with the commonality of much professional subject matter throughout the world, suggests that such systems may be very cost competitive with present expenditures and may also provide major improvements in quality, and a major expansion in opportunities for advanced training.

5. For out-of-school applications, the definition of projects is not yet clear. It is likely that they will encompass experimentation and demonstration involving many of the lower cost, lower complexity technologies, as well as some significant experimentation with television. Of greatest promise at this point for providing a bank of information to communities in developing countries for both audio and video cassettes and a variety of programmed instruction materials in printed form.

It is probably desirable that a theme of such projects will be an effort to integrate behavioral and social development programs across fields of functional activity -- maternal and child health care, agriculture, etc. -- through a concentration on the entire family group as the target audience.

It is also likely that two kinds of projects will be attempted -- first, an effort to greatly expand the reach and impact of

extension workers and other inter-personnel "change agents," second, an effort to press the capacities of the instructional technologies to directly teach mass audiences, with a minimum or negligible change-agent support.

In all these matters, the basic responsibility for policy and resources obviously must rest with the developing country. In most cases, however, external technical assistance and capital assistance will be required. This suggests the need for very close collaboration of the developing country and the assistance agencies in order that the right mix of resources are available, in appropriate magnitude and at the right time.

KEY APPLICATIONS OF THE EDUCATIONAL TECHNOLOGIES

A. In School Applications of Television

1. El Salvador - El Salvador is in the third year of its educational reform, a pioneering effort to rapidly reform the objectives, content, and methods of education, initially at the junior secondary level, through intensive use of instructional television systematically coordinated with curriculum reform; newly written materials, thorough teacher retraining, and evaluation. As of January 1972, a majority of the nation's junior secondary students (about 30,000) will be encompassed by the new system. AID has provided the major assistance to this project.

An intensive scientific evaluation of the project is providing information on costs, educational effects, attitudes, and operating problems. While firm conclusions must await at least the completion of 1972 testing, the evidence thus far is that educational change can be rapidly introduced with such a system, that such change does produce significantly more student learning, and that operating costs are moderate and can be borne by El Salvador. It is furthermore clear that evaluation can perform a valuable function in a system of this sort, increasing the recognition of policy makers and operators of both deficiencies and strengths within the system and thereby guiding the process of improvement.

At this point, it seems to be the judgment of El Salvador's educational leaders that an effort to improve the quality of television teaching would likely have high pay-off in further increases in educational productivity. Now that the system is firmly established, this kind of second

phase quality improvement becomes possible and can more easily be implemented than in the traditional system.

El Salvador has not yet dealt with the problems attendant to expansion of this kind of system to the much larger population of primary school students and to adults. It is, however, actively examining alternative methods for using the technology to upgrade educational opportunity in both these sectors and initially probably will concentrate on primary school teacher training with television.

The El Salvador project has fulfilled early expectations that it would show how the systematic integrated use of an instructional technology, if carried through with national commitment, can produce rapid educational change.

2. Niger - The experimental project in Niger (800 students) represents an exploratory use of television in a complete system of instruction carefully designed with guidance from sophisticated theories of learning, anthropology, and visual communication. Within this small, high-cost experimental system, there has been created an educational experience of relevance to its students, great student participation, excellent use of detailed feedback to guide production, and almost total elimination of authoritarianism as a means of student motivation.

Perhaps the most important lesson learned from Niger is that quality education can be provided at the primary school level with classroom teachers who themselves have had only a primary school education and no formal teacher training. The cost implications of this fact are important. There is,

indeed, the further possibility that creation of a new kind of education at the primary school level can actually proceed more effectively with classroom teachers who have not been subjected to many years of classical education and to traditional methods of teacher training.

Most of the analyses that have been made of the costs and educational effects of the Niger system will be made available in detail through a study now being completed in France. Certain of the key conclusions will be integrated into the work being done on a number of educational technology projects by Stanford University, for A.I.D.

We do not, however, yet know in any systematic way how to capitalize on the experience and approaches developed by the French-Nigerienne team for use by other nations.

3. American Samoa - Samoa's intensive use of television for all grade levels, began in 1964. It represents a basic model using television intensively as part of a complete reform of educational content and practice. Stanford University is providing assistance in analyzing the first useful test data coming from that system.

Because Samoa is an older project, continued observation is likely to produce an understanding of how such innovative systems may develop as they mature. For example, many recent observers have noted that the spirit of the project, initially innovative, thereafter became rigid. For example, the practice is to re-do every television program every year. The result is that program resources are spread very thinly over a tremendous production schedule (150 programs per week) and that other key components such as the

classroom teacher, have been neglected. Furthermore, the adherence to a highly structured, rigid procedure of teaching English has had questionable results, particularly when compared to more participatory systems such as those used in Niger.

Another finding, somewhat surprising, is that the classroom teacher has indeed learned a great many teaching techniques from television, as predicted, but that these are mass instruction techniques which are inconsistent with the role the classroom teacher could most usefully play.

Finally, the continuing difficulty that Samoa has had in making its secondary school system function adequately suggests the possibility that the intensive use of television may be more effective at lower grade levels. The next phase of this project, which will address many of these problems, will bear careful scrutiny.

4. Ivory Coast - The most comprehensive systematic use of television as an instrument for both reform and expansion is that which has become operative in September, 1971 in the Ivory Coast. During this first year it will be reaching some 20,000 first grade students through a reformed educational system which will utilize television intensively for both classroom instruction in all subjects and for teacher-training.

Over the next 10 years, the entire school population will be encompassed. The Ivory Coast embarked on this system because of its urgent need for upgrading the education and training of the mass of its population in order to continue its remarkable economic growth. It chose a comprehensive system using television in the conviction that such a system could

both upgrade quality and increase the availability of education within a short period of time, and, further, that because of its greater instructional efficiency, the cost of producing graduates could be reduced. For example, one analysis shows that the Ivory Coast now must invest seventeen student years of resources to produce one sixth-grade graduate, while the new system may reduce that to perhaps seven years, with attendant savings. Finally, the Ivory Coast's effort is part of a broader attempt to lay the basis for development in all regions of the country, hopefully reducing the rate of migration to Abidjan.

The possibility of attaining some of these dramatic objectives at a reasonable cost has been convincing enough to stimulate major investments from French foreign assistance, the World Bank, several UN agencies, and the German and the Canadian governments. AID has played only a minor role, providing the advice of its staff and consultants to UNESCO and the Ivory Coast and, recently, offering some limited continuing advisory assistance, partially financed through AID's Africa Bureau, on evaluation of the project.

This project, because of its size and ambitious objectives, could stimulate a major breakthrough in the state of the art in the systematic use of educational television within schools. Of particular importance is what will be learned about operating a project so large in size which must reach heterogeneous audiences.

Aside from the many substantive things to be learned from the development of this project, it will also have to deal with problems of coordinating inputs from diverse external assistance agencies and experts.

What has already become clear is that a complicated system like this requires firm administration, with strong support from the political leadership of the nation. (This observation is supported, of course, by experience in El Salvador and other places.) A related lesson of importance is that training of the top leadership in the planning and administration of educational reform must come very early. Finally, the Ivory Coast experience suggests that it would be helpful at an early stage of planning to arrive at clear instructional objectives on which all agree.

5. Colombia - Television has been used in the classrooms of Colombia since 1963. While it has not been used as a part of a fully integrated system of reform or expansion, it does carry a significant portion of the instructional load, apparently successfully. It has grown to be the largest television in-school system in the world, now reaching about 500,000 students. Although early evaluations were conducted, none has been done since the system became fully operative.

Colombia's continuing reliance on television suggests a degree of satisfaction with its contributions to education. Program production techniques could be studied by other countries to good effect, particularly since costs are reported to be very low. Of greatest importance, however, is what might be learned from Colombia about the administration of a large scale system. Such an analysis has yet to be undertaken.

6. India's Rural Television and In-School Television - Since 1963, with Ford Foundation aid, India has been conducting a small experiment in the New Delhi area which is producing television programs both for school

children and for farm families. The school broadcasting is of a supplementary nature, with little evaluative data apparently available. The rural broadcasts have been more thoroughly evaluated and have shown a steady drop-off of listener interest (although this has been associated with a steady increase in agricultural sophistication, largely for other reasons, by those farmers near New Delhi receiving the broadcasts).

The broad lessons from this experiment may be that major efforts must be made to produce interesting and effective broadcasting once the novelty of television wears off, and that new techniques must be used for providing incentives for the local discussion leaders who are so important in relating a broadcast program to local problems.

7. Mexico - Mexico has developed several innovative systems utilizing the educational technologies. For example, its "Telesecundaria" system has similarities to that in El Salvador, with the notable exception that some students are being taught without having trained teachers in the classroom. It is also making significant use of radio at the primary school level.

8. Other Applications of In-School Television - The operational projects mentioned heretofore are not intended to be inclusive. There are a number of other noteworthy projects, most of them representing efforts either smaller in geographic scope or utilizing television or radio in a supplementary mode. This is not to say that they are not important. Singapore, for example,

represents a use of classroom television where even the supplementary use of television may have a significant impact on overall educational effectiveness.

There are many other examples of small scale use of television, such as those in Northern Nigeria, Ethiopia, Ghana, Brazil, and other countries. Such applications may be logical first steps for a country to familiarize itself with educational technology and to train a corps of people in its concepts and operations. In most circumstances, however, these kinds of applications will not automatically evolve into projects which promise dramatic changes in educational quality or efficiency. Such a second stage will have to be planned as such.

B. In School Applications of Radio

Radio has been used far longer than television, but thus far without an effort to have it carry a program of fundamental change in education. We will simply note two of many examples which could be cited. (Mexico's use for primary education was alluded to earlier.)

1. Kenya Radio - One of the few examples of the significant use of technology other than television in the developing world is the use of radio, combined with correspondence study, in Kenya. The project began in 1965 with assistance from A.I.D. (Africa Bureau) which provided primarily for advisors from the University of Wisconsin. The major aim of the project was to develop a method for spreading more widely the excellent teacher-training opportunities which existed at a few urban teacher-training institutions, without going to the infeasible expense of training and retraining all teachers at these urban centers. The program that was devised involved regular radio broadcasts to primary school teachers as part of a system that included correspondence study. The correspondence element provided feedback both to the teachers and to the operators of the system and also provided the key to administering the system.

At this point, all foreign assistance has been phased out, and the project is said to be operating smoothly and successfully. Preliminary evaluations have been promising, in that the costs are lower than conventional teacher-training and educational objectives appear to be achieved in a shorter period of time. The final evaluation report has not yet been received.

2. Thailand Instructional Radio - This is one of the oldest and largest media systems. At last report, in 1967, the system was reaching 800,000 students with several broadcasts per week. Unfortunately, the last formal testing was done in 1961. While encouraging, the data is rather old. Stanford University, under AID research contract, is hoping to work with Thailand to update its testing and to conduct a broader assessment of effectiveness.

C. Other In-School Applications of Technology

1. Spain's Computer-Assisted Instruction for Teacher Training -

With UNESCO assistance, Spain is about to embark on the most sophisticated use of "high technology" in education of any developing country yet. A program is being developed which will be aimed at rapid upgrading of the teaching force of Spain through the use of computer-assisted instruction. Up to 150 hours of such instruction are to be provided each teacher.

Spain and UNESCO have involved in this project many of the most competent professionals around the world and have developed a plan which appears to be attractive to Spain from both a cost standpoint and the standpoint of speed of training. Given the hesitation on the significant use of computer-assisted instruction within school systems because of high cost, this project could represent a major breakthrough. If successful, the methods may be applicable to many countries; in fact, some of the programming itself may be useful elsewhere.

This is, of course, a more indirect method of reaching students with new curricula and new instructional methods than such applications as classroom television. It also does not provide directly the increase of teaching resources needed by many developing countries. On the other hand, it will probably be accepted with little resistance from the established teaching force and may have a major effect on the knowledge base from which they teach. It remains to be seen, of course, whether it will result in significant changes in the way teachers actually teach.

2. Indian Programmed Instruction - With A.I.D. assistance, India is about to embark on an inter-related series of three pilot projects in the application of programmed instruction to its educational problems. Preliminary work by a team from the National Education Association has indicated that conditions are promising for a successful development of programmed instruction in India. As a result, India is about to start efforts in primary school education in Bombay, Poona, and in a rural area near New Delhi. This is a frankly experimental project, conceived with the expectation, however, that within five years the materials will be sufficiently developed and tested to make programmed instruction an important instrument in alleviating India's severe shortage of trained teachers and, most significantly, at a level of cost and administrative complexity that can be managed with India's meager infrastructure. This is the first major focus on programmed instruction for the direct education of students to which the developing countries have yet committed themselves. It will be carefully evaluated for both costs and effects.

#### D. Out-of-School Applications of Technology

##### Out-of-School Applications

In the industrialized world, only "Sesame Street," some of the new "open" universities and projects such as the Japanese NHK high school seem to be aimed at providing organized educational opportunity outside of a classroom. There also is some use of the broadcast media to induce changes in family planning, agricultural practices, and other social development activities.

In the developing world perhaps the best known use of technology for out-of-school application is the use of radio in literacy campaigns. But we know remarkably little of its effectiveness. Various media, of course, also are being used for advertising related to family planning (with substantial AID support). However, it appears that nowhere is the potential being adequately tapped in operational projects aimed at major development activities.

Perhaps the most informative project is still India's Radio Rural Forum. It seems likely from this and similar experiences with educational innovation that a long-continuing process of local adaptation and change may be required

India's experience further suggests the importance of trying to design pilot experiments that represent most of the key variables which will be faced in later, large scale, implementation. Both regional and individual differences have a great impact on the success of programs.

The pilot phase must consider not only the effects of these differences on the content of educational programs but also the effects on other elements of the system, such as the form of local leadership and administrative techniques, and build the differences into the project, if possible.

Perhaps the most general principle is that such programs must be pragmatic, based firmly on continuing assessments of their effectiveness. (This principle is particularly important in non-formal education, because if successful the knowledge and capacity of the target population will be constantly changing, in largely unpredictable fashion.)

#### E. Planned Projects

1. Korea - Korea is engaged in detailed planning for what could become one of the most systematic and complete educational reforms ever undertaken. AID has been assisting in this planning, through a systems planning study conducted by Florida State University and through further technical assistance.

The current possibility is that a five-year educational research and development effort will be started, aimed at producing a prototype system (reaching several hundred thousand primary and secondary school students) with certain characteristics: faster progression through the system; rate of individual progression through the system dependent on individual learning achievement; increase in the number of students handled by an individual teacher; organization of curriculum around "learning modules"; thorough reform of objectives, content, and learning

methodology, relating the intended results of education more closely to needs of a changing industrialized society; resulting in a reduction in unit costs per graduate. In the view of the project planners, only such a radical restructuring will permit Korea to afford to service a rapidly growing student population.

The instructional approach would utilize television, teacher retraining, programmed instruction and other methods for individualizing instruction, careful definition of behavioral objectives, and detailed feedback to develop, through criterion testing and revision, a tested complete curriculum of instructional modules. The management system would include the reorganization of classes to utilize a master teacher plus supporting teachers in a way to reduce both the total number of teachers per student and the average salary costs, while through the differentiation of teacher roles continuing to provide quality classroom teaching.

If Korea does proceed with the reform, this will represent a landmark effort in the restructuring of education to meet changing needs, budgetary crises, and the opportunities for quality improvement presented by instructional technology.

2. Brazil - Brazil is planning to begin a nationwide program of educational innovations making use of the educational technologies. A.I.D. is providing initial assistance to Brazil in the form of training opportunities for planning educational technology systems and through financial support in a portion of a sector loan earmarked for innovation.

The criteria for supporting projects from these funds are now being developed in Brazil.

Of greatest significance is, first, the fact that Brazil has decided that the need for mass education with quality can be met by the effective use of educational technology and, second, that it now has some funds, both its own and those of external agencies to implement that decree.

Somewhat independently, Brazil is also proceeding with planning an initial R&D program for use of a satellite for in-school educational television and radio beamed to the poorest areas of the country, areas which cannot afford trained teachers and which do not attract or hold such teachers as they can afford. The final shape of an experiment and/or operational program using satellite E.T.V. has yet to emerge.

As in all countries, the organization of national, state, and local institutions to undertake this major effort is a first area of effort for Brazil. Substantively, there is the question of the desirability of diverse approaches at this early stage (where experience with different kinds of systems may be fruitful) as opposed to the concentration of intellectual and financial resources on key problems which joint efforts might provide.

In any event, it does appear that Brazil is committed to using educational technology to provide educational opportunity to a large part of its population not now within the school system. In doing so,

it will perforce face many questions of importance to other countries, among them: how to teach without a force of highly trained classroom teachers; how to administer systems over so large and decentralized a nation; how to deal with populations very diverse in background and aptitudes; and, how to arrive at optimal technoeconomic solutions for providing communications to poor and remote areas.

3. Latin American Satellite Study -- U.N.D.P. - The Andean nations and neighboring Latin American countries are about to begin a major feasibility study of the potential of satellite educational broadcasting for the region. This is a detailed, two-year study costing close to \$1 million, funded partly by a UNDP grant with technical assistance from a large UNESCO team. Virtually every sector important for evaluating project options is to be systematically studied, including educational uses, management, technoeconomic factors, cross-cultural programming, political cooperation, and others.

Needless to say, this kind of detailed study, in the context of serious operational planning, should bring to light many issues overlooked in more theoretical studies, in addition to providing answers to many questions. Further, the methodologies developed during this study may have similarity to much other large-scale educational project planning, whether involving satellites or not.

4. India - The greatest experiment in using the power of broadcasting as a tool for general social development is that which is planned for India, from the spring of 1974 for one year, using a NASA experimental

satellite. The satellite will be used to broadcast development-related television programs to 3,000 villages of India in five different cultural and linguistic regions, most of them isolated from the modern sector of Indian life. The expectation is that this first year will be a prelude to a permanent system of broadcast satellites that within 10 years will reach more than 80 percent of the population of India.

Indian planning for administration, program production, training and evaluation is just beginning. Much can be learned from the planning process itself, for India will have to make hard decisions as to content, expected effects, methods of coordination among development ministries and between central and local governments, effects on cultural identity, methods of training, evaluation and many other key problems. Further, the methods of coping with cultural and linguistic differences will be of much interest both from a technical standpoint and an educational one. Of the many questions which the Indian experiment will illuminate, three stand out:

- How can programming be made interesting, relevant, and useful to very diverse groups?
- How can a system be devised that will work with minimal trained local leadership in the form of discussion leaders or monitors?
- How can a system this large, reaching otherwise remote populations, be effectively administered to produce significant development results?

5. Guatemala Rural Education - As soon as some details are worked out, Guatemala will begin a project whose first phase will be a major pilot project or projects aimed at developing a system to provide

educational opportunity and information to the majority of its population, which lives in rural areas without access to significant formal education or information. This, too, is a bold effort to use communications technologies and concepts to leap over the barriers of insufficient schools, insufficient teachers, insufficient development workers.

Generalizations from Learning from Television -  
What the Research Says, NAEB, 1967

Wilbur Schramm and Godwin Chu

(Items marked with one or two asteriks (\* \*\*\*) have special importance to planners)

I. Do Pupils Learn from Television?

1. Given favorable conditions, children learn efficiently from Instructional Television. \*
2. By and large, Instructional Television can more easily be used effectively for primary and secondary school students than for college students. \*
3. So far as we can tell from present evidence, television can be used efficiently to teach any subject matter where one-way communication will contribute to learning.

II. What have we learned about the efficient use of Instructional Television in a school system?

4. Television is most effective as a tool for learning when used in a suitable context of learning activities at the receiving end. \*\*
5. Television is more likely to be an efficient part of an educational system when it is applied to an educational problem of sufficient magnitude to call forth broad support. \*
6. Television is more likely to be an efficient tool of learning if it is planned and organized efficiently.

III. What have we learned about the treatment, situation, and pupil variables?

7. There is no evidence to suggest that either visual magnification or large-size screen will improve learning from television in general.
8. There is insufficient evidence to suggest that color will improve learning from film or television. \*
9. Where learning of perceptual-motor skills is required, a subjective angle presentation on television will tend to be more effective than an objective angle presentation.

10. There is no clear evidence on the kind of variations in production techniques that significantly contribute to learning from Instructional Television. However, students will learn better when the visuals are presented in a continuous order and carefully planned both by the television team and the studio teacher.
11. Attention-getting cues that are irrelevant to the subject matter will most probably have a negative effect on learning from Instructional Television.
12. There is no consistent evidence to suggest that either humor or animation significantly contribute to learning from Instructional Television.
13. Subtitles tend to improve learning from Instructional Television, particularly when the original program is not well organized.
14. There is insufficient evidence to suggest that dramatic presentation will result in more learning than will expository presentation in Instructional Television.
15. Inserting questions in a television program does not seem to improve learning, but giving the students a rest pause does.
16. Whether a television program is used to begin or to end a daily lesson by the classroom teacher makes no difference in learning.
17. Repeated showings of a television program will result in more learning, up to a point. But teacher-directed follow-up, where available, is more effective than a second showing of the same program.
18. If saving time is important, a television program can probably be shortened and still achieve the minimum requirement of teaching.
19. There is no clear evidence to suggest whether eye-contact in television instruction will affect the amount of learning.
20. Problem-solving instruction on television is more effective than lecturing where the materials taught involve the solving of a problem.

21. The students are likely to acquire the same amount of learning from Instructional Television whether the materials are presented as a lecture, or in an interview, or in a panel discussion.
22. Where accurate perception of images is an important part of learning, wide viewing angle and long distance will interfere with learning from Instructional Television.
23. Adequate attention provided by the classroom teacher will, in most cases at least, remedy the adverse effect due to a wide viewing angle.
24. Noise will reduce the effectiveness of learning from film and television so far as part of the learning comes from the auditory medium.
25. Instructional Television appears to be equally effective with small and large viewing groups. \*\*
26. Instructional Television may or may not be more effective with homogeneously grouped students, depending on other factors in the learning situation.
27. Whether Instructional Television can teach students who view at home as effectively as students in the classroom seems to depend on other conditions. \*
28. At the college level, permissive attendance does not seem, by itself, to reduce the effectiveness of Instructional Television.
29. Students will learn more from Instructional Television under motivated conditions than under unmotivated conditions.
30. Learning from television by the students does not seem necessarily to be handicapped by the lack of prompt feedback to the instructor.
31. Showing, testing, revising an Instructional Television program will help substitute for lack of live feedback to the teacher, and make for more learning by the students. \*
32. The lack of opportunity for students to raise questions and participate in free discussion would seem to reduce the effectiveness of learning from Instructional Television, particularly if the students are fairly advanced or the material is relatively complicated.

33. If a student being taught by Instructional Television can be given immediate knowledge of whether he has responded correctly, he will learn more. \*
34. Students taught by television tend to miss the personal teacher-student contact, but there is insufficient evidence to suggest that the lack of such contact will impair learning from Instructional Television. \*
35. Practice, whether by overt or covert response, will improve learning from Instructional Television if the practice is appropriate to the learning task, and if the practice does not constitute an interference.
36. Note-taking while viewing Instructional Television is likely to interfere with learning if time for it is not provided in the telecast.

#### IV. Attitudes Toward Instructional Television

37. Teachers and pupils are more favorable toward the use of Instructional Television in elementary school than in secondary school and college. \*
38. Administrators are more likely to be favorable toward Instructional Television than are teachers. \*
39. Voluntary home students of television college classes tend to be more favorable toward learning by television than are the students who take these same televised courses in the classroom. \*
40. At the college level, students tend to prefer small discussion classes to television classes, television classes to large lecture classes.
41. Favorable attitudes are distributed widely enough among different televised courses to cast doubt on the assumption that some academic subjects, per se, may be disliked as material for Instructional Television.
42. There is evidence of a Hawthorne effect among students beginning to use Instructional Television, but no firm evidence that attitudes toward the medium necessarily improve or worsen with time.

43. Liking Instructional Television is not always correlated with learning from it.
44. Among the factors that determine teachers' attitudes toward Instructional Television are (a) how they perceive the degree of threat to the classroom teacher; (b) how they estimate the likelihood of mechanized instruction replacing direct contact with students; (c) how they estimate the effectiveness of Instructional Television; (d) the difficulties they see in the way of using modern techniques; (e) how conservative they are, and whether they trust or distrust educational experimentation. \*
45. Among the factors that determine pupils' attitudes toward Instructional Television are (a) how much contact they think they will have with a teacher; (b) how they compare the relative abilities of the studio and classroom teachers; (c) whether they find Instructional Television boring or interesting; (d) the nature of the televised programs they have seen; (e) the conditions of viewing. \*

V.. Learning from Television in Developing Regions

46. There is no evidence to lead us to believe that children learn any less efficiently from television in developing countries than elsewhere.
47. Under suitable conditions, television has been shown to be capable of highly motivating learning in developing regions. \*
48. Illiterate people need to learn certain pictorial conventions. There is some evidence suggesting that these conventions are not hard to learn. \*
49. When media are introduced for upgrading the level of instruction, then it has proved very important to train teachers in their proper use and to keep in close touch with them. \*
50. Resistance to television and other media is likely to be no less in developing countries, but the size and urgency of the problems are likely to provide greater incentive for overcoming it. \*
51. Feedback from the classroom teacher to the studio teacher will be helpful to effective use of the media. \*

52. There is ample evidence that the new media, particularly television, are effective for in-service training of teachers for developing regions. \*

VI. Learning from Television: Learning from Other Media

53. Given favorable conditions, pupils can learn from any instructional media that are now available. \*\*
54. There appears to be little, if any, difference between learning from television and learning from film, if the two media are used the same way.
55. Television and radio have certain advantages over films in flexibility and deliverability.
56. Radio is less expensive than television; economy of scale usually governs cost comparisons of television and film.
57. More complete control of film by the classroom teacher gives it a potential advantage over television.
58. The use of visual images will improve learning of manual tasks, as well as other learning whether visual images can facilitate the association process. Otherwise, visual images may cause distraction and interfere with learning.
59. There is some evidence to suggest that moving visual images will improve learning if the continuity of action is an essential part of the learning task.
60. Student response is effectively controlled by programmed methods, regardless of the instructional medium.

TITLE: Action Program and Work Plan: Non-Formal Education

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

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BUREAU FOR TECHNICAL ASSISTANCE  
OFFICE OF EDUCATION AND HUMAN RESOURCES

ACTION PROGRAM AND WORK PLAN

(Key Problem Strategy  
Paper and Work Plan)

NON-FORMAL EDUCATION

March 1971

## ACTION PROGRAM AND WORK PLAN

### NON-FORMAL EDUCATION

#### I. STATEMENT OF THE PROBLEM

Throughout history, the vast majority of people have acquired social, economic and political skills through learning experiences outside of formal school systems, i.e. non-formal education. Traditionally, this process of inculcating attitudes, knowledge and skills was based in the family, the tribe, or was an integral part of the whole culture. Although it was central to the system of "governance," it was only in the most marginal way a responsibility of the "government."

European colonial rule introduced two fundamentally new educational concepts: (1) that education, for purposes of colonial administration, was a necessary responsibility of the governing power, and (2) that such education was the accepted mode of vertical social and economic mobility.

These two concepts have left an indelible mark on the now independent and developing countries. The high value traditionally placed on non-formal education and learning has atrophied. Formal education on essentially European lines has acquired a pervasive value system often far out of proportion to its relevance and usefulness to society.

During the past fifteen years the IDCs and external assistance agencies have concentrated their educational efforts on the development

of formal school systems. Given the historical backgrounds of the LDCs, such concentration was perhaps inevitable. The byproducts, however, have been continuing neglect of traditional modes of non-formal education and failure to perceive the vast gap which could not possibly be filled by the formal educational system.

Growth in populations and changes in the economics and aspirations of the LDCs render impossible a resort to ancient forms of traditional non-formal education. Yet, formal education is becoming prohibitively expensive for most LDCs, given their needs and financial resources.

In most of these countries educational costs are increasing at a rate faster than their governmental budgets and gross national products. As a result, a very large proportion of the present and future population of most newly developing countries will receive little or no formal education. For many LDCs, their only opportunity for skill and knowledge development for the populace as a whole is through some kind of non-formal education.

The only escape from this educational dilemma appears to be a far more perceptive and purposeful effort to make education and learning an integral part of life where people live and work. It now appears clear that the skills, knowledge, attitudes and capacities of the labor force (and indeed the whole population) are developed as much through experience, on-the-job training, and recreational and cultural activities as they are through formal schooling. It seems equally clear that this non-formal mode of learning could be very substantially increased in value and extended in scope by more imaginative planning, organization and leadership.

We now have little systematically organized information on non-formal education in the LDCs. This results both from the lack of attention to this area by educators and from the very nature of non-formal education efforts. We do know that various LDCs (or groups within them) are conducting a considerable array of non-formal education activities and projects and some have launched apparently successful programs of one sort or another.

Within developed countries non-formal education makes an extremely important and varied contribution to human resources development. Such activities often begin in order to meet real needs and end when the need no longer exists. In this sense, non-formal education efforts frequently are more responsive to real needs and new concepts, as determined in society and in the marketplace, than are formal school system endeavors.

Emphasizing non-formal education does not necessarily mean de-emphasizing formal education. It does mean developing a new dimension of education which can provide learning experiences for a much larger proportion of the population in the places and environments in which they live.

The problem may therefore be stated in three parts: (1) to gain recognition for non-formal education as a more important and respected component of national education for development; (2) to study, document and disseminate information on successful examples of non-formal education which appear suitable for experimentation and application in other LDCs and (3) to provide professional and financial support for research, experimentation and implementation of those models which appear most promising, or for new concepts which appear worthy of testing.

II. ACTION PROGRAM FOR NON-FORMAL EDUCATION

A. Major Obstacles

1. Lack of clear definition and concept: Considering the crucial role which non-formal education has played in the developed countries, and its growing importance in the LDCs, it is difficult to define the term in a manner which is readily understood by and acceptable to professional educators. This is caused by (1) our inadequate knowledge of and attention to educational activities carried on outside the formal school system, (2) the tendency of educators to think of education only in terms of formal, graded school systems and (3) the wide-ranging and amorphous nature of non-formal education, frequently private in origin and management and often occurring as a byproduct of activities directed primarily at objectives other than education (e.g., rural cooperatives).

Equally difficult has been establishment of the concept of non-formal education as a system of education, quite different from formal education systems, but potentially capable of providing non-school populations with educational services systematically and in ways which significantly serve individuals, societies and the purposes of national development.

It is unlikely that non-formal education can become recognized, respected and propagated as an important national enterprise in education until a suitable definition and concept of it can be evolved and acquire wide international understanding and acceptance. This will require serious and sustained investigation, analysis, experimentation and evaluation by foreign assistance agencies and by the LDCs.

2. Physical and social isolation of population groups: The population most in need of non-formal educational opportunities are the farm and village people and the urban poor. These are the groups least likely to have access to more than minimal formal education, containing the highest proportion of adult illiterates and making up the great bulk of the national population. Physical, economic and social isolation combine in various ways to preclude their access to non-formal learning experiences which could enhance their capacities as individuals and their participation in society and development.

A substantial increase in investment in rural development, including both infrastructure and services, is required. These are the most direct ways of producing a "learning environment." However, modern communications technology gives promise of becoming a major tool for reducing the distances and bringing educational (and recreational) experiences to these isolated populations, at costs which can be borne by the LDC economies.

3. Organization and Resources: With national budgets increasingly strained by the costs of formal school systems, few countries have seen clearly a major role for non-formal education or have devoted adequate resources to strengthen it. In fact, this increasing financial stress has stimulated interest in non-school education, particularly by non-educational leaders and planners.

The result is that few countries have any organization (delivery system), financial resources or personnel dedicated to an overall interest in non-formal education as a whole. Ministries of education, generally speaking, see it, alternatively, as of little consequence, a potential

competitor for resources, or an illegitimate form of education which should be brought into the formal system. Consequently, many of those who believe in the potential of non-formal education feel that its promise would be lost if it should come under the dominance of ministries of education. While this is a real hazard in some countries, it is perhaps no less hazardous to attempt to create separate educational delivery systems in countries which are rapidly becoming unable to afford even the one they have. Actually, it is not necessary and it is probably undesirable to view these alternate, and in many cases complimentary, paths to learning as outright competitors.

Non-formal education, by its very nature, should be more diverse in organization, funding and management than the formal system. It should emphasize local initiative, self-help and innovation on the part of large numbers of private and public institutions. Nevertheless, a sensible, national effort requires a degree of national planning, coordination and funding. The use of modern communications technology, for example, can hardly escape some form of national operation. Among the obstacles to be overcome, then, are those that hamper development of compatible systems of formal and non-formal education with a healthy exchange of experience between them.

Encouragement of experimentation in developing such compatible systems could be strongly influenced by external assistance agencies, particularly in countries which are beginning to gain a clear understanding of the problem.

4. The Knowledge Gap: Assuming reasonable progress on the foregoing obstacles, we are still confronted with a serious lack of basic knowledge regarding the subject matter, effective means of

delivery and the effects of many kinds of non-formal education. There have been few cost-benefit studies of this type of education, and its effects on behavior, particularly in non-economic fields, are known only by random or anecdotal cases. We only can surmise what the sources and magnitudes of funds would be for non-formal education related directly to the economic and social interests of people, employers and governments.

The few authentic success stories usually point to a single, unique personality without whom the success story could not have happened. The unique personality is obviously a major asset in any field. However, it is no substitute for information, analysis and insight in defining problems and in creating institutional capabilities for dealing with them.

Both assistance agencies and LDCs have a large role to play in developing and testing the subject matter, methodology, costs and effectiveness of various modes of non-formal education.

5. Interrelationships with other Development Sectors: One of the distinctive features of non-formal education is that it aims far more explicitly at changes in behavior than does formal education. Although there are important exceptions (cultural and recreational, for example), the main point of non-formal education is to induce changes in attitude and behavior: fewer and healthier babies, better nutrition, improved agriculture, better repair of automobile engines, greater productivity in steel production, more effective participation in solving village problems.

Yet the principal custodians of these sectors, in the LDCs and in the assistance agencies, are in different organizational units

with various professional interests and skills. These suggest some of the obstacles in using non-formal education as a tool of multi-sectoral development.

#### B. Significant Research Efforts

Over the past twenty years, an enormous quantity of literature has been produced on a wide variety of activities which we would now call "non-formal education." This literature deals with experiences in agricultural extension, handicraft programs, cooperatives, community development, participation of women in development, literacy training, labor education, political orientation and behavior, family and so on. Certain large and sustained sectoral and regional programs - like the Comilla activity in East Pakistan - have been studied and reported at great length.

Much of this "research" has considerable validity and its value must be exploited more fully as non-formal education assumes a clearly identified and high priority by the IDCs and the assistance agencies.

Thus far, however, there has been very little authentic research on non-formal education as a whole or on its potential as a purposeful national system of education designed to make significant learning experiences available to a very large proportion of the non-school populations of the IDCs.

While basic research will be required to define and clarify non-formal education in broad national terms, the initial approach is primarily pragmatic: (a) to identify examples of non-formal programs - successful or unsuccessful - which have been competently studied, analyzed and recorded; and (b) to identify current examples of significant projects or programs, documenting them in a form for study,

experimentation and trial elsewhere.

This case study approach is one which appeals to both LDCs and assistance agencies. AID, through the joint efforts of TAB and the Regional Bureaus, has queried all Missions by airgram asking them to identify one or more significant activities in non-formal education which might be suitable for more detailed study and documentation. Follow-on activities will be scheduled as appropriate.

Perhaps more important in the intermediate and longer term, the IBRD has arranged with the new International Center for Educational Development (formed from a merger of Education and World Affairs and the Council for Educational Enquiry) to: (a) conduct a series of case studies in non-formal education, (b) synthesize these into an overall report on non-formal education as an area for IBRD interest, and (c) help the Bank develop a broad "strategy" for investments in non-formal education.

Simultaneously, the TAB and the Regional Bureaus are exploring the possibility of both basic and case study research with various institutions. To concert and coordinate efforts in the research field, IBRD, AID, ICED and AAI are informally coordinating their plans. Other groups, such as UNESCO and certain foundations, are interested in the subject area.

Considering the range and influence of the institutions now seriously interested in research pertaining to non-formal education, it appears feasible in the near future to: (a) identify and exploit significant existing materials, (b) produce better and more analytical case studies of different kinds and from various countries, and (c) design a program for joint execution by LDCs and assistance agencies

which will result in a better understanding of non-formal education.

### C. Field Pilot or Experimental Projects

Our present knowledge of field pilot or experimental projects is sketchy and inadequate, and other assistance agencies have similar knowledge gaps.

Undoubtedly, there now are many experimental projects being tried out, some with AID assistance. Some have progressed beyond the experimental stage and are regarded as tested on-going non-formal educational activities. Others like motivational (sensitivity) training in several Latin American countries, are currently being evaluated. Actually, innumerable examples exist of experimental or semi-established projects of considerable variety, such as youth corps, quasi-military organizations, the "Year of Service" program at Haile Selassie I University, educational TV and radio programs aimed at various population groups, and so on endlessly.

There is, of course, a very wide variation in the purposes, quality, arrangements and significance of these projects. The difficulty now is that very few of them have been carefully studied and documented. In some cases, they are hardly known in the host country and in almost no instance have they been conceived of as elements in an overall design for the education of non-school populations.

### D. Full-scale Field Projects

Perhaps the most conspicuous example is the Mobile Trades Training Unit Program in Thailand. This program, started in 1960 with one unit, now has a nationwide network of some 30 units and provides trades training for a period of five months for over 20,000 participants annually; it expects to reach 50,000 by 1972.

AID has provided substantial support for equipment (nearly \$2 million) and has funded a comprehensive evaluation of the program. This evaluation should be completed soon and should provide us with an extraordinarily valuable case study of a program which appears to have great potential for many IDCs.

Fragmentary reports are available on other full-scale programs, like the Village Polytechnic Program in Kenya and many cooperative efforts in Latin America, some operated by governments and some by private institutions, principally the Catholic Church.

According to reports, Israel has had exceptionally successful experience with non-formal educational programs. Non-formal educational activities have for decades been an important element of rural development in India, Pakistan and other countries.

The problem is that thus far these activities have been regarded and conducted as adjuncts to other sectors of development, without being recognized as elements of a national educational enterprise, formal or non-formal. In many cases, they have sought "legitimacy" through nomenclature (The Rural Academy in East Pakistan, Village Polytechnics in Kenya), through affiliation with some element of the formal system (vocational schools and comprehensive high schools) or through adoption of many of the trappings of formal education (certificates, diplomas, entry requirements and time sequences).

The thing that is fundamentally wrong about such attempts at legitimacy is that they imply to leaders and participants alike that non-formal education is a bastardized kind of formal education - that non-formal learning, however valid, is less respectable than formal education, however irrelevant.

The developed countries have propagated this illusion by their own behavior and by their advice and assistance to the developing countries. Consequently, they have a responsibility to assist the developing countries (and themselves) to reinterpret education as "learning for life," not "sitting for an examination." It is around this concept that a doctrine, a value system and an educational mystique must be built.

#### E. Present Involvement of LDCs in Problem

It is difficult to gauge the present involvement in or commitment to non-formal education on the part of the LDCs. Discussion of it has become fashionable in development circles, but possibly more for political and financial reasons than for educational reasons. Non-formal education as a conversation piece is "in". Probably, however, it is more in as a style (mini-education) than as a profound and enduring concept of purposeful learning experience for everybody. The argument most frequently adduced is that it is a way out of the financial dilemma of formal education rather than that it is a different but valid form of education which can achieve many educational goals not achievable by formal education, however well financed.

Judging by the large number of experimental projects being launched and the lesser number of full-scale projects under way, it is safe to say that there is substantially more informed interest in non-formal education by the LDCs today than at any time since they started their development programs.

There are obviously individual leaders in the field of great talent and commitment. There is very probably a much greater number who profess faith in non-formal education without understanding its

real premises, objectives or potential.

F. Prospective Role of AID or Successors

The prospective role for AID (and other assistance agencies) can best be derived from an examination of Section IIA. -Major Obstacles.

Briefly stated these are: (1) assisting in creating a clear definition and concept; (2) helping to focus greater attention on rural development and the urban poor; (3) reducing physical, social and economic isolation through educational technology; (4) encouraging development of effective delivery systems; (5) helping to close the knowledge gap; and (6) helping to make education organic to all of development.

Although the U.S. has had, and is having, a great deal of experience with non-formal education, AID's role cannot be that of exporter of a tested product in this field. The role required in meeting all six of the obstacles mentioned above requires a sensitive and perceptive association with the LDCs in conceptualizing, experimenting, researching, model-building and evaluating within the context of the societies, cultures, and resources of the LDCs themselves.

G. Human and Organizational Resources Available to A.I.D.

At this time the range of talents available to AID in the field of non-formal education as a whole is severely limited. Thus far, we have not been able to identify a single individual or institution with impressive credentials in non-formal education as a whole. There are, of course, many institutions and individuals with considerable knowledge and experience in specialized segments of the overall subject field. Also, there are many individuals and institutions

which have fine records in formal education and in technical assistance generally.

This paucity of established talents in non-formal education as a whole is not altogether bad. There is no encrusted doctrine to be overcome. The interested people understand the assets and liabilities of formal education in the LDCs, but have modest opinions of their knowledge and experience of non-formal education as a whole. Uniformly, they see themselves as "learners and doers" in association with the LDCs. Their broad experience enables them to understand the concept of non-formal education as a whole as it is used in this and associated papers.

These observations are essentially true of the A.I.D. Task Force for this problem area. The disciplines represented on the Task Force are helpful but probably not as crucial as the basic point of view - that we have much to learn from and with the LDCs before we can claim any large measure of professional competence in the subject area.

Available external talent follows the same pattern as that of the Task Force. The consultants working with us are experienced, open-minded and intelligent. Unfortunately, their other commitments make the amount of time they have available limited and to some extent unpredictable.

Fairly firm expressions of institutional interest have been received from Michigan State University, Stanford University and the African American Institute. Only AAI is now serving as an intermediary institution. However, there are good reasons for believing that as information is received of AID, IBRD and other assistance agencies

interests in the field, many other institutions will offer themselves as intermediaries in one way or another.

None of these institutions can be expected to have any great knowledge or experience in non-formal education as a whole at the outset. They can acquire these assets rapidly, however, if the assistance agencies and the IDCs provide them with suitable opportunities.

Even accepting these limitations, the U.S. does have very substantial competence in research, experimentation, systems analysis, administration and evaluation. Our historical experience, while frequently not directly relevant, is of informative and comparative value. Our communications technology conceivably can lead to more effective applications in the IDCs than they have thus far demonstrated at home.

H. Involvement of Regional Bureaus, A.I.D. Missions and IDC Experts.

As indicated in earlier sections, we see the most effective way of coming to grips with this problem area as being through an unusually close association of AID/W, USAIDs and IDC leaders. The first step in this direction was taken in September/October 1970, in which the O/EHR with the assistance of its consultants and the EA/TECH drafted an airgram to East Asia USAIDs outlining the non-formal education concept and asking brief reports on projects and programs which they felt significant in the field. Subsequently NESAs, ARA and AFR decided to send out similar airgrams. Those examples which seem to warrant it will be followed up by USAID or AID/W staff, by outside consultants, by potential future contractors or by other interested assistance agencies.

It is planned to conduct an international seminar on the subject as soon as a joint effort of AID/W, EHR and EA/TECH, USAID staffs, LDC nationals and host institutions in East Asian countries. The Southeast Asia Development Advisory Group may serve as a sponsor.

The object of this initial seminar would be four-fold: (1) to develop and test materials and methodology for on-site seminars in non-formal education, (2) to identify LDC individuals and institutions personally, professionally or institutionally concerned with the field, (3) to reach some judgment of the best way of stimulating interest and action in the LDCs and (4) to establish linkages between U.S. and LDC institutions for purposes of research, pilot projects and experimental programs.

All Regional Bureaus will be kept informed of the progress of planning of the seminar and may participate in it. They are being encouraged to consider variants upon the seminar method which may be more suitable in the several regions.

Although this is the initial seminar project, the extensive involvement of U.S. and LDC institutions in the setting of a host country or region, will be a feature of our work in this problem area.

## NON-FORMAL EDUCATION

SHORT-TERM WORK PLAN  
(Jan. 1971 - July 1971)

The courses of action to be initiated or brought to some visible result in the near future can be specified with a reasonable degree of precision. Essentially, these are actions now underway, as a result of several months of activity in this problem area, or starting points for more extensive efforts to be undertaken subsequently. The short-range actions involved are either parts of or precursors to activities visualized within the framework of the Long-Range Work Plan, covering a five-year period and discussed subsequently.

Given the relative specificity of these Short-Term Plan actions, as contrasted with the more generalized areas of work outlined in the Long-Range Plan, they can be presented both meaningfully and succinctly in the tabular form which follows. Some indication of the status of progress on each of the actions enumerated may be gained from noting their timing. The timing used reflects a point at which either a significant "bench mark" in development of the subject is expected to be achieved or when a discernible product is scheduled to appear. The timing reflects actual scheduling of activities contemplated during the next six months. Since not all these actions are within the control of TA/EHR, some slippage may occur. However, so far as we are concerned, the schedule represents a firm commitment by this office.

The courses of action are listed separately for clarity. There are, of course, many strands of inter-relationship among them.

Essentially, this band of activities represents the early stages of efforts:

- a) To develop and promulgate a better understanding of non-formal education and its potential contribution to development;
- b) To initiate appropriate structural arrangements within the A.I.D. community in Washington and the field on this subject;
- c) To open lines of communication and cooperative planning with other donors having potential interest in this field of activity;
- d) To begin the development of basic resources and institutional capacities for long-range work in the subject area; and
- e) To initiate actual working experience with the LDCs on this subject at this preliminary stage in order to bring important "real life" considerations into play very early in the process.

Non-Formal Education  
Short-Term Work Plan  
(Dec. 1970 - July 1971)

19

Action	By	Timing	Comments
1. Completion of expanded definition and concept of non-formal education.	EHR Staff Harbison Seltzer	1st Qtr. 1971	Papers prepared and discussed
2. Complete first edition of bibliography on non-formal education.	EHR Staff Lawrence (PPC)	1st Qtr. 1971	Completed
3. Complete and publish final version of Key Problem Paper on Education and Human Resources Development	EHR Staff	1st Qtr. 1971	Completed. Various versions disseminated
4. Initiate cooperative planning with IBRD, ICED, AAI, Asia Foundation, and Ford Foundation.	EHR Staff and Consultants	1st Qtr. 1971	Cooperative liaison arrangements established
5. Establish and operate AID/W Task Force on Non-Formal Education	EHR Staff	1st Qtr. 1971	Group organized. Meetings held.
6. Continue liaison with outside consultant group.	EHR Staff	Continuing	Continuing
7. Review airgram responses from AID Missions to circular airgram on non-formal education projects.	EHR and Reg. Bureaus	1st Qtr. 1971	Completed
8. Prepare Action Program and Work Plan on Non-Formal Education.	EHR Staff	1st Qtr. 1971	Completed
9. Participate in planning with EA international seminar on subject.	EA/TECH, EHR, Consultants and others	1st Qtr. 1971	Seminar held May 1971, SEADAG, SEAMES sponsorship
10. Help develop papers on non-formal education for EA seminar	EA/TECH, EHR, Consultants and LDC experts	2nd Qtr. 1971	Completed

Non-Formal Education  
Short-Term Work Plan  
(Dec. 1970 - July 1971)

20

Action	By	Timing	Comments
11. Participate in planning with EA one or two seminars in EA on subject.	EA/TECH, EHR and others	2nd Qtr. 1971	Planning moving forward
12. Generate increasing understanding of non-formal education by AID/W Bureaus and USAIDs through distribution of working papers, bibliographies, case studies and field visits.	EHR, AID/W Bureaus and consultants	1st & 2nd Qtrs. 1971	Being done as a continuing action.
13. Contract with one or more U.S. institutions (TAB or Regional Bureaus) to develop institutional capabilities in non-formal education.	EHR, AID/W Bureaus	2nd Qtr. 1971	EHR/Mich. State AFR/AAI EA/SEADAG
14. Complete 211D grant to Florida State University. (This grant for educational technology, but has non-formal education implications.)	EHR Staff	2nd Qtr. 1971	Grant made
15. Plan for studies of potential of non-formal education in major sectors.	EHR, AGF, POP, Nutrition, UD.	2nd Qtr. 1971	Action temporarily postponed
16. Encourage AID/W Bureaus to explore variants on EA seminar or other methods of generating information, understanding and action in specific countries or regions.	EHR, AID/W Bureaus and selected USAIDs	2nd Qtr. 1971	Action beginning

## NON-FORMAL EDUCATION

LONG-RANGE WORK PLAN  
(FY 1971 - FY 1975)

The Long-Range Work Plan covers a five-year period. The actions contemplated are therefore necessarily more generalized than those presented in the Short-Term Work Plan. Further, they are more susceptible to change in direction, substance, emphasis and operating technique than those activities now underway or to be undertaken in the near future. Such flexibility is deemed essential both in view of our limited knowledge and insight regarding the subject area at this time, and to allow for those many adjustments which should be made in the light of our evolving experience.

Given the evolutionary development of specific courses of action in succeeding years, the overall objectives and purposes of the Long-Range Work Plan, nonetheless, appear reasonably clear at this time. Essentially, we are seeking to facilitate the knowledge generation process and to create the framework through which it will be possible for the LDCs, with such assistance as may be appropriate from ourselves and others:

- a) To better understand non-formal education and its overall potential for development.
- b) To develop validated bases for judgment and selection concerning those categories and modes of non-formal education which can maximize the human resource development return on investments in non-formal education.
- c) To use non-formal education as a means to at least partially alleviate certain of their critical problems in the education sector.

d) To create those institutions and make such other arrangements as will result in the further generation of operationally useful knowledge in the field, a continuing network of information exchange among nations on the subject, and a reasonable degree of organization to make effective the contribution of non-formal education to development.

Most importantly, the development of knowledge and the institutional framework would proceed over the five years in tandem with the development of a "real life" body of experience in the LDCs themselves. Such "real life" experience, for example, will consist of such things as: case studies of actual non-formal education activities in being; the development of validated models and alternatives based on actually operating activities; a judiciously selected band of innovative and experimental projects; the selected strengthening or creation of institutional bases of sponsorship or orchestration of non-formal education activities and systems; and a high degree of access to information and actual exposure to non-formal education activities between and among responsible persons within the LDCs themselves.

Given the overall problems of development in the LDCs, and, more specifically, their own recognition of the gross dimensions of the many-faceted "education crisis", there will be ample incentive during the decade of the 1970s for LDC leaders to seek directions, such as non-formal education, which hold some potential for either partial solutions or some degree of alleviation of pressing problems. The real work, decision making and major resource allocations for non-formal education reside within the LDCs and their leadership. There is, nonetheless, an important role for external assistance agencies in

helping to focus such interest and efforts along the most productive lines. This, in a sense, is the overall intention of the Long-Range Work Plan in non-formal education.

The general elements of the Plan appear in tabular form, beginning on the next page. An illustrative time sequence is indicated to serve as a rough guide to the initiation of substantial work in each of the action areas. It also gives some sense of the duration of various activities which may be categorized within the general action area descriptions.

Action	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975
1. Carry out the 16 actions cited in the Short-Term Work Plan.	_____				
2. Develop and refine through successive efforts a body of concepts and doctrine on non-formal education which will be understood and accepted by the LDCs, donor agencies, and other interested parties.		_____			→
3. Conduct research, case studies, pilot projects, and experiments which will contribute effectively to various program objectives.		_____			→
4. Generate a continuing body of validated case studies of non-formal education in action.		_____			→
5. Contract with two or more institutions to conduct studies and research in non-formal education to reduce the knowledge gap which now exists, including subject matter, methodology, organization, administration and cost effectiveness.		_____			
6. Consider one or more 211-d grant arrangements in the subject area.		_____			
7. Generate "growth point" institutions in selected countries in each geographical region through field seminars or other means, including technical assistance and funding.			_____		→
8. Investigate various existing or newly created delivery systems for non-formal education.			_____		

To Be Revised.

Continuation

Action	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975
9. Develop and test potential of educational technology for reaching effectively various out of school populations in rural and urban settings.					
10. Conduct studies in the application of non-formal education to major development sectors such as agriculture, health, population, industry, nutrition and social development.					
11. Forge successively stronger links with the other external donors and the international network of interested institutions.					
12. Work with other assistance agencies, particularly the international development banks, in identifying and testing the potential of loan funding non-formal education.					

TITLE: Action Program and Work Plan: Educational Finance and Measurement

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

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ACTION PROGRAM AND WORK PLAN

(Key Problem Strategy  
Paper and Work Plan)

EDUCATIONAL FINANCE AND MEASUREMENT

May 1971

## ACTION PROGRAM AND WORK PLAN

### EDUCATIONAL FINANCE AND MEASUREMENT

#### I. Statement of the Problem

Educational programs in the developing nations are in deep financial trouble. In the first development decade, the major effort was to get large numbers of persons educated to fill manpower requirements. To a startling degree, and in general terms, this has been accomplished, although selective shortages remain in such areas as the technical fields, the sub-professional occupations, the managerial categories, and for well-trained teachers.

Educational system output has continued to expand, however. Burgeoning populations have led to an insistent popular demand for more and more education--a demand with such obvious political implications that it can be ignored only at great risk.

There has thus arisen a serious dilemma about education in the LDCs, seen in somewhat classic supply-demand terms. Satisfying the social pressures for universal primary education has led to increases in secondary school entrants, which compound to produce demands for more university seats. In this sense, school enrollment feeds upon itself; for example, it has been estimated that from 1965 to 1970, the average annual enrollment increase for the secondary level would be of the order of 13 per cent

for Africa and Latin America, and 10 per cent for Asia. The average annual enrollment increase for the tertiary level would be 12 per cent for Africa, 6 per cent for Latin America, and 8 per cent for Asia. Although the absolute accuracy of these projections has not been corroborated, the fact remains that greater numbers are entering educational institutions of all types in the LDCs.

The supply aspect of the dilemma embraces three major problems: rising unit costs of education, a threatened leveling-off of resources available for education, and basic educational system inefficiency and waste.

Rising unit costs. Although data about educational costs in the LDCs are difficult to assemble, the available evidence suggests that costs per student at every level have been rising relentlessly over the past decade. The basic cause is the steady increase in teacher costs, which in every country account for the largest part of educational expenditures. Many of the measures which have been suggested to curtail increases in unit costs are severe, and could lead to serious deterioration in the quality of education: hiring unqualified teachers, curtailing salary increments to teachers in service, and foregoing expenditures on supplies, materials, and equipment.

Limited resources. In the second development decade, enrollment goals for secondary education, quite apart from LDC educational objectives for 100 per cent primary school enrollment, are 23 per cent for Africa, 36 per cent for Asia, and 46 per cent for Latin America.

Higher education enrollment rate targets have been established at 1.5 per cent for Africa, 5 per cent for Asia, and 6.4 per cent for Latin America. To achieve these goals, it is estimated that educational expenditures will have to reach 4.5 per cent of GNP for Asian nations, and between 6 and 7 per cent of GNP for African and Latin American countries, or an approximate doubling of the share of GNP allotted to educational financing needs in these countries. This would seem to be difficult of attainment for many LDCs. National budgets have other significant requirements to address, and as the competition for funds intensifies, educational policy-makers and managers will have fewer degrees of freedom for maneuvering--for meeting quantitative as well as qualitative imperatives.

Waste and inefficiency. The educational systems of all too many of the developing nations are characterized by antiquated management practices, dysfunctional structure and organization, and a lack of long-term planning. Wastage of resources that are available to these systems is widely prevalent, especially in the case of expenditures dissipated through high pupil attrition rates and those that are misallocated to programs which do not mesh with the needs and conditions of modernizing societies.

The serious financial plight of the developing nations has been widely discussed by experts, with reasonably widespread agreement that while external assistance in the form of grants and loans will be helpful and necessary, the main effort in meeting educational costs will have

to be put forth by the LDCs themselves. There seem to be at least two major avenues of attack open: 1) To examine revenues for education, with the hope of employing hitherto untapped sources and designing new schemes of funding, and 2) To utilize all means possible to make educational systems more efficient in using whatever funds are available.

#### Alternative Financing Schemes For Education in the LDCs

It is basic to our understanding of the educational financing picture in LDCs to recognize that the task of uncovering new resources and identifying alternative funding schemes necessitates a full knowledge of current practices. At this time, only incomplete data exist on the sources of educational finance. Some countries make budgetary distinction between public and private expenditures, but unraveling such information to get at sources is a difficult and often confusing exercise given present available documentation. However, the broad outlines can be sketched in order to provide a framework of reference.

Educational funds in the LDCs come for the most part from general government resources, which are derived from income and business taxes (profits, value added, and sales), and from fees, licenses, and several kinds of duties. Financing education from national revenues in this way is a legacy of the colonial period in many LDCs, and is primarily due to the influence of the British and French philosophies. In contrast, local "earmarked" taxes have traditionally supplied most of the funds for education in the United States.

LDCs may be able to make greater use of local community taxes, somewhat along the lines of the U.S. model, without sacrificing totally the funding support from national budgets. Evolving political structures in some countries, as for example, India, Nigeria, and Brazil, eventually may lead to greater state or regional participation in educational funding.

Other alternative funding approaches suggest differing mixes of involvement by business and industry, students and parents, and local communities. Some possibilities are noted below.

1. Business and industry taxes earmarked for technical and vocational education may permit countries to establish less expensive alternatives for what traditionally has been a costly type of education when provided by the schools themselves. Experiments along these lines have been tried in certain Latin American countries (INACAP in Chile, SENAT in Brazil, INCE in Venezuela, SENA in Colombia), but the costs of such schemes need to be fully analyzed. Experiences of these types in some countries suggest that new modes of education can bring new sources of funds into play, a possibility that deserves further investigation.
2. Scholarship programs, which can be used to channel needed manpower into short-supply occupations, offer another possible avenue of support, when such grants come from industry and business, professional associations, and other non-governmental

6.

sources. Funds given by such organizations for scholarship and other school grants can be made partially tax-deductible, as could donations for purchase of special school facilities and materials, such as laboratory equipment, workshops, models, and so forth.

3. Students might be expected to bear a larger portion of the burden of their education, especially at the university level. This can be in the form of loan-schemes of various types, with concessional terms, interest "forgiven," long-term repayment provisions, and the like. Several different approaches have been used in the U.S., Scandinavia, and in the LDCs.
4. Variations of the Harambee (self-help) program of financing village schools in Kenya may provide a means for enlisting greater parental and local citizen support for schools. The Kenya community support effort has included donations of land, construction of school facilities and teachers' dwellings, and on-going maintenance.

Local community "assistance in kind," particularly for capital or non-recurrent requirements such as school buildings and furnishings, was a common pattern in the formative period of the development of the U.S. educational system, and has been tried in several countries, developed and developing. Involving local citizens in construction is a way to tap labor which might not otherwise be

utilized, and creating wealth which would not appear except for this kind of special demand.

5. There are other possibilities for financing education. One is the "social insurance investment-educational loans" idea. This proposal would provide for the collection of a kind of "social security tax" from employed persons and their employers, and the granting of loans for educational purposes against accumulations in the social security account. In effect, an employee's accumulations would serve as basic collateral for such loans. Borrowing would be limited to the amounts needed for education designed to improve the borrower's productive capacity. The idea is to help the worker become more productive through education and thus more valuable to the nation.
6. Another possibility is the use of land-improvement taxes. As an example, if a government creates an artificial reservoir for conservation of water resources and as a flood-control mechanism, land values increase, and the owner of contiguous property has received benefits against which tax may be levied. Revenues obtained in this way could be earmarked for educational purposes.

The point is that many different funding approaches are available; indeed, the possibilities are virtually limitless as creative minds are brought to bear on the matter. The greater problem will not be in identifying alternatives, but in evaluating their utility, their limitations and strengths, their probable impact upon the educational system, and their economic effects and relationship to the total national development concerns of LDCs. For example, two criticisms of the "earmarking" scheme have been put forward. One, the whole idea represents a kind of "Pandora's Box": similar specification might be ordered for needs in other sectors, such as family planning, health services, road construction, and so forth, and the operation of such arrangements would become complex and unwieldy, with competing claims upon resources compounded by employing the earmarking mechanism. Second, the earmarking scheme could easily get out of hand in the sense that funds would be collected without reference to demonstrated need or guarantee of efficient use.

Although the pressure would be hard to resist, the device of earmarking does not have to lead inexorably on the one hand to a multiplicity of earmarking schemes in other sectors, or on the other hand to confusion, should the scheme be adopted intersectorally. Further, there are ways to insure that the collection of earmarked funds are tied to known expenditure requirements, as for example specifying such funds for compulsory education (i.e., demand needs for compulsory education are more likely

to be known in concrete terms throughout a nation, and such needs can be projected over time; demand for non-compulsory forms of education, on the other hand, do have regional and local differentiation.)

The idea implicit in weighing the merit of any allocation scheme is simply that it must be part of a well organized and managed total system of use and disbursement. Indeed, utilizing alternative funding schemes in practice will result in structural changes in educational systems, in all likelihood. Examples as already noted are the bringing of industry and the business community in general into certain kinds of vocational and technical training, interesting parents in putting forth more efforts for construction and maintenance of facilities, student loan schemes, and regional or state funding support of new and different types; in the sense that those who help pay for education will require some influence in policy-making (e.g., curricula) and management (e.g., selection of teachers).

One idea that has gained wide circulation is that those who profit most directly from education ought to assume a larger share of the burden of paying for it. Adoption of such a philosophy could lead to a kind of democratization of control and management; parents, students, business leaders, professional people and local government officials will have to be involved in new and important ways in setting up and running educational systems, a development which well might have favorable effect on education generally, as well as upon its funding.

On the other hand, implicit in any movement to obtain more funds from those who enjoy the benefits of education, is the problem that even a modest payment of educational costs may represent a serious obstacle for low-income segments of LDC populations. Raising such an "economic barrier" or qualification for education is a very questionable practice in these terms.

#### Analytical Tools and Measurement Procedures

Identifying alternative funding schemes is one means for alleviating financial pressures in LDCs. The concomitant is to identify and to make available those measurement procedures and analytical tools useful in policy-formulation, decision-making, and management, to the end that educational systems will become more efficient.

The inputs for the educational process are several. These may be in the form of values which the society wants perpetuated and goals which are to guide the educative process. Other inputs are content, or the existing knowledge which students are expected to acquire, students, teachers, supervisors, administrators and managers. Other important inputs are money, facilities, equipment, and supplies.

The costs of education may be thought of as direct costs charged against the budget for education, private costs borne by students and their families, and indirect or "opportunity" costs, borne by the society and individuals in the sense that while students are in school their families and the society must forego any earnings they might

otherwise receive. All of these costs may be considered as part of the investment society makes in education, and this investment is used to purchase teachers and physical resources which are employed in the educational "production function," or the working of the educative process.

Educated persons issue from this process; these "outputs" will be better equipped to serve society and to function as productive individuals for their own growth and advancement. They will have skills, attitudes and knowledge that will variously equip them to go into the world of work, to contribute to a better life for their families, communities, and nation. The outputs of the educative process will tell us much about the efficiency of the educational system as it has taken inputs and transformed them, and system efficiency or effectiveness essentially has to do with productivity. Productivity in this context has two elements: internal efficiency and external efficiency.

Internal Efficiency. We may define internal efficiency as the relationship of output value to inputs, so that as the ratio between these two variables improves, efficiency may be said to increase. If, for example, some new instructional technique is introduced into the educational process leading to better learning, and without proportional increases in costs, higher internal efficiency results.

It is not unreasonable to suggest that the quest for internal efficiency will necessitate in many LDCs organizational and structural changes in the educational apparatus, a matter to which we shall return later.\*

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\*It has already been noted that the search for alternative funding schemes is also quite likely to lead to system changes and modernization.

The point is that there are many possible ways to increase system efficiency: new management practices, better information and accounting systems, decentralization of schools, use of technology, development of non-formal education arrangements, and improvement of educational research and planning on a wide scale.

External Efficiency. The matter of external efficiency is essentially the consideration of the relevance of an educational system to the demonstrated needs of its nation. In LDCs, the characteristic problem is that schools are not sufficiently development-oriented: for example, there is a mis-match in the manpower needs of the economy and the knowledge and skills of graduates. External efficiency is often measured by employing some kind of cost-benefit analysis, in which the essential index is the ratio of costs of inputs to output benefits, calculated over time.

The problem is that such "benefits" are even more difficult to measure than the "outputs" a student takes with him when he leaves the educational process. However, it is defensible to assume, for example, that any modernization of the educational system that brings about a better fit between the skills graduates carry with them, and the work-demands of the jobs they secure, means that the educational system has achieved a higher external efficiency, at least in this regard.

Educational planners and econometricians more recently have employed some of the newer objective measurement techniques for determining costs, calculating rates of return, and projecting financial requirements for

education. Case studies (e.g., those of the International Institute for Educational Planning), have reported uses and values of cost-analysis methods; models have been designed for use with computers: for comparing alternative inputs and variable program design (such as student-flow models); and the fields of operations research, systems analysis, and program budgeting have been applied in several LDC contexts. Although these approaches have not been widely utilized in the LDCs, and the whole field of measurement requires continued refinement and experimentation, a beginning has been made over the past decade.

While the development of measurement for educational planning has received its greatest impetus and encouragement from economists and others concerned with the financial implications of the operation of educational systems, and the major emphasis has been upon quantitative elements, the search for techniques of evaluation cannot be confined to the discipline of economics, nor limited to quantitative considerations. Recent trends suggest that educational planners and policy-makers are becoming more concerned with questions relating to quality. In fact, the quality matter may be said to underlie the search for improved efficiency. For example, the goal is not only to forecast with sharper precision the numbers of teachers needed for a particular development demand and the cost thereof, but also transcends this to address the issue of the amount and character of the preparation such teachers must have to perform productively.

Further, the measurement and analysis undertaking must be organized so that we are not forever engaged in symptomatic research which addresses discrete problems, but basically ignores systemic relationships and connections. The "systems approach," when correctly applied, encompasses techniques which determine the interrelatedness and linkages of constituent elements, leading to the establishment of some kind of conceptual order.

This kind of measurement and analytical approach aims at a clearing away of the undergrowth and a getting down to bedrock issues, subjecting these to close scrutiny and asking the primary question, "What do we want the educational system to do?" On the basis of what is desired, alternative means are worked out, taking full account of financial limitations.

Writers on the subject of LDC educational development speak of it in terms of "crisis." But it is a crisis of long-standing, that merely deepens from year to year. It is probably essentially due to the fact that few LDCs have really tried to effect basic changes in their systems of education. To bring about true modernization, it is the system that must be changed, rather than pieces of it.

In summary, then, of the foregoing discussion, the problem may be stated in question-form: "How can LDCs be assisted in making their educational systems more efficient and less costly of operation, and in identifying and evaluating alternative schemes for financing education?"

## II. Action Program for Educational Finance and Measurement

### Major Obstacles

If we are to assist LDCs in identifying funding sources and making their educational systems more efficient through employment of measurement tools, we must first recognize the existence of several obstacles.

1. Social pressures allow no compromising of educational quantity goals. Ways must be found to adjust financial capabilities to social pressures for increased education in the LDCs. The right of every citizen to a reasonable minimum amount of education is clear and defensible. Yet, so many demands are being placed upon resources that counter pressures have been generated which threaten the achievement of the right to a minimum education. In the view of some experts, the goal of universal primary education is "unrealistic," "unachievable," "impossible"; except in the distant future.

There seems to be little question that such an objective is going to be difficult of attainment. One argument stresses the point that full enrollment in primary schools, quite apart from the costs incurred in providing equipment, facilities, and trained teachers at this level, will lead to ever-increasing numbers of educated primary school leavers for whom jobs are not going to be available. Another and related argument stipulates that with every school-age child in primary school, enrollment pressures of harrowing magnitude will build at the secondary level, with costs compounding. Behind many such arguments is the

notion that the goal for universal primary education is a chimera, which, while an attractive banner for politicians, is not really to be taken seriously.

There is good cause for viewing universal education objectives as unattainable dreams: the money is not there. But it is not currently available for many other purposes as well. The point has already been made that developing new ways of educating may lead to new sources of funds. Another facet is that providing education through different channels may lead to financial economies.

"Substitutive" schemes, such as those possible through imaginative employment of technology, like radio and television, may be cheaper mass-education alternatives. Other alternatives encompass the substitution of extra-school system education for some sectors of the population, such as using the armed services for certain kinds of training (e.g., Iran and Nigeria). The mere fact that some "non-formal" education is substitutive or that it is not associated with formal school enrollment and operation, does not necessarily mean that the quality of education has been diluted. "Quality" certainly embraces the concern that whatever education is provided should be relevant and useful. No one will defend the position that education imparted through regular, traditional channels, whether for mass-consumption or otherwise, is the only way or even the best way to dispense the kinds of information, attitudes, and skills that are needed by certain segments of the population.

As an example, consider the rural farming families of the vast countryside of the developing nations. When these families send their children to school, and try to keep them there, they are probably insuring that many of these children who graduate will seek employment in the cities. This happens in part because the kind of education these children get in the existing schools of the LDCs do not equip them, temperamentally or otherwise, to go back to the farming community, and make a better life there. Thus, the advisability of spending money to continue "more of the same" kind of education, even with the intention of providing universal educational opportunity to all people, is clearly debatable.

The only course really open, then, for overcoming this obstacle, is to look for ways to make the unattainable a possibility: to search out new alternatives to mass education that will provide the right kinds of education for national purposes, while looking for new funding schemes and ways to make all educational endeavors less expensive, because the social pressures and political strength for universal education and many other educational goals are not going to go away.\*

\*Furthermore, it behooves AID to fully encourage and support such social pressures, in view of the underlying goals of U.S. education, our technical assistance posture and achievements of the past, and our commitment to the philosophy of optimum advancement of the welfare of the people of developing countries, as stressed for example in Title IX of the 1966 Foreign Assistance Act.

Schemes like using the armed services for some kinds of training suggest that funds expended for one national goal can do "double-duty." The army in many countries has a primary function quite distinct from training automotive mechanics and para-medics, but if such training is provided through such channels, real savings may be realized. Indeed, wherever possible, planners ought to strive to put into effect the dictum, "no single-purpose teachers, no single-purpose facilities, no single-purpose expenditure of funds."

2. Our knowledge about funding procedures and educational system operations in LDCs is diffuse and unorganized. Although there is considerable agreement about the seriousness of the problems of funding education and reducing its costliness, we need further information about current funding practices and procedures in both LDCs and the more advanced nations, and some means of organizing our knowledge about those measurement and analytical tools which might be used to bring a higher productivity to educational systems.

This means more than reviewing the literature, conducting field investigations, and developing case studies, as helpful and necessary as these activities are. It means an exercise of synthesis, in which existing knowledge and information is carefully examined and analyzed, and useful and relevant principles of general application elucidated for future guidance and action.

3. Because so many organizations are working in the problem area, there is a danger of duplication of efforts. Many agencies of international scope are exercised about the problems related to funding and improvement of educational system efficiency. We must seek out the best ways of coordinating our efforts with the work of others, to avoid plowing fields already well-tilled. Inter-agency association and cooperation is nothing new, nor is the need for it a novel idea; but only in maintaining close communication with the work of other donor organizations can we distinguish these activities with which we can assist in ways and to a degree that others may find impossible, and avoiding undertakings that are being well handled by others or can be conducted best by them.

4. There is a tendency to separate educational financing problems from the overall educational development context. The ever-present propensity to regard each educational problem as a discrete entity has already been noted. Solutions are often propounded that ignore relationships and linkages with other elements of the educational system, and with the total development situation. Every attempt must be made to view the issues related to educational finance as part of a generalized planning approach, or model. Educational planning is concerned basically with improving the efficiency and productivity of educational systems by clarifying educational objectives, diagnosing current conditions and recent trends, assessing alternatives, and finding ways to translate

plans into action. It is inimical to the successful operation of any system if changes are introduced without careful consideration of their total effect, over time, upon the whole structure.

Another aspect of the matter is that the great pressure for designing solutions for specific problems tends to a consequent neglect of continuing in-depth research and analysis of the matrix of development difficulties in LDCs. While it is obviously necessary to delimit the field of inquiry to manageable dimensions, it is vital that our primary orientation should not be to solutions, in this case alternative schemes of finance and special analytical tools, but to the wide assortment of problems, to which existing schemes and tools may be applied, or for which new approaches may have to be devised. When we have "canned" solutions, we tend to look for the problems for which the solutions are specific treatments, and may never uncover those other, hidden problems which require quite different treatment. To get past this obstacle, then, emphasis must be placed upon a wider "system approach," which imposes methodological strictures against partial piecemeal analysis.

Constant reference to the total development context in LDCs should on the one hand prevent us from neglecting important connections with other facets of that context as we work with educational finance, and on the other hand, decrease the likelihood that our particular attention to one problem area will be an exercise of "solutions looking for problems."

5. There is a shortage of persons trained to work with problems of educational finance and measurement and the lack of an institutional resource base in the problem area.\* Although there is no lack of LDC nationals in positions of educational management and decision-making who are aware of the funding and efficiency problems, there is a shortage of persons who have been trained to deal with such problems. Economists who are members of planning commissions and departments in the LDCs see the need for action in uncovering new funds and financing approaches, and employing analytical tools in correcting inefficient operation, but they lack background in educational matters. Educationists in these countries, on the other hand, while they may be aware of the financial exigencies, characteristically have little background in economics and educational planning. As a consequence, there is a communications problem that compounds the need to act, to develop programs, and to take corrective steps.

One contribution that could be made by AID is to assist LDCs to identify persons who would qualify for training as educational planners, and whose training would be tailored to equip them to deal with educational finance and measurement issues. One aspect of any training assistance along these lines would be a "tracer," or follow-up study of LDC nationals who have been trained as educational planners. Such a

\* See also discussion, pp. 31 ff., relating to the need to organize the talent that is available.

study would be valuable in helping to evaluate how these persons are currently employed, how diffuse they are within each LDC, what their problems are, and so forth.

In addition, AID could identify institutions here and abroad in which the right kinds of training programs exist, or could be developed through grant money.

#### Significant Research Efforts

As a distinct field of study, the economics of education is not well developed, having really aroused the worldwide interest of scholars relatively recently. As for attention to problems of developing nations, the literature of the economics of education is sparse, although growing. In particular, efforts to research and study educational costs and finance and educational system productivity and efficiency have been limited.

The questions economists have been concerned with, in their analyses of education, are of the following types: is education mainly consumption or investment; if education is consumption, what degree of choice do consumers have in demanding still more education; if education is investment, what is the return when compared with other forms of investment; how much should be spent on the different types and levels of education in a given country; how should or may expenditures be financed; what is the optimum combination of formal and non-formal education; what measurable contribution does education make to the global development of human resources; what is the role of management and organizational structure

in producing optimum return from expenditures in education; and what part does systematic planning play in a more orderly expansion of education?

Many reports of international conferences have appeared in the past several years, calling attention to facets of the problems, but it has only been quite recently that substantive attempts have been made to document the dimensions of the financial impasse in education in the LDCs. One such attempt is the series of cost analyses prepared by IIEP and funded by AID, which deal with such topics as "The Use of Cost Analysis to Improve the Efficiency of School Building: A Case Study of British Experience," "The Use of Cost-Benefit Analysis as a Guide to Resource Allocation in Education: A Case Study on India," "Cost Analysis in an Asian Model of Education Development," and "The Use of Cost-Benefit Analysis to Compare the Rates of Return at Different Education Levels: A Case Study in Columbia." Another approach is a series of four case-studies on the effect of population growth and cost of primary education and teacher-training in developing countries, also prepared by IIEP.

One avenue of research that requires serious investigation in an LDC context is that of measurement of educational outputs as an important reference for system efficiency. To get at this, as well as to achieve other research purposes, one suggested approach would involve a "functional analysis" of educational systems, in which basic goals would be identified,

and the programs designed to meet such goals outlined in terms of function. For example, educational systems have the function of imparting attitudes, skills, and information or knowledge. The outline can be further developed from this point. Once the functions have been determined, a second dimension to the analysis would be to identify where the functions are being carried out, at which levels, whether by public or private, formal or non-formal means, and to what effect. Costs can then be calculated and indicators of efficiency developed and applied. Where there is evidence of dysfunctionality, corrective steps may be suggested and options developed. Detailed costing out of all alternatives would follow.

Field Pilot or Experimental Projects: Full-Scale Field Projects.

At present, there is very little being done in the way of either pilot or full-scale field projects, in determining the utility of alternative funding schemes, or the values of measurement tools in improving educational system efficiency.

Every effort should be made to work out experimental programs of alternative funding and efficiency measurement, such as for example, applying systems analysis to the educational program in a smaller geographical area, such as a city, or the development of different funding schemes for a region within a rural province.

Present involvement of LDCs in the Problem Area. The involvement of leaders of LDCs in the overall problem area has to date centered for the

most part in expressions of interest as evidenced by attendance at international conferences on the subject, granting of permission to occasional investigators (such as those from IIEP) to conduct research and costing studies, and writings on educational finance and related subjects.

A number of developing countries have tried new funding approaches that represent a break with tradition, such as Kenya's full-cost tuition program, and the student loan programs and business-tax schemes of several Latin American countries.

Some progress in employing measurement and analytical tools in LDCs has been achieved through the activities of researchers associated with the IIEP cost-analysis case studies project. For example, in Barbados, marginal-costs calculations were used to evaluate expenses to be incurred in extending an experimental team-teaching program; in Ceylon, a number of statistical techniques were invented to disaggregate costs of primary schools from those of secondary schools, recurrent costs from non-recurrent costs, and teaching staff recurrent costs from recurrent costs not associated with teachers; in Chile, rate-of-return analysis was employed to assess the feasibility of a new-non-formal education program (INACAP: Instituto Nacional de Capacitacion), in which expected costs for starting the program were compared with projected economic benefits should the program achieve minimal output objectives; in the Ivory Coast, cost studies of partial reform measures and the use of instructional television were conducted;

Tanzania has experimented with different kinds of teacher costs projections; and Uganda worked through several levels of analysis to achieve reductions in unit costs of education.

Unfortunately, while work of the above character has been done in the LDCs, under the direction and often engaging full-time efforts of non-LDC personnel, the involvement of LDC personnel has not been as substantial as might be desired.

### Summary

Here we recapitulate in brief outline form the discussion to this point:

1. It is generally agreed that the LDCs face serious financial problems with respect to providing the amount and kind of education needed and desired by their citizens.

2. The financial plight of LDC educational systems suggests that two major undertakings must be initiated: identifying and evaluating alternative funding schemes and improving system efficiency.

3. Engaging in the process of finding new ways to employ funds for educational purposes requires (1) A clear understanding of how education is being currently funded around the world: where funds are coming from; how they are collected; what the expenditure patterns and costs are. (2) A knowledge of the range of options available: the utility of such option; and the economic effects and relationship to the total national development concerns of LDCs of each option. (3) An awareness

that changes in funding could lead to accompanying changes in the structure and organization of education: requiring funding assistance from states or provinces, local communities, industry, parents, students, and others, brings them more directly into policy-formulation, decision-making, and management.

4. Seeking ways to improve the productivity of educational systems necessitates (1) Understanding that higher efficiency implies changes of a wide variety. (2) Improving efficiency essentially means more complete information about how educational systems are organized and managed; measurement and analysis techniques must be applied to discover the character and dimensions of dysfunctionality. (3) Understanding that while evaluation often connotes quantification, concern for improvement in the quality of education underlies the quest for higher efficiency. (4) Realizing that if our interest is in system efficiency, a "systems approach" is probably indicated, with measurement and analysis related to the total educational enterprise.

5. A number of obstacles stand in the way of assisting LDCs in the problem area: (1) Social pressures allow no compromising of educational quantity goals; (2) Our knowledge of funding procedures and educational systems operations in LDCs is diffuse and unorganized; (3) Because so many organizations are working in the problem area, there is danger of duplication of efforts; (4) There is a tendency to separate educational financing problems from the over-all educational development context;

(5) There is a shortage of persons trained to work with problems of educational finance and measurement, and the lack of an institutional resource base in the problem area.

6. Some research, mostly in the form of case studies, has been carried out, but much remains to be done. Especially needed is a comprehensive survey of the situation with regard to the problem area in the LDCs themselves. Although LDC involvement in the problem area in any direct fashion has not been very extensive to date, there is scope for such involvement, including field project work.

#### Prospective Role of AID

On the basis of the foregoing, and in consideration of what AID might do in the problem area, it is possible to distinguish at least six activities with which the Agency might be associated in the future. These are listed and briefly described below.

1. Logistical, having to do with identifying experts and specialists, organizations, and physical resources, and providing for their employment in meaningful ways.

LDC nationals who are knowledgeable in the subject field should be identified and ways found to make use of them. AID can also locate consultants who have worked in the problem area, and find ways to marshal these human resources for action. The mechanism of the Task Force itself is a logistical activity, bringing internal Agency knowledge and experience to bear on specific priority issues.

2. Inventory, referring to activities that are essentially survey endeavors, providing an accounting of constituent elements of the problem, according to some agreed-upon framework.

Some survey activity has been carried out in the identification of the problem area, in investigations, discussions, and literature reviews carried out by the Problem Area Manager (PAM) and the staff of the Office of Education and Human Resources. These activities have been summarized in a number of documents, the latest of which is this paper. Further survey can be carried forward by members of the Task Force and specialist consultants hired for that purpose. To obtain the most comprehensive assessment of constituent elements of the problem area, some formal study could be launched with AID support.

3. Analysis, relating to those activities which entail close scrutiny and examination of constituent elements, and identifying distinguishing characteristics, qualities, and salient features.

Again, the EHR staff and PAM have given considerable attention to this endeavor. Members of the Task Force will perhaps be able to assist, and consultants have been called upon already to engage in this activity. It is expected that if a grant is awarded as noted under point 2 (above), the institution carrying out the survey will also provide certain analyses.

4. Synthesis, encompassing activities that lead to the derivation of broad principles, the formulation of "findings," procedures, methodologies and guidelines.

The present paper represents a kind of inventory-analysis-synthesis exercise. But the most comprehensive synthesis would come about as part of a larger, well-designed project or projects focusing on priority aspects of the problem area.

5. Application, including those activities which provide for putting procedures and methodologies into use either through support of efforts of other agencies, or by initiating new activities.

Ways must be found to make the results of activities 2 through 4 (above) available to LDCs needing assistance in the problem area. There are several options: publications, seminars, training of LDC personnel, establishment of regional or national centers for study and dissemination, and so forth.

6. Evaluation, embracing interim and terminal judgments about the extent of congruence of objectives with programs or undertakings designed to achieve such objectives; it is an assessment of the degree to which solutions address problems, and actions meet needs. It is a consideration of the entire problem-solving process: its usefulness, relevance, "mesh" with reality, suggestions for improvements, and directions for new problem-solving activities.

Evaluation takes place at all stages of problem-solving, in informal fashion, but provision must be made for specific evaluative exercises, by consultants, members of the Task Force, the staff of EHR, LDC nationals, and others.

#### Problem-Solving: Specific Actions

In view of the obstacles noted earlier, AID can fund an effort that will produce a taxonomy of the kinds of problems LDCs face in attempting to make their educational systems more efficient, and a cataloging of the analytical and measurement tools available or required for addressing such problems.

AID certainly should make every effort to become involved in conferences, seminars, and other meetings of an international scope which relate to the problem area. As one step in this direction, the Problem Area Manager is currently engaged in preliminary discussions with representatives of the World Bank, IIEP, UNESCO, and a U.S. university, about organizing an informal conference on the measurement of educational system outputs.

AID should certainly explore the possibilities of continuing its support of research and other activities which relate the problems of educational finance and measurement to all other aspects of educational planning. The Office of Education and Human Resources of the Bureau for Technical Assistance has identified two other priority problems for education: educational technology and non-formal education.

The obvious relationships and linkages of these two problem areas with the financing and measurement area are indicative and illustrative of the fact that to approach educational finance and measurement in a piecemeal fashion is to ignore the essential unity of educational development problems in the LDCs.

Another possibility for making a contribution is assisting a U.S. institution to develop special strengths in the educational financing area to serve as a training base for LDC nationals and as a resource for dealing with particular short-term needs of LDCs in the problem area.

One of the obstacles discussed in an earlier section called attention to the shortage of trained educational planners; that is, persons who have specialized knowledge and skills to deal with research, innovation, and financing needs. However, this is only one aspect of the problem; for even when LDC personnel are trained along the lines suggested, they often return to their own countries, only to "sink out of sight." There is a serious diffusion of the talent already trained, and the prospect is for more of the same, unless LDCs somehow find ways to organize researchers and planners with the right kinds of background for employment in educational system modernization.

One way that this might be accomplished is to strengthen existing centers in LDCs through some sort of grant scheme. In a number of LDCs there are small cadres of persons who have had specialized training in

one or more fields related to educational development needs. What is suggested is not "institution-building" along old lines, but careful, discriminating use of funds to improve "competency nuclei" where they exist. Incentive grants, use of 211(d) funds in such fashion that U.S. institutions of strength might be associated with fledgling LDC agencies, channeling support through UNESCO regional planning centers to country institutions--all are possibilities, and these and other approaches should be considered, as ways to organize and focus LDC talent in the problem area: a logistics problem of the first magnitude.

The need for "feedback," especially to Regional Bureaus, USAID Missions, LDCs, and other donor agencies working in the problem field, and from these entities back to EHR, will be accomplished in several ways. Representatives of Regional Bureaus will sit on the Task Force, and be involved individually in various activities, especially in evaluation. USAID Missions will be kept informed, and their concerns noted through regular channels open to the EHR Office (e.g., contacts through Regional Bureaus, direct visitations by EHR staff and consultants in the field, consultations with Mission people when they are in Washington, and so forth). LDC personnel and agencies will be involved as heavily as policy and opportunities and interest permit. In some cases, where we may support research by other donor or investigative agencies, for example, our contacts with LDCs will be somewhat oblique and indirect. In more direct fashion, as already noted, we would hope

to identify and utilize LDC specialists and experts in further surveying the problem area, and in the analysis, synthesis, application and evaluation activities. In every possible way we will also cooperate with other assistance organizations, maintaining a close monitoring of activities by such organizations in the problem area, and looking for ways in which we can reinforce their work.

#### Human and Organizational Resources Available to AID

In terms of individuals with knowledge in the key problem area, AID can draw upon a substantial number of consultants in the several economics sub-disciplines, including the economics of education. The Problem Area Manager has been in contact with several of these individuals, and expects to use them as a resource pool for the Task Force, which itself will assist in developing the action program AID might pursue. Individual members of the Task Force come from different background disciplines, such as economics and systems analysis, and will greatly strengthen the total undertaking.

#### Involvement of Regional Bureaus, AID Missions and LDC Experts

To effect such involvement, the Problem Area Manager is relating his activities closely to the interests of the Regional Bureaus and AID Missions. Regional Bureau representation on the Task Force is one channel for developing such involvement. As work in the Key Problem Area progresses, every attempt will be made to inventory AID Missions

about their ideas and suggestions, to keep them informed of work in the problem area, to gain indications of LDC nationals expert in the problem area, and to respond as opportunities dictate to requests for assistance.

Short-Term Work Plan: Strategy

The actions cited in the revised Short-Term Work Plan of March 1971 are listed on the next page. They were designed to meet the objectives implicit in the list of activities presented on pages 28-30. Thus, Work-Plan actions 1 and 2 are logistical; actions 3, 4, 5 and 6 are inventory; action 7 embraces both inventory and evaluation activities; action 8 has to do with analysis and evaluation; and action 9 encompasses analysis, synthesis, and evaluation.

Action 9 will, if implemented, provide a product with dual usefulness. It will be an informational resource (part one), and it will give guidance to the PAM on research and other activities that can and should be undertaken (part 2). Some of the suggested activities of part 2 will probably best be undertaken by other external assistance agencies, in which case AID may give partial support. Some activities will be actionable and fundable by Regional Bureaus and/or USAID Missions, and some by TAB/EHR. The contractor undertaking the Inventory-Classification as described in action 9 of the Short-Term Work Plan will receive approximately \$180,000 to carry out the work, with \$90,000 available in FY 1971, and another \$90,000 available from FY 1972 funds. By April 1972 another project to be funded by TAB/EHR could be identified on the basis of the Inventory-Classification (part two), although it is impossible at this point to

(revised, March 1971)

EDUCATIONAL FINANCE AND MEASUREMENT

Short-Term Work Plan  
(December 1970 to July 1, 1971)

Action	By	Date Initiated
1. Finalize list of consultants to be employed in the problem area.	EHR Staff	December 1, 1970
2. Finalize membership of Task Force in problem area.	PAM	January 6, 1971
3. Obtain additional guidance from U.S. and non-U.S. experts and specialists concerned with educational financing problems in LDCs, in order to further delineate the problem area	EHR Staff Regional Bureaus Consultants	January 10, 1971
4. Initiate discussions with external assistance agencies in order to inventory their intentions with regard to work in the problem area.	PAM	January 20, 1971
5. Inventory the activities of other U.S. agencies to learn what they are doing and have done in the problem area.	PAM	February 10, 1971
6. Convene informal conference with representatives of other assistance agencies to examine possibilities for further study and research in measurement of educational system outputs.	PAM	February 10, 1971
7. Convene one-day meeting of Task Force to review Problem Paper	PAM	February 10, 1971
8. Obtain judgments of consultants, Task Force Members, USAID Missions and LDCs about activities to date, and further work to be undertaken by AID in the problem area, in view of what LDC interests and needs are, and what other agencies plan to do.	PAM	March 1, 1971
9. Contract with appropriate institution to undertake Inventory-Classification of activities in educational finance and measurement.	PAM	April 1, 1971

EDUCATIONAL FINANCE AND MEASUREMENT---continued

Short-Term Work Plan  
(December 1970 to July 1, 1971)

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This will include attention to the following:

- (1) Survey and organize information on the particular strengths and weaknesses, advantages and disadvantages, and general characteristics of optional funding schemes available to, or being used by, the LDCs.
- (2) Survey and organize information about the kinds of educational system efficiency problems of LDCs, as these are related to educational finance, and of the relevance and utility of the various measurement tools that can be applied to such problems.
- (3) Survey and organize information about educational costs and expenditure patterns, and the sources of educational funds in the LDCs.
- (4) Survey and organize information about other aspects of educational finance, such as procedures by which LDCs may adjust financial capabilities to social and other pressures for more education.
- (5) Specify needed new research or other activities, and how, why and where such activities ought to be undertaken, by whom, and with projected pay-offs.

The product of this activity will be a two-part manual. The first part will be the organization and classification of the research and other information on activities in educational finance; the second will "map out" the new research or other activities that ought to be undertaken.

say with any certainty what kind of activity this will be. Not more than \$250,000 will probably be available in any case in FY 1972. The total funding required for the Educational Finance and Measurement area would then be of the order of \$340,000 for FY 1972.

Long-Range Work Plan: Strategy

This plan (next page) is based on the strategy and funding levels noted above. The first two elements of the strategy of the Long-Range Work Plan will be:

1. Funding will be completed on the Inventory-Classification project noted in action 9 of the Short-Term Work Plan
2. On the basis of early indications from the Inventory-Classification work, an activity, actionable by TAB/EHR, would be selected

Additional elements of the Long-Range Work Plan will include:

3. Discussions with Regional Bureaus and/or USAID Missions and other external assistance agencies to get new research or other activities underway (on the basis of ideas forthcoming from the Inventory-Classification of action 9 of the Short-Term Work Plan or through other indications).
4. Identify LDC or other non-U.S. experts, specialists, or LDC national or regional institutions working in the problem area, and develop contacts with them.
5. Keep current the resource pool of U.S. consultants in the problem area.

EDUCATIONAL FINANCE AND MEASUREMENT

Long-Range Work Plan

Action	FY 1972	FY 1973	FY 1974	FY 1975
1. Complete funding on the Inventory-Classification project noted in action 9 of the Short-Term Work Plan.	-----			
2. Support at least one research or other activity identified by the Inventory-Classification project (action 9 of the Short-Term Work Plan).	-----			
3. Conduct discussions with Regional Bureaus and/or USAID Missions and other external assistance agencies to get additional research or other activities underway (on the basis of ideas forthcoming from the Inventory-Classification project of action 9 of the Short-Term Work Plan, or through other indications).	-----			
4. Identify LDC or other non-U.S. experts, specialists, or LDC national or regional institutions working in the problem area, and develop contacts with them.	-----			
5. Keep current the resource pool of U.S. consultants in the problem area.	-----			
6. Continue to conduct/support, together with other external assistance agencies, more research and other projects which will fulfill action program goals, and forge lines of communication and cooperation with such agencies.	-----			
7. Arrange for training LDC nationals as desirable and possible for work in educational finance and related concerns.	-----			
8. Work closely with Regional Bureaus, USAID Missions; responding to requests for information, specialist assistance, and obtaining evaluative feedback on planned, regular basis	-----			

EDUCATIONAL FINANCE AND MEASUREMENT--continued

Long-Range Work Plan

Action	FY 1972	FY 1973	FY 1974	FY 1975
8. from these sources related to developments in the field contd in the problem area.				
9. Develop, where possible, special forms of resource bases in one or more LDC institutional settings, arranging for field and/or laboratory projects on LDC initiatives.*				
10. Develop at least one 211(d) grant institutional arrangement with a U.S. institution in the problem area.*				

\*There may be some way to combine these two actions under one grant arrangement.

6. Continue to conduct/support, together with other external assistance agencies, more research and other projects which will fulfill action program goals, and forge lines of communication and cooperation with such agencies.

7. Arrange for training LDC nationals as desirable and possible for work in educational finance and related concerns.

8. Work closely with Regional Bureaus, USAID Missions; responding to requests for information, specialist assistance, and obtaining evaluative feedback on planned, regular basis from these sources related to developments in the field in the problem area.

9. Develop, where possible, special forms of resource bases in one or more LDC institutional settings, arranging for field and/or laboratory projects arising on LDC initiatives.

10. Develop at least one 211(d) grant institutional arrangement with a U.S. institution in the problem area.

In summary, the Long-Range Work Plan is a strategy designed to:

1. Build upon the Inventory-Classification activity proposed in the Short-Term Work Plan.

2. Increase our knowledge of persons and institutions in the LDCs and what they are doing in the problem area, and provide support for improving LDC institutional competencies.

3. Improve our capability to identify and utilize U.S. and non-U.S. consultant-expertise in the problem area.

4. Encourage on-going research in the problem area by all types of agencies.

5. Provide support for training LDC nationals in the problem area.
6. Maintain channels of dialogue and communication with all elements of the Agency relative to the problem area.
7. Provide for continuous evaluation of all activities.
8. Develop U.S. institutional competency as a resource for activities in the problem area.

TITLE: Inventory Classification of Activities in Educational Finance  
Contract with Harvard University "Statement of Work"

CONFERENCE

-ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

## ARTICLE I - STATEMENT OF WORK

The basic target or purpose of the technical services to be performed is to provide Developing Countries with an informational resource; in this case, better organized information on research and other activities in the educational finance area. More specifically in undertaking this organization, or "Inventory Classification", the Contractor shall do the following:

(1) Survey and organize information on the particular strengths and weaknesses, advantages and disadvantages, and general characteristics of optional funding schemes available to, or being used by the Developing Countries. To this effect, the following steps shall be taken:

a) Review of the existing laws concerning financing of education in developing as well as developed countries. The researchers will make use of the facilities of the Harvard Law Library, and materials collected by the International Tax Program of the Harvard Law School. This library research will be supplemented with commissioned papers of scholars from different countries in Europe, Africa, Asia, and Latin America, describing existing financing schemes in their own or neighboring countries. The concept of financing education will be taken in its broadest sense, ranging from general taxes and taxes earmarked especially for education, to tax rebates for private donations to educational institutions, industry-government partnerships in training, student loan schemes, community self-help programs, social insurance investment educational loans, etc. This type of information will be classified and analyzed in a framework of economic, cultural and historical events. An effort will then be made to

group countries in accordance to a typology derived from the interaction of pertinent variables.

(b) A concentrated effort will be made to compile information on existing, but at the present not in operation, schemes for financing different types of education. This part of the research will draw upon the accumulated knowledge and materials from studies in the United States, international organizations such as UNESCO, IIEP, ILO, OECD, and research institutes in England, Sweden, Latin America and elsewhere. Next schemes will be analyzed in terms of their possible effects and feasibility of application to the different typologies defined in a).

(2) Survey and organize information about the kinds of educational system efficiency problems of Developing Countries as these are related to educational finance, and of the relevance and utility of the various measurement tools that can be applied to such problems.

This part of the project will first inventory and classify the different types of educational system efficiency problems with which LDCs have to cope, and will then identify and evaluate the various analytical tools and techniques which may be applied to such problems.

A presentation will be made of the importance of setting objectives and evaluating the planning and administrative processes of educational programs. A typology of evaluative approaches will be presented with indications of the types of situations in which these might be applied. Descriptions and evaluation will be made of cost-effectiveness and benefit-cost analyses, of use of a systems approach as framework for public expenditure in the educational sector, and of the relationship between a systems approach to planning and program budgeting.

Because of the prevalence of multiple objectives in education, an effort will be made to deal separately with the qualitative aspects of some subsystems in education such as the administrative and information system, curriculum, teacher training, etc.

(3) Survey and organize information about education costs and expenditure patterns, and the sources of educational funds in the developing countries; and 4) Survey and organize information about other aspects of educational finance, such as procedures by which developing countries may adjust financial capabilities to social and other pressures for more education.

This part of the project will make use of existing studies on educational expenditures done by UNESCO, IIEP and OECD and others. It is expected that the country-studies now being initiated by UNESCO will also be available for analysis. A model for analyzing educational expenditures in the general context of national budgets and budgets of other political subdivisions such as states will be developed. With this model, ranges and limits for expenditures for education will be determined for a large number of LDCs under the assumption of continuation of existing revenue-raising schemes. An attempt will also be made to analyze and simulate the impact of new schemes on a few developing countries representative of the different "types" developed in 1a). This sensitivity analysis and the methodology thus developed will provide guidelines for LDCs when forecasting or planning for educational expenditures.

(5) Specify needed new research or other activities, and how, why, and where such activities ought to be undertaken, by whom, at what cost, and with projected "pay-offs".

A program of research in the fields of finance, and efficiency as it relates to finance will be proposed. For this part, intensive consultations will be carried on with experts in the U.S. and abroad.

Two conferences, one in March of 1972 and the other in October of 1972, will be arranged with local and foreign experts, and officials from AID to discuss and present new ideas in the fields of educational finance in developing countries. A graduate seminar on the financing of education in developing countries will be offered in the Spring of 1972 with the participation of experts in the field.

In carrying out the project, the Contractor will be expected to:

(a) Consult with appropriate Developing Country specialists, practitioners and officials about their concerns and perceptions related to educational finance problems, utilizing their suggestions and insights in the early stages of the project in organizing the inventory, as well as at other points.

(b) Review published reports and other documents related to research and experience in the problem area.

(c) Undertake actual visits to some Developing Countries in order to survey practices and activities in the educational finance field not yet part of the "written record". Leads to such activities would come from the consultations with Developing Country persons noted under (1) above.

(d) Consult with U.S. and third-country experts and specialists, including organizations such as UNESCO and IIEP.

(e) Consult with the AID project manager prior to consultation with LDC specialists, practitioners, and officials, and prior to visits to LDCs.

A "manual" will be produced, having two sections. The first will be the classification of the research and other activities in the field of educational finance (items 1-4 above); the second will "map out" the new research or other activities that ought to be undertaken (item 5 above).

The format of the manual should be such that it will permit easy reference. The language will be essentially non-technical, recognizing that many of the Developing Country people who will use the manual are not specially trained in educational finance. Every effort should be made to provide guidance through this manual that will be cognizant of the real life situation in the Developing Countries. (i.e., many highly sophisticated procedures and measures may simply not be applicable to the situations in the Developing Countries. The manual shall be printed, with a durable binding, and two thousand (2,000) copies shall be delivered to A.I.D. by December 31, 1972.

ARTICLE III - KEY PERSONNEL

A. The key person which the Contractor shall furnish for the performance of this contract is as follows:

<u>Key Personnel</u>	<u>Position</u>
Dr. Manuel Zymelman	Principal Investigator

B. The person specified above is considered to be essential to the work being performed hereunder. Prior to diverting the specified individual to other programs, the Contractor shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the program. No diversion shall be made by the Contractor without the written consent of the Contracting Officer; provided, that the Contracting Officer may ratify in writing such diversion and such ratification shall constitute the consent of the Contracting Officer required by this clause. The listing of key personnel may, with the consent of the contracting parties, be amended from time to time during the course of the contract to either add or delete personnel, as appropriate.

TITLE: Status Report: Inventory Classification of Activities in Educational Finance (Contract with Harvard University)

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

March 22-24, 1972

STATUS REPORT: INVENTORY CLASSIFICATION OF ACTIVITIES IN  
EDUCATIONAL FINANCE (Contract with Harvard University)

The Harvard Project, now in its sixth month, has accomplished the following:

1. Annotated bibliography on the financing of education from an historical perspective is to be completed. A first draft of a paper on the same topic has been completed. Work continues on Banks and Loans for Education, Voucher Systems, and Educational Contracting.
2. An exhaustive search of the literature and laws pertaining to the financing of education has been completed, and the data is being put on cards to allow subsequent analysis.
3. Work is underway on the analysis of the different effects of sources of revenue for education; i.e., property taxes, value-added tax, etc.
4. Another important stage in this project, that of arranging a series of position papers on different problems concerning educational finance and efficiency, has been partially completed. To date the following papers have been commissioned:  
(titles are approximate)

John Anderson (Sociologist, University of Sussex, England).  
The Financing of Self Help Educational Projects

Charles Benson (Economist, University of California, Berkeley).  
The Financing of Education in the General Context of  
Social Services

Andre Daniere (Economist, Boston College).  
The Credit System for Education

Michel Debeauvais (Economist, O.E.C.D., Paris).  
The Influence of Costs on the Financing of Education

Werner Hirsch (Economist, University of California,  
Los Angeles).  
What Level of Government should Finance and Produce  
Education?

Jerry Miner (Economist, Syracuse University; on leave  
this year at the London School of Economics).  
Financial Control and Efficiency in Education

John Simmons (Economist, Harvard University).  
Evaluation of the External Efficiency in Education

John Vaizey (Economist, Brunel University, England).  
Socio-Economic Effects of Financial Schemes for  
Education.

5. Consultations: Mr. Dominguez spent three days in Washington, D. C., consulting with officials in the international banks primarily on the different credit schemes for education. He also consulted with the Department of Cooperatives of the OAS on the different cooperative arrangements for education.

In January, Dr. Zymelman visited London, Paris, Uganda and Kenya, to confer with experts in the field and also with LDC nationals concerning the financing of education and also the priorities in the fields of educational research. He interviewed seven people in Kenya, four in England, eight in Paris, and seven in Uganda.

6. Seminar on the Financing of Education. A seminar with an enrollment of 25 graduate students is being offered this term at Harvard, under Dr. Zymelman's direction. One-half of the participants are from developing countries. Several guest lecturers are taking part in the seminar, and the sessions are being tape-recorded for wider diffusion of the lectures.

The topics being covered are:

- A. Educational Finance in Historical Perspective
- B. Forecasting Educational Resources for Education
- C. Student Loan Institutions in Developing Countries
- D. Methods of Evaluation of Financial Schemes
- E. Financing Education in the Context of General Social Service
- F. Private vs. Public Finance of Education
- G. Mixed Systems of Financing Education
- H. Banks and Loans for Educational Purposes
- I. Financial Policies for Increasing Educational "Efficiency"

Additional topics will be selected by participants.

TITLE: Non-Formal Education  
Contract with Michigan State University  
"Statement of Work"

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

March 22-24, 1972

ATTACHMENT A

STATEMENT OF WORK

The basic purpose of the technical services required by this contract is to provide LDCs with the beginning of a systematic base of knowledge on non-formal education in response to their growing needs for such authoritative information. In general, terms, this enhancement of knowledge base on non-formal education will contribute to the educational planning, assist in the rational choice among various human resource development strategies, and provide options to the donor community and to the LDCs,

The Contractor will produce a series of studies providing a systematic body of knowledge, planning guides, new insights, and alternative strategies which are needed to undergird future efforts in non-formal education. The subject listing of studies which follows indicates the areas of inquiry involved. While identified as individual items there will be a high degree of coordination and interrelationship among them. Additionally, all of this work will be carried out as an interdisciplinary team effort in such a way as to form linkages with other appropriate institutions and groups throughout the world interested in the subject matter.

The subjects of such studies are listed below. Their proposed content is described in more detail under the heading of "STUDY SUBJECTS" in subsequent paragraphs of this statement of work.

- a. Historical Perspectives
- b. Categories and Strategies
- c. Country Comparisons
- d. Learning Effectiveness
- e. Economic Factors
- f. Case Study Survey
- g. Model Feasibility
- h. Administrative Alternatives
- i. Participant Training

The form of the final studies, which will be of a quality standard suitable for publication, will be determined by mutual agreement between the Contractor and the A.I.D. project monitor with the primary emphasis being one of mutual desire to enhance the usefulness of the work products. To facilitate the usefulness of these studies, the project monitor will arrange - at an early stage in the life of the proposed contract - a meeting involving Contractor personnel and representatives of the education components of the various Regional Bureaus of AID/W.

In developing these studies, the Contractor will be expected to:

1) Consult with appropriate IDC specialists, practitioners and officials about their concerns and perceptions related to non-formal education and its problem, utilizing their suggestions and insights.

2) Review published reports and other documents related to research and experience in the problem area.

3) Undertake actual visits to some IDCs in order to survey practices and activities in the non-formal education field not yet part of the "written record".

4) Consult with U.S., third-country, and IDC institutions, experts and specialists, establishing continuing linkages with such resources.

The Contractor in consultation with TAB will ensure the early involvement of IDC personnel and institutions in the project. The Contractor will advise the project monitor of proposed visits to IDCs well in advance which will be arranged in accordance with prevailing A.I.D. practices.

## Work Plan and Schedule

The time scheduling of the various studies and the web of interrelationships among them will be determined in discussions between the Contractor and the A.I.D. project monitor. Not more than 120 days after execution of the proposed contract, the Contractor will provide to the A.I.D. project monitor a work plan outlining the proposed time sequence for all studies. Following agreement between the Contractor and the project monitor on the aforementioned work plan, the Contractor within a period not to exceed another 120 days will provide to the project monitor an outline of all studies to be undertaken in first phase of the project. Three copies of the approved work plan shall be furnished to the Contracting Officer.

## STUDY SUBJECTS

### A. Historical Prospectives

This study will provide a perspective on non-formal education and its relationship to formal education over time. It also will cover organizational and structural matters and will compare formal and non-formal systems. It will suggest trends and problems at various stages of development, and it will identify turning points and significant issues drawn from a historical perspective which should affect current efforts.

### B. Categories and Strategies

This study will conceptualize the non-formal system in terms of various categories--by geographic area, by delivery system, by target group, by objectives, by substantive content, etc. It will help to organize knowledge and facilitate comparative analysis within the field. It also will examine alternative strategies for program development within specific categories and

within specific country systems. Special attention will be given to the options and strategies open to external assistance agencies in the non-formal education field, particularly for A.I.D. or another bilateral U.S. agency.

#### C. Country Comparisons

Comparative studies will be made of several countries where non-formal education efforts have been prominent and some success has been attained.

This will be based on broad surveys of the national learning systems in several countries with special attention to non-formal education, its scope, cost, relative importance, problems and limitations. It also will attempt to assess the state of readiness for non-formal education innovations. The countries selected should reflect several of the regions of the world in which A.I.D. is involved, and the methods used should facilitate cross-country comparative analysis. Special attention should be given to actual or potential systems linkages in non-formal education. The work should be designed to provide useful insights for education planners and others.

#### D. Learning Effectiveness

Several studies will identify components and variables relating to learning effectiveness which are most critical in non-formal education situations and processes. Included will be a review of existing ethnopedagogical, anthropological and sociological research and theory to determine their potential contributions to problem solving and action in LDC non-formal education efforts. These will provide hypotheses for future research and suggest possible small scale experimentation. These studies will help to provide necessary depth to efforts in this field and may suggest future applications of behavioral science knowledge and technique to the non-formal education

process. The essential aim is to garner from the overall knowledge base on learning effectiveness any available insights on how to achieve the maximum learning effectiveness at the lowest cost.

#### E. Economic Factors

The potential of non-formal education to have a relative cost advantage in the education field, or certain components thereof, is a primary reason for A.I.D. interest in this area. We, of course, are also interested in a broader range of economic factors and considerations as they affect non-formal education, including its potential to attract financial support from sources other than those devoted to formal schooling. Additionally, there are economic factors involved in such aims as the broadening of educational opportunities. At present, there is a wide and scattered array of studies and information touching on one or several of the economic factors involved in non-formal education. There is not, however, a systematically organized and analyzed study of such scattered information which could provide us with real economic insights relating either to non-formal education as a whole or to the particular segments of such activities which may become of high priority interest to A.I.D. This study would be a preliminary effort to fill this void. Essentially, it will be an assembly of what is known and an analysis thereof, providing some positive guidance in itself but also revealing the major gaps in such knowledge and a sense of the relative importance of future work to fill such gaps. In this sense, it is not expected that there will be undertaken in this study original efforts, such as new cost-benefit or cost-effectiveness studies of specific projects. As in the case of the other economic factors involved, however, this study should collect, identify and

derive some preliminary judgements from such cost-benefit and cost-effectiveness work as already has been done in this field.

#### F. Case Study Survey

A survey will be conducted of specific examples of non-formal education. Potential case studies might be examined more completely to determine such matters as their replicability in other settings, cost-benefit comparisons, problems of measurement, variables important to success, and relationships to formal education systems. Examples of unsuccessful as well as successful non-formal education projects will be included. Without foreclosing the opportunity for original case studies, this effort essentially will be of a survey and analytical nature, taking advantage of case study work already done or in process.

#### G. Model Feasibility

This study will undertake initial work and planning related to developing a model of the human resource sector with full attention to the role of non-formal education within the total system. Essentially, this will be a feasibility report which examines potential for model building for non-formal education in the education and human resource development area. It will appraise the practicability of such model building and its costs and benefits.

#### H. Administrative Alternatives

This study will examine and compare various administrative alternatives for creating and managing specific non-formal education programs and non-formal education on a broad basis. It will draw on existing experience in administering

apparently successful non-formal education programs. Arrangements for the national management, direction or guidance of non-formal education as a whole do not now exist in the LDCs. A comparative study of options available for such purposes will be included in this study.

I. Participant Training

Alternative designs for providing participant training in non-formal education will be prepared and evaluated. On the assumption that training of leaders and other participants in this field should incorporate a different and innovative mix of experiences, this training strategy study should be a highly practical tool in planning specific country-oriented training in the U.S. and/or third countries.

PAPER NO. 10

TITLE: Non-Formal Education  
(By Michigan State University)

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

March 22-24, 1972

PROGRAM OF STUDIES IN NON-FORMAL EDUCATION

Center for International Programs and Studies

Michigan State University

March 10, 1972

## PROGRAM OF STUDIES IN NON-FORMAL EDUCATION

Michigan State University

### Purpose

The purpose of the program is to create an organized knowledge base in the field of non-formal education. It is hoped that this will contribute substantially to the LDCs in the development of policy and programs, in educational planning, in choosing among various human resource development strategies and in budget allocations. An equally important purpose is to provide options to donor agencies, and in particular AID.

More specifically, the program will produce a series of studies aimed at systematizing information and opening up alternative strategies for educating both young and old. While one purpose is to produce studies of high quality, a prime criterion in evaluation will be their utility in policy-formation and action with respect to programs in non-formal education. This standard requires careful attention to the process through which we work. That process will consist of (1) generating new knowledge about non-formal education, (2) systematizing present knowledge, (3) abstracting action guidelines from research, (4) conducting joint research with responsible individuals and groups in the LDCs, (5) consulting with policy and decision makers in both the LDCs and donor agencies, (6) working with participants from the LDCs, (7) developing a network of scholars and planners interested in non-formal education, and, finally, (8) conducting periodic seminars for the diffusion of useful information.

## Subject Areas for Study in the Non-Formal Education Project

### I. Historical Perspectives.

This study will provide a perspective on non-formal education and its relationship to formal education over time. It also will cover organizational and structural matters and will compare formal and non-formal systems. It will suggest trends and problems at various stages of development, and it will identify turning points and significant issues drawn from a historical perspective which should affect current efforts.

Study team leader: Marvin Grandstaff, Associate Professor, Department of Secondary Education

Study team members: Cole S. Brembeck Lynn Scheuter, John Thompson, Malcolm Lawson, and Frank Guldbrandsen.

Contributing studies: Ted Ward/William Herzog - Learning Effectiveness  
John Hunter - Economic Factors

Field Studies: To be determined

Working papers prepared: Grandstaff - Historical Perspectives on Non-Formal Education. Brembeck - The Strategic Uses of Formal and Non-Formal Education.

### II. Categories and Strategies.

This study will conceptualize the non-formal system in terms of various categories--by geographic area, by delivery system, by target group, by objectives, by substantive content, etc. It will help to organize knowledge and facilitate comparative analysis within the field. It also will examine alternative strategies for program development within specific categories and within specific country systems. Special attention will be given to the options and strategies open to external assistance agencies in the non-formal education field, particularly for AID or another bilateral U.S. agencies.

Study team leader: George H. Axinn, Executive Director, MUCIA; Professor Agricultural Economics.

Study team members: Olu Awa, Roger Cuyno, William Kieffer, Jose Mesa, John Shields, Carol Thompson, and David Wadsworth.

Contributing studies: Fred Waisanen - Model Feasibility

Field Studies: An evaluative study of the rural animation programs in Senegal is under consideration, along with analysis of non-formal education in families and in rural villages in Nepal, Thailand, Nigeria, Indonesia, Brazil, and Peru.

Working papers prepared: George Axinn - Alternative Strategies in International Intervention in Education.

### III. Country Comparisons.

Comparative studies will be made of several countries where non-formal education efforts have been prominent and some success has been attained. This will be based on broad surveys of the national learning systems in several countries with special attention to non-formal education, its scope, cost, relative importance, problems and limitations. It also will attempt to assess the state of readiness for non-formal education innovations. The countries selected should reflect several of the regions of the world in which AID is involved, and the methods used should facilitate cross-country comparative analysis. Special attention should be given to actual or potential systems linkages in non-formal education. The work should be designed to provide useful insights for education planners and others.

Study team leader: Professor Richard O. Niehoff, Assistant Dean for International Programs.

Study team members: Rex Ray, Professor of Industrial Education  
Bernard Wilder, Research Associate.

Campus backup team: Harold Marcus, History; John Hinnant, Anthropology; Victor Low, History; Roy Donahue, Crop/Soil Science; Eugene DeBenko, International Librarian; Kenneth Keahey, Pathology; Martin Benjamin, Philosophy; Delbert Whitenack, Pathology.

Contributing studies: John Hunter: Inventory of Non-Formal Education, Brazil. Rex Ray: Non-Formal Development of Vocational Skills (Rural), Zaire.

Field studies: Principal research team will conduct field work in Ethiopia, from March 15 to May 15. Contributing teams will study Brazil, Zaire and a third country.

Working papers prepared: Nat J. Colletta - Non-Formal Education in Anthropological Perspective, Non-Formal Education Programs in Different Geographical Areas of the World, and Selected Topics in Non-Formal Education.

IV. Learning Effectiveness.

Several studies will identify components and variables relating to learning effectiveness which are most critical in non-formal education situations and processes. Included will be a review of existing ethnopedagogical, anthropological and sociological research and theory to determine their potential contributions to problem solving and action in LDC non-formal education efforts. These will provide hypotheses for future research and suggest possible small scale experimentation. These studies will help to provide necessary depth to efforts in this field and may suggest future applications of behavioral science knowledge and technique to the non-formal education process. The essential aim is to garner from the overall knowledge base on learning effectiveness any available insights on how to achieve the maximum learning effectiveness at the lowest cost.

Study team leaders: Ted Ward, Professor, Curriculum Research and William Herzog, Professor, Communications.

Study team members: Lois McKinney, John Dettoni, Norman Anderson.

Contributing studies: Marvin Grandstaff, Cole Brembeck, Homer Higbee

Field Studies: Series of modular replicable and adaptable field experiments to examine the consequences of adapting instructional procedures and communication designs to conform to the real-world demands on various applications of non-formal education. These studies are being designed to be carried out by scholars in host nations with minimal consultation from the MSU team. Probable locations of the first round of field experiments are Brazil, Ghana, Malaysia, the Philippines, and Costa Rica.

Working Papers prepared: Ted Ward - Effective Learning in Non-Formal Modes.

V. Economic Factors.

The potential of non-formal education to have a relative cost advantage in the education field, or certain components thereof, is a primary reason for AID interest in this area. We, of course, are also interested in a broader range of economic factors and considerations as they affect non-formal education, including its potential to attract financial support from sources other than those devoted to formal schooling. Additionally, there are economic factors involved in such aims as the broadening of educational opportunities. At present, there is a wide and scattered array of studies and information touching on one or several of the economic factors involved in non-formal education. There is not, however, a systematically organized and analyzed study of such scattered information which could provide us with real economic insights relating either to non-formal education as a whole or to the particular segments of such activities which may become of high priority interest to AID. This study would be a preliminary effort to fill this void.

Essentially, it will be an assembly and analyze what is known and provide some positive guidance. It will also reveal the major gaps in our knowledge and give a sense of the relative importance of future work to fill gaps. In this sense, it is not expected that original efforts will be undertaken, such as new cost-benefit or cost-effectiveness studies of specific projects. As in the case of the other economic factors involved, however, this study will collect, identify and derive some preliminary judgements from cost-benefit and cost-effectiveness work that has already been done in this field.

Study team leader: John Hunter, Professor of Economics and Director of Latin American Studies Center.

Study team members: Fernand Goudraault, Michael Lukomski and Abdul Mannan.

Contributing studies: Einar Hardin, Professor and Associate Director of Labor and Industrial Relations.

Field studies: Two studies planned for 1972-1973.

Working papers prepared: Einar Hardin - Economic Evaluation of Nonformal Education in Rich and Poor Nations.

#### VI. Case Study Survey.

A survey will be conducted of specific examples of non-formal education. Potential case studies might be examined more completely to determine such matters as their replicability in other settings, cost-benefit comparisons, problems of measurement, variables important to success, and relationships to formal education systems. Examples of unsuccessful as well as successful non-formal education projects will be included. Without foreclosing the opportunity for original case studies, this effort essentially will be of a survey and analytical nature, taking advantage of case study work already done or in process.

Study team leader: Louis A. Doyle, Associate Director Continuing Education.

Study team members: Russell J. Kleis and Melvin Buschman

Contributing studies: Homer Higbee, Participant Training non-formal education Programs.

Field studies: To be determined.

#### VII. Model Feasibility.

This study will undertake initial work and planning related to developing a model of the human resource sector with full attention to the role of non-formal education within the total system. Essentially, this will be a feasibility report which examines potential for model building for

non-formal education in the education and human resource development area. It will appraise the practicability of such model building and its costs and benefits.

Study team leader: Frederick Waisanen, Professor, Department of Sociology.

Study team members: To be named.

Contributing studies: Professor George Axinn, Categories and Strategies.

Field studies: Costa Rica

Working papers prepared: Frederick Waisanen - Individual Modernity and Non-Formal Education.

#### VIII. Administrative Alternatives.

This study will examine and compare various administrative alternatives for creating and managing specific non-formal education programs and non-formal education on a broad basis. It will draw on existing experience in administering apparently successful non-formal education programs. Arrangements for the national management, direction or guidance on non-formal education as a whole do not now exist in the LDC's. A comparative study of options available for such purposes will be included in this study.

Study team leader: Richard O. Niehoff, Assistant Dean for International Programs.

Study team members: Ralph Smuckler, Dean of International Programs, and Professor of Political Science.  
Bernard Wilder, Research Associate.

Contributing studies: All study areas where field trips were conducted and/or where case study and country study materials have been gathered.

Field studies: Visits to approximately four countries that have been visited earlier by other teams and have been identified as examples worthy of more intensive study of administrative consideration.

IX. Participant Training.

Alternative designs for providing participant training in non-formal education will be prepared and evaluated. On the assumption that training of leaders and other participants in this field should incorporate a different and innovative mix of experiences, this training strategy study should be a highly practical tool in planning specific country-oriented training in the U.S. and/or third countries.

Study team leader: Homer Higbee, Assistant Dean Education Exchange, International Studies and Programs; Associate Professor, Political Science.

Study team members: Melvin Buschman, Louis Doyle, Russell Kleis (others to be added.)

Contributing studies: Studies on Country Comparisons, Economic Factors, Case Study Survey, all of which are in the non-formal study series. As program develops others may be added.

Field studies: To be determined.

The Plan of Work

The work plans being employed by our investigators are necessarily diverse since each line of inquiry is somewhat different. The following comments, then, refer to the means we are using to develop the program as a whole. Our general approach was, first, to issue a broad invitation to faculty members and graduate students who might be interested in the subject. We then proceeded to identify those with more specific interests who wanted to undertake particular studies.

Seminars in Non-formal Education. The bi-monthly seminar is designed for the large group of faculty and graduate students (about 60) who are interested in non-formal education. The agendas consist of reports from faculty members who have studies in progress and in the presentations of consultants. The seminar has been in operation for more than a year. In June 1972, we plan to hold a conference to review the work of the several teams with specialists from outside the University.

The Working Group. The working group consists of faculty members, listed above, who are undertaking specific studies, under some form of contract support. While the large-group seminar is well established, the working group is just now beginning to interact as a body. We anticipate weekly meetings of the group aimed at the development of studies through the sharp interaction of this small group.

The Role of Graduate Students. Doctoral students are a vital part of the program and are linked to it in three ways: (1) through dissertation research, (2) assisting in faculty research, or (3) a combination of the two.

Field Work. Not all studies will require field work but some of them will. The first of the field studies will be conducted March through May, 1972 in Ethiopia. Others are planned for other countries in Africa, Latin America, and Asia.

Consultants. Outside consultants provide a different perspective for our group. We use them in three ways, to work with individuals who wish to use their insights on work in progress, to consult with our working group and to speak to the large-group seminar. Thus far, Archibald Callaway, Fred Harbison, and Philip Coombs have come to campus as consultants. Others have been invited to meet with us in the future.

Participants. With AID concurrence we plan to convene a small group of participants who are selected on the basis of having responsibilities, either for policy or operations, in the field of non-formal education. We plan to involve them deeply in our work. They may join an existing study team, work with several study teams, collaborate in a research project involving their own countries, or do a combination of these.

Conference and Seminars. Our group is maintaining close contact with other people working in the field of non-formal education. We had representatives at the SEADAG seminars on non-formal education in Washington, May 13-15, Penang,

Malaysia, October 11-15, and Seoul, Korea, October 17-20. We also had a representative at the conference in Lagos, Nigeria, November 13-16.

We are maintaining close liason with Philip Coombs with respect to the eighteen case studies he is doing under the auspices of the World Bank.

#### Time Track

We have set a tentative time schedule for the plan of work. A number of variables are involved which influence the timing of the outcomes. For example, we must reckon with variables like: (1) the prerequisite nature of certain studies with respect to others, (2) the locale in which the study needs to be done, (3) the availability of faculty and graduate students at certain times and not at others, (4) the availability of foreign colleagues for cooperative work, and (5) the availability of data.

We mentioned earlier in this report that we feel the process through which we produce the studies can have considerable influence on policy and action. The way we go about the work, who we work with, and how, may in the long run have as much influence on the results as the findings of the studies themselves. We do not want to sacrifice this prospect in order to hasten by a few weeks the published product. We hope that this report makes it clear that we aren't standing still. We have twelve faculty and graduate student teams at work, with the prospect of a thirteenth. Drafts are already being produced. We intend to keep moving with dispatch.

We expect that the third year will see the printing and publishing of the final volumes.

#### Conclusion

In conclusion we may say that our main thrust is to create the best possible resource we can for understanding a very complex subject, and for translating its

variables and complexities into useable information and strategies for those who shape educational policies and programs. We cannot do this alone. We seek the help of AID experts, scholars, and foreign colleagues in both academic and governmental roles. A great deal is at stake. If new and viable alternatives for educating people are to be developed the kind of knowledge base we are working at will have to be built.

## STUDY TEAM MEMBERS

### Faculty:

George Axinn	Executive Secretary, MUCIA, and Professor, Agricultural Economics
Cole Brembeck	Director, Institute for International Studies in Education and Associate Dean, College of Education
Lawrence Borosage	Professor, Secondary Education and Curriculum
Michael Borus	Associate Professor, Labor and Industrial Relations
Melvin Buschman	Assistant Director, Continuing Education, Professor, Administration and Higher Education
Louis Doyle	Associate Director, Continuing Education
Marvin Grandstaff	Associate Professor, Secondary Education and Curriculum
John Hanson	Professor, Secondary Education and Curriculum, African Studies Center
Einar Hardin	Professor and Associate Director, Labor and Industrial Relations
David Heenan	Associate Director, Institute for International Studies in Education
William Herzog	Assistant Professor, Communication
Homer Higbee	Associate Professor, Political Science Assistant Dean, Educational Exchange
John Hunter	Professor, Economics Director, Latin American Studies Center
Russell Kleis	Professor, Administration and Higher Education
Daniel Kruger	Professor and Associate Director, Labor and Industrial Relations
Richard Niehoff	Assistant Dean, International Studies and Programs
Rex Ray	Professor, Secondary Education and Curriculum
Ralph Smuckler	Dean, International Studies and Programs
Frederick Waisanen	Professor, Sociology
Ted Ward	Professor, Secondary Education and Curriculum
Bernard Wilder	Instructor, Institute for International Studies in Education.

Research Associates:

Norman Anderson  
Olu Awe  
Nat Colletta  
Jim Covert  
Roger Cuyno  
John Dettoni  
Fernand Gouldreault  
Frank Guldbrandsen  
Sang Kang

William Kieffer  
Besa Kotati  
Malcom Lawson  
Mike Lukomski  
Abdul Mannan  
Lois McKinney  
Lynn Schlueter  
Carol Thompson  
Tim Thompson  
David Wadsworth

TITLE: Effective Alternatives to Processes of Traditional Education  
(A.I.D. Sec. 211-d grant to the University of California at  
Los Angeles)

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

March 22-24, 1972

PROPOSAL FOR A GRANT-IN-AID  
UNDER THE AGENCY FOR INTERNATIONAL DEVELOPMENT  
INSTITUTIONAL GRANTS PROGRAM

Name of Applicant: University of California, Los Angeles

Date of Application: May 19, 1970

Title: A grant to develop within the UCLA Latin American Center a special multidisciplinary competence for analysis of effective alternatives to processes of traditional education.

Duration: 5 years from the date established by the grant

Amount of the Grant: \$600,000

SUMMARY

UCLA through its Latin American Center proposes to strengthen its interdisciplinary research, evaluation, teaching, and consultation or service capabilities in order to expand present University investigation of socio-economic problems in Latin America. To accomplish this, the Center plans to create an analytical framework in which a project may be undertaken to provide concepts and manpower for alleviating educational bottlenecks in the development of Latin American nations.

The grant will allow the Latin American Center to direct to the problems of representative countries in Latin America its existing, planned, and proposed strength in such areas as education, economics, anthropology, law, psychology, political science, and urban studies. Countries cooperating with the Center not only will permit the University to draw upon its intensive experience in Latin America but to develop a carefully delineated interdisciplinary statistical focus in Latin American nations which have representative kinds of problems in education and development.

Funds requested in this proposal will be used to (a) free present faculty to engage more fully in development studies; (b) hire visiting faculty; (c) support domestic and foreign graduate and special students while they pursue their education or training in interrelated socio-economic aspects of educational development; (d) improve library holdings and acquire census and unpublished data relevant to the project; (e) develop courses, seminars, and a workshop-symposium; (f) provide for necessary field work and computer services; and (g) provide for periodic evaluation of progress.

The general objective of the grant is based on interrelated sets of activities which permit the University:

1. To develop instruments and procedures for analysis of alternatives to traditional educational processes and, within the financial possibilities of the grant, to collect, analyze, and interpret aggregate data for (a) sub-national and (b) national levels of educational problems.
2. To isolate and examine socio-cultural considerations in educational development.
3. To investigate economic considerations in mass education of potential students.
4. To examine the application of systems of educational technology as related to educational productivity.
5. To relate rural-urban considerations to the process of educational development.
6. To provide a project forum within the Latin American Center which will guide research and provide training and educational opportunities for professional staff members of domestic, international, and foreign agencies through research, seminars, symposiums, and regular University course work.

The goal will be to generate model alternatives to traditional educational programs as well as to provide a scholarly framework by which these multidisciplinary models may be developed and further refined by graduate and special students and faculty as they return to, consult with, or enter developmental work in national and international agencies.

University Capabilities:

With over 50 faculty members conducting research on Latin America, the UCLA Latin American Center is recognized as one of the leading academic institutions involved in teaching, research, and consulting activities related to Latin America.

While the growth of the Center resources program has been rapid and a broad base of competency has been developed with on-going basic financial support from the University, much of the available funding has involved development and maintenance of an organizational framework to assure faculty and student departmental resources. The proposed grant-in-aid will permit the Center to integrate research and instruction into a coordinated program of highly specialized and project-oriented investigation. In this manner we will capitalize on the following organization which has emerged since 1963 to provide the Center with a campus- and University-wide base of action. Leadership and guidance of activity is provided through the following Latin American Center Dean's Advisory Committees in the fields of:

- Economics and Business Administration
- Education
- Letters and Science
- Medicine and Public Health
- Extension
- Engineering
- Arts
- Law

Academic studies at the graduate level are provided by over 13 departments affiliated with the Latin American Studies Special Programs. Brochures describing these programs and pamphlets outlining detailed degree requirements are available from the University.

Faculty members conducting research on Latin America in relevant areas cooperate with the Center in development of courses and seminars. Additional members will be added during the time period of the project and all members of the University faculty will be available for consultation on matters related to the areas covered by the grant.

UCLA currently receives approximately \$800,000 in public and private funding for various aspects of Latin American resources research, teaching, extension, and consultation. This funding is

expected to continue and to increase. Funds requested in this proposal will not replace existing funding for any programs. Also, activities provided for in this proposal will not duplicate existing or other planned programs at the University.

The University is committed to the continued growth and development of integrated interdisciplinary programs. It regards the first five years as a basic development period during which time it would seek to enhance the financial backing both from within the University and from other outside sources supporting international needs.

University Contribution:

The University's broad base of activity in Latin American Studies will provide:

Office, classroom, and auditorium space for faculty, students, and special meetings or symposiums related to this program.

Library facilities at the main campus and at the University's Regional Center in Latin America.

Appropriate access to University computer facilities, other special research aids, and University administrative support services.

Consultation with members of the faculty not directly associated with the Center.

Objective and Scope of Proposed Program:

The project to be carried out under this grant will be built upon the existing and expected expansions in the broad-based Latin American resource activity at UCLA. The grant will be used by the Center to develop a framework for an integrated approach to interdisciplinary research problems and to develop among faculty and students improved capabilities for future research, teaching, and consultation in the University, in development agencies, and in Latin America. This will be accomplished through a series of studies, courses, seminars, visiting lectureships, and an interchange of ideas and concepts with individuals in developing countries and in national and international agencies.

Interrelated approaches of this project are:

1. To develop instruments and procedures for analysis of alternatives to traditional educational processes and, within the financial possibilities of the grant, to collect, analyze, and interpret aggregate data for (a) sub-national and (b) national levels of selected educational problems.

To this end, the adequacy of educational services in terms of manpower needs and social demands will be examined. Problems in patterns of specialization and course offerings currently available will be assessed. Content in formal and informal educational programs will be evaluated in relation to achievements, efficiency, and cost as well as high dropout and repeat rates of the school-age population. Such analyses involve (a) the study of the appropriateness of selected alternatives with regard to sub-cultural contexts and the continuity between family and society; (b) the comparison of selected educational alternatives across regional and national boundaries with regard to their economic and social value in modernization; and (c) possible application of findings to other Latin American countries where similar problems may be alleviated as a result of experimentation with alternatives.

2. To isolate and examine socio-cultural considerations in educational development.

Under this objective, studies will be conducted by faculty and graduate students through an interdisciplinary approach on the way in which identifiable socio-cultural factors interact with the educational process. Investigation will involve: (a) studies of selected value orientations of potential students; (b) examination of such orientations as they relate to educational change; (c) description of representative religious and world view orientations as they are believed to affect educational programs; (d) systematic evaluation of these religious and world view orientations as they actually interact with policy. In this manner we will suggest the congruence of curricular and pedagogical approaches to sub-cultural groups with particular social and occupational goals. Such analysis will provide an assessment of the relevance of selected current and planned educational programs as well as offer some general guidelines for future planning.

3. To investigate economic considerations in mass education of potential students.

Analysis of patterns in cost of mass education will involve representative examination of (a) enrollment by subject; (b) student-teacher ratios; (c) grade and age level offerings; and (d) highest level of schooling or training achieved. This data will be correlated with representative data on age cohorts for occupational sectors in order to interpret the background of differential economic growth rates. Educational costs will be calculated in relation to efficiency in planning for projected dropout rates, school construction, and physical plant size. The resulting assessment will include evaluation of (a) varying educational needs in relation to economic production needs; and (b) policy options in the area of technical planning.

4. To examine the application of systems of educational technology as related to educational productivity.

This approach involves investigation of (a) aspects of educational attainment levels; (b) cost benefit effectiveness of alternative programs; (c) relevancy of technology to the job to be performed in relation to needs and funds available; and (d) evaluation of alternative mixes of such things as educational time periods, pupil-teacher ratios, class size, and teacher training requirements.

5. To relate rural-urban considerations to the process of educational development.

This approach subsumes (a) examination of differences in the needs of rural and urban educational programs as well as (b) analysis of the kinds of investigation appropriate under different and varying conditions. A related topic of study involves (c) some neglected aspects of community and village educational development in Latin America. Analysis of social indicators for local units in the 1960 and 1970 population censuses will not only permit interpretation of the social and economic context of rural educational problems but will provide a focus for training and research projects in those countries in Latin America where statistical agencies have agreed to develop cooperative data analysis.

6. To provide a project focus within the Latin American Center which will guide research and provide training and educational opportunities for professional staff members of domestic, international and foreign agencies through seminars, symposiums, and regular University course work.

UCLA, through existing or planned and new courses to be developed under this grant, will be prepared to accept and give individuals from less developed countries an advanced and specialized education in analysis of socio-economic data and formulation of educational models, and it also will be prepared to integrate administrators and researchers from domestic agencies into a carefully focused program. Faculty and students preparing to work with international and national development agencies will gain experience in working in multidisciplinary seminars, courses, and a third-year Workshop-Symposium, which is scheduled to evaluate the research framework and its results.

This program is designed to increase UCLA's capability to provide high level manpower for national and international development agencies through a five-year research- and action-oriented effort. A substantial number of U.S. and Latin American graduates with interdisciplinary foundations will be trained. Our programs of regional research cooperation are designed to strengthen our relationships with Latin American scholars as we integrate faculty and students into the program. Those Latin Americans who work with us in Los Angeles and in the field will have begun a new tradition in research.

#### Implementation of the Project:

The Director of the Latin American Center (who is Research Coordinator and Grant Administrator) and the Latin American Center Dean's Advisory Committees will develop specific research guidelines for the project, authorize research, and supervise the direction and quality of different phases of individual and seminar investigation. Chairmen of the eight committees will themselves meet regularly to serve in a policy-making capacity for the Center. Since a crucially important ingredient in the project will be a periodic review and evaluation process, the policy committee will report to the annual meeting of UCLA Latin Americanists in order to obtain valuable reactions to the program on a campus-wide and national and international basis.

Specifically, initial project research will lead to a Workshop-Symposium that will be held in the third year. With the aid of U.S. and Latin American participants, the Workshop will evaluate progress to produce mid-course corrections for the remaining portion of the project.

Theoretical framework for case studies in selected countries

will be developed in the Center's Research Seminar which will coordinate investigation and ongoing activities such as (a) the Seminar on Urban Planning and (b) the Seminar on the Theory of Social Indicators (courses offered in UCLA's new School of Architecture and Urban Planning); and with (c) the School of Education's Seminar on Latin American Education.

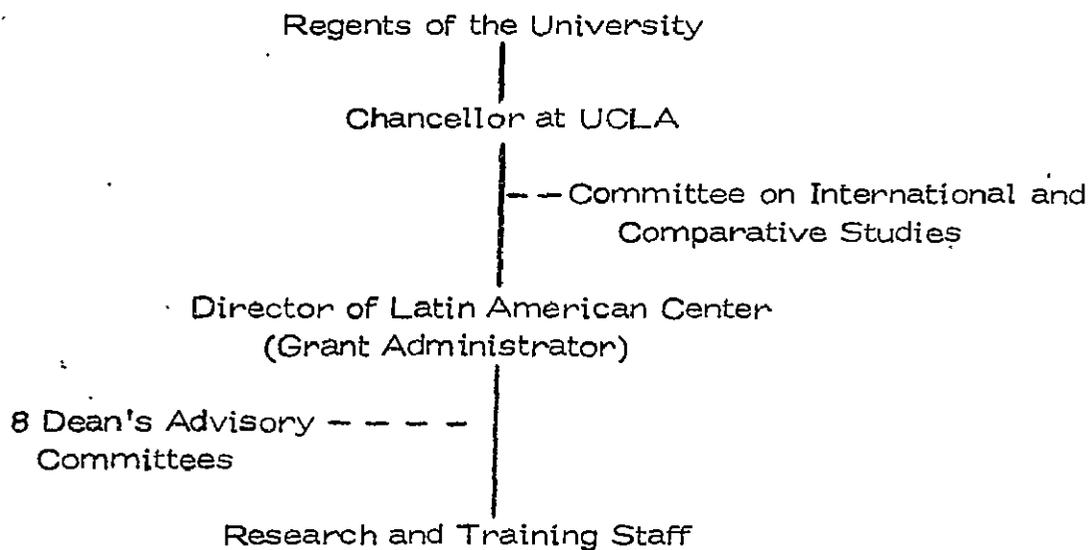
The significance of the Center's Research Seminar goes beyond the traditional concept of a university seminar. This particular seminar, in addition to providing a theoretical framework, is a focal point for (a) presentation of preliminary findings to a multidisciplinary group of faculty and students; (b) ongoing evaluation and a self-corrective mechanism for planned activities; (c) presentations by Latin American faculty and interchange of ideas with faculty, students and invited guests.

Finally, UCLA's Latin American Center is committed to publishing results of the research project in its Latin American Studies Series. Translation of data analysis into English, Spanish, and Portuguese is planned in order to make our methods and conclusions widely known as phases of the project are completed.

In sum, as the project progresses, we foresee the development of research on education and social systems through utilization of data in various countries in Latin America. Thus we expect other sources of financing to be forthcoming for related studies as the meaning of comparative data from selected countries become available, and as growth in increments of highly competent manpower in this field become widely known.

Administrative Structure:

The Latin American Center at UCLA is administered by a director and two associate directors. The director, who is responsible to the Chancellor of the University, will be guided by the Committee on International and Comparative Studies and the Dean's Advisory Committees for Latin America, which will also provide continuous assessment of the direction and quality of research.



## ESTIMATED BUDGETARY PROPOSAL

(In Thousands of Dollars)

Salaries.....	\$257.0	42.8%
Stipends and dependency allowances.....	\$176.9	29.5%
Tuition and fees.....	\$ 19.5	3.3%
Travel.....	\$ 95.0	15.8%
Equipment.....	\$ 10.0	1.7%
Other (library, computer, supplies and expenses, etc.).....	\$ 41.6	6.9%
Total	<u>\$600.0</u>	<u>100.0%</u>

TITLE: Effective Alternatives to Processes of Traditional Education  
(By The University of California at Los Angeles)

CONFERENCE

ON

A.I.D. PRIORITIES IN EDUCATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR TECHNICAL ASSISTANCE

OFFICE OF EDUCATION AND HUMAN RESOURCES

March 22-24, 1972

Development of Special Multidisciplinary Competence  
for Analysis of Effective Alternatives to  
Processes of Traditional Education

1970-1971

February, 1972  
Thomas J. La Belle  
Research Coordinator

## TABLE OF CONTENTS

	<u>Page No.</u>
PREFACE . . . . .	i
I. Summary of the Contribution of Section 211(d) to the Total University Capability in the Study of Education in Latin America. . . . .	1
A. Research. . . . .	2
B. Training. . . . .	2
C. Service . . . . .	4
D. Relations with Latin American Institutions. . . . .	5
E. Staff . . . . .	6
F. Publications. . . . .	7
G. Library Resources . . . . .	7
II. Objective and Scope of Proposed Program . . . . .	8
III. Major Accomplishments, 1970-1971. . . . .	12
A. Development Reform and Implementation . . . . .	12
B. Development of Research Competence. . . . .	23
C. Development of Competence for Consultations and Service . . . . .	35
D. The Involvement of Other University Resources . . . . .	39
IV. Directions for the Future . . . . .	47
A. Teaching. . . . .	47
B. Research. . . . .	48
C. Service . . . . .	50

P R E F A C E

## PREFACE

This report concerns UCLA's activities under the "Institutional Centers to Aid Foreign Development" program administered by the Agency for International Development. Effective October of 1970 the University of California at Los Angeles, through its Latin American Center, received a five-year grant authorized by the Foreign Assistance Act of 1966, in which the purpose of the funding is to strengthen the recipient institution's "...capacity to develop and carry out programs concerned with the economic and social development of less developed countries".<sup>1</sup> The specific area of concern relates to the development, within the UCLA Latin American Center, of a special multidisciplinary competence for the analysis of effective alternatives to processes of traditional education in Latin America.

In accord with the institutional building focus of the grant, the Latin American Center has carried out research, evaluation, teaching, and consultation or service activities concerning the broad area of educational phenomena in Latin America. In accomplishing these general goals, the Center has relied on abilities developed over two decades of work in Latin America in which emphasis has been placed on building counterpart relations with Latin American professionals, working on problems of mutual concern to UCLA and host country personnel, and carrying into the relations a genuine desire to provide alternative analytic and methodological approaches which

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<sup>1</sup>Foreign Assistance Act of 1966 (Public Law 89-583), which amended the Foreign Assistance Act of 1961 (Public Law 87-195). The quote is derived from Section 211(d) "Institutional Centers to Aid Foreign Development."

prove to be of value to Latin Americans. In short, the Center prides itself on involving Latin Americans in all aspects of its programs and on attempting to eliminate what some have referred to as "research imperialism." In effect, this orientation means that the Latin American Center prefers to support proposals concerning research, service, or training aspects of the grant only after being assured that a recognized need by Latin Americans has been voiced. In addition, an attempt is made to collaborate with a host country institution which is prepared to provide access to relevant data and, if appropriate, additional human and material resources.

At a time when formal education is widely criticized for its lack of relevance for students, its lack of attention to meeting society's best intentions, and its lack of being accountable for the money spent to accomplish both, the grant is perceived by those working most closely with it as a significant and logical investment. Thus, the opportunity to define and augment the study of the role and function of numerous formal and informal processes of education in the development context, and from a multidisciplinary perspective, is viewed by us as among the greatest challenges facing the Americas and the world. Yet one cannot push aside the complexity of the problem, past research in studying schools, or importance placed by society on the school's selection function in moving toward the analysis of alternatives to what currently represents a worldwide financial, intellectual and emotional commitment. In terms of complexity, for example, it is possible that no one will discover a method for adequately analyzing financial inputs and learning outcomes on the

effects of changing an aspect of the educational process in classrooms. The reason rests with the kinds of independent variables which need to be controlled in order to provide a definite answer to such a problem. Investigators who want to assess the effects of a textbook in schools, for example, have to ask questions about size, illustrations, vocabulary, and substance. In addition, they need to know what age, sex, and family background are evidenced by the participants and they must control for such items as the location of the school, the incentives to students, and the characteristics of the teacher or transmitter. The economic models which have been used and which do not have to recognize some of these constraints have proven wholly inadequate for understanding this human process, even though such models are successful in the analysis of physical capital investment.

Although considerable progress has been made in developing the curriculum and methods which can improve the achievement of individuals in certain cognitive and psychomotor areas, much of this learning is predicated on what the child brings with him to school, rather than what he is exposed to at school. For example, the Coleman data on the equality of educational opportunity suggests that it is the family background and the peer group of the child rather than the teacher, the curriculum, or the library which have the greatest effect on achievement. Although such studies are challenged on methodological and substantive grounds, conflict in approaches and outcomes of educational research is often where the administrator and planner are left when it is necessary to make decisions. Summary data on classroom organization,

instructional procedures, and on the application of technology to school functions often result with no better than an equal chance that one alternative is better than another. Add to the complexity and conflicting research outcomes societal expectations for the school to promote educational attainment and consequent improved social status and the school can be seen as a rather cumbersome, and exceedingly complex, vehicle for behavior change. It remains, however, almost as important socially and culturally to most populations as the existence of the wheel.

In part, our attention this first year has been directed toward the linkages among schools and the wider society. We have concerned ourselves with the role and function of schools as they relate to a rural-urban and an indigenous-creolized continuum, emphasizing the effects of the family and community as they interact with the school. One rationale for pursuing this area rests with the assumption that the school has been shown to have little impact on social and economic development unless the wider incentives for continuing in school are related to the perceived pay-off existing for the individual and group. This means, in effect, that success has not been achieved through altering what goes on in school unless those alterations provide for a more effective link between the individual and his potential of improving financial status or prestige.

In assessing these linkages in order to better understand alternatives, our orientation in the first year of the grant has been to look at education as a communicative process in which the experiences undertaken by the learner in some way alter his overt and covert behavior. We are studying such

processes in the family, in schools, and in certain private and public institutions like industry and rural health centers. The major thrust has been to look at these social and cultural institutions for their potential in affecting behavior. We have analyzed and described educational phenomena from a behavioral and social science base in an attempt to discover what educational processes exist, how they function, and what is their effect.

We have not, therefore, been asking questions which will provide a nation with an alternative to schools. Because we do not believe that one alternative is feasible given current investments, we are attempting to develop analytical methods which will shed some light on the differential contribution of various forms of education to social, cultural, political, and economic outcomes. By examining the interrelationships of existing teaching and learning activities within a nation, we suggest that alternatives to certain functions performed by the already overburdened school can be identified. They also accompany schools as nearly unknowns in terms of the development process.

I. SUMMARY OF THE CONTRIBUTION OF SECTION 211(d)  
TO THE TOTAL UNIVERSITY CAPABILITY IN THE  
STUDY OF EDUCATION IN LATIN AMERICA

I. Summary of the Contribution of Section 211(d) to the Total  
University Capability in the Study of Education in Latin America

The greatest resource at UCLA is the broad range of faculty and students who bring to the study of education a diverse array of theoretical and methodological approaches and are able to collaborate freely through the Latin American Center as a multidisciplinary institute. The 211(d) grant has enabled these human resources to pursue educational research, service, and training activities while building upon competencies developed through specializations in academic disciplines. The outcome of such human investments are the analyses of educational phenomena, the concomitant methods and procedures by which such investigations are produced, and the training of students and faculty as they undertake such activities.

The Latin American Center is organized around eight Deans' Advisory Committees comprising 50 faculty members and representing eight schools and colleges at UCLA. These Committees advise the Center Director and the Grant Coordinators' Committee and are actively involved in the functions of the grant. Thirty-two projects were funded by the Committee through June 30, 1971. These projects are headed by investigators from the Departments of Geography, Anthropology, Latin American Studies, History, Economics, and Political Science, as well as the Schools of Public Health, Education, Management, and Law. With the exception of a study undertaken on Cuba, the projects involved Latin American institutions and personnel from Venezuela, Colombia, Mexico, Bolivia, Guatemala, Brazil, Peru, Panama, and Costa Rica.

## A. Research

In order to develop additional insight into alternative educational processes in the development context seven studies are attempting to assess the impact of the family and certain extended relationships on the child's perception of the world around him. A number of these investigations concentrate on the out-of-school learning environment with which the child interacts and through which he is influenced. Several concern enculturation among the indigenous tribal and creolized populations of Latin America. An additional six research projects concentrate on the school's impact on the population which it serves and on the environment in which it is located. These school-community studies augment the five studies which relate to the various components which are characteristic of the operation of schools. These include studies of administrators, teachers, and the curriculum as integral aspects of the schooling process. An additional seven studies are concerned with institutional and noninstitutional schooling at the macro level, and two are actually assessing the impact at the micro level of alternatives.

## B. Training

In cooperation with the School of Education's doctoral program in Comparative and International Education, two graduate level courses dealing with education in Latin America have been developed. One of these is an introductory course which surveys the role and function of schooling in Latin America and the other, supported by the grant, is a research seminar

on educational problems and issues in Latin America. Whereas the introductory course surveys the cultural, economic, and political institutions of Latin America as they pertain to increased understanding of educational systems, the seminar is designed to give students an opportunity to investigate recent research on Latin American education, pursue the preparation of research proposals prior to conducting their own research in Latin America, and analyze and present their research findings.

The seminar on education in Latin America draws upon visiting domestic and foreign scholars as well as faculty and students at UCLA with expertise in the development problems of Latin America. An average of five such individuals address the seminar each quarter.

Several special standing seminars have been held since receipt of the grant in the fall of 1970. These standing seminars are concerned with the development of theoretical and conceptual approaches to the study of education and development. The first of these standing seminars was held in the winter quarter of 1971 when a paper was presented by Professor David O'Shea based upon Gunnar Myrdal's model for social and economic development.

Through the Schools of Law, Engineering, Public Health, Education, and Social Welfare, and through the Departments of Anthropology, Sociology, Psychology, Economics, History, Political Science, and Linguistics, many different courses are offered concerning the areas of development. These course offerings guide most research, planning, and evaluation in education and development.

In accord with the development of UCLA as a resource base for solving multidisciplinary problems regarding education in Latin America, the Latin American Center instituted curriculum reforms in both its B.A. and M.A. programs. Students are encouraged to take courses outside of the traditional Latin American studies area while applying the theoretical and methodological principles to Latin American topics. Graduates and undergraduates are able to spend a portion of their careers in Latin America supported by the 211(d) grant when their research relates to the study of educational phenomena.

Several special nondegree short courses have been conducted in Latin America through the grant. Among these, and on three separate occasions in Mexico and Venezuela, week-long workshops on the institutionalization of change in higher education have occurred. These sessions concentrated on alternative methods of curricular planning in professional schools.

A two-week short course involving nine Venezuelan educators concerned with planning community colleges as alternatives to traditional higher education tracks in Venezuela was conducted by UCLA faculty at UCLA during the Spring quarter. Discussions centered around community college research, planning, and evaluation models appropriate to Venezuela.

### C. Service

Consultantship activity has proceeded during the past year in several ways. Besides those in the community college short course, several other Venezuelans, including two vice-ministers of education, were on campus at

other times to discuss the development of such colleges. Several UCLA educators have collaborated with Guatemalans concerned with developing a literacy program, and with Venezuelans and Mexicans concerned with curricular change in higher education. Collaborative work has also proceeded with private foundations in Venezuela and Mexico, and with AID personnel in Mexico, Guatemala, Venezuela, and Brazil. It is felt that one of the most beneficial ways UCLA has carried on consulting work results from the faculty and students who carry out research activities with host country counterparts in Latin America.

#### D. Relations with Latin American Institutions

Increasing the possibilities for pursuing research with Latin American institutions concerned with education and development has been a concerted goal of the University through the grant funds. To date, considerable success has been achieved in this area. Several private and public institutions in Mexico, Guatemala, Costa Rica, Panama, Venezuela, Peru and Brazil have requested and received UCLA students and faculty as colleagues in various research efforts. Students and faculty are also able to take advantage of the Centro Latinoamericano de Venezuela, a special institution created 10 years ago to bring together UCLA's Latin American Center and a large number of Venezuelan institutions for the purpose of sharing resources and reaching common goals. More than 10 students and faculty used the resources of the Centro during the 1970-1971 academic year.

## E. Staff

In order to adequately administer the grant funds several faculty and staff members at UCLA have taken on new responsibilities. One professor, a specialist in Latin American Education and Assistant Dean of the School of Education, now functions as coordinator of the substantive operations of the grant. The Director and Associate Director of the Latin American Center, along with the coordinator of the grant, constitute the Grant Coordinators' Committee and are charged with administering the programs conducted through the grant. Also under the grant, a full-time professional statistician, researcher, and computer programmer has been secured to assist in the preparation and editing of empirical research studies emanating from the Latin American Center. Other individuals whose roles and functions have changed as a result of the grant include a Latin American bibliographer in the University Research Library who is engaged in the collection and preparation of source materials on education and development in Latin America; a full-time assistant librarian has also been acquired to assist in this task. Several other professionals, including Latin American educators, have been enlisted to provide consultant services to the operations of the grant.

These include one educator who is charged with planning and conducting seminars on higher education and two consulting anthropologists who, in addition to advising the committee on particular aspects of sociocultural research, conduct specialized research of their own among indigenous populations in Latin America. Additional resource people include a full-time

editor for publications and an educator specializing in Latin American development.

#### F. Publications

UCLA has also benefited from the grant through support of the Latin American Center's publications. The Latin American Center is committed to publishing the results of its many varied investigations on education in Latin America in the form of monographs, anthologies, and research papers. At present several theses are in press and the Center is publishing the only anthology on education and development in Latin America, entitled Education and Development: Latin America and the Caribbean. In addition, The Statistical Abstract of Latin America, also published by the Center, has initiated specialized analyses of statistical series on education in Latin America.

#### G. Library Resources

Library resources have also received considerable attention. Through the combined resources of the Education/Psychology Library and the Latin American section of the University Research Library emphasis has been placed on augmenting existing information sources on education in Latin America through acquisition of government documents, journals, monographs and other items pertaining to research on the role of education in the development process.

II. OBJECTIVE AND SCOPE OF PROPOSED  
PROGRAM

## II. Objective and Scope of Proposed Program

The project to be carried out under this grant was designed to build upon the existing and expected expansions in the broad-based Latin American resource activity at UCLA. The grant was to be used by the Center to develop a framework for an integrated approach to interdisciplinary research problems and to develop among faculty and students improved capabilities for future research, teaching, and consultation in the University, in development agencies, and in Latin America. This was to be accomplished through a series of studies, courses, seminars, visiting lectureships, and an interchange of ideas and concepts with individuals in developing countries and in national and international agencies.

Interrelated approaches of this project are:

1. To develop instruments and procedures for analysis of alternatives to traditional educational processes and, within the financial possibilities of the grant, to collect, analyze, and interpret aggregate data for (a) subnational, and (b) national levels of selected educational problems.

To this end, the adequacy of educational services in terms of manpower needs and social demands will be examined. Problems in patterns of specialization and course offerings currently available will be assessed. Content in formal and informal educational programs will be evaluated in relation to achievements, efficiency, and cost as well as high dropout and repeat rates of the school-age population. Such analyses involve (a) the

study of the appropriateness of selected alternatives with regard to sub-cultural contexts and the continuity between family and society; (b) the comparison of selected educational alternatives across regional and national boundaries with regard to their economic and social value in modernization; and (c) possible application of findings to other Latin American countries where similar problems may be alleviated as a result of experimentation with alternatives.

2. To isolate and examine sociocultural considerations in educational development.

Under this objective, studies will be conducted by faculty and graduate students through an interdisciplinary approach on the way in which identifiable sociocultural factors interact with the educational process. Investigation will involve: (a) studies of selected value orientations of potential students; (b) examination of such orientations as they relate to educational change; (c) description of representative religious and world view orientations as they are believed to affect educational programs; (d) systematic evaluation of these religious and world view orientations as they actually interact with policy. In this manner we will suggest the congruence of curricular and pedagogical approaches to subcultural groups with particular social and occupational goals. Such analysis will provide an assessment of the relevance of selected current and planned educational programs as well as offer some general guidelines for future planning.

3. To investigate economic considerations in mass education of potential students.

Analysis of patterns in cost of mass education will involve representative examination of (a) enrollment by subject; (b) student-teacher ratios; (c) grade and age level offerings; and (d) highest level of schooling or training achieved. These data will be correlated with representative data on age cohorts for occupational sectors in order to interpret the background of differential economic growth rates. Educational costs will be calculated in relation to efficiency in planning for projected dropout rates, school construction, and physical plant size. The resulting assessment will include evaluation of (a) varying educational needs in relation to economic production needs; and (b) policy options in the area of technical planning.

4. To examine the application of systems of educational technology as related to educational productivity.

This approach involves investigation of (a) aspects of educational attainment levels; (b) cost benefit effectiveness of alternative programs; (c) relevancy of technology to the job to be performed in relation to needs and funds available; and (d) evaluation of alternative mixes of such things as educational time periods, pupil-teacher ratios, class size, and teacher training requirements.

5. To relate rural-urban considerations to the process of educational development.

This approach subsumes (a) examination of differences in the needs of rural and urban educational programs as well as (b) analysis of the kinds of investigation appropriate under different and varying conditions.

A related topic of study involves (c) some neglected aspects of community and village educational development in Latin America. Analysis of social indicators for local units in the 1960 and 1970 population censuses will not only permit interpretation of the social and economic context of rural educational problems but will provide a focus for training and research projects in those countries in Latin America where statistical agencies have agreed to develop comparative data analysis.

6. To provide a project focus within the Latin American Center which will guide research and provide training and educational opportunities for professional staff members of domestic, international and foreign agencies through seminars, symposiums, and regular University course work.

UCLA, through existing or planned and new courses to be developed under this grant, will be prepared to accept and give individuals from less developed countries an advanced and specialized education in analysis of socioeconomic data and formulation of educational models, and it also will be prepared to integrate administrators and researchers from domestic agencies into a carefully focused program. Faculty and students preparing to work with international and national development agencies will gain experience in working in multidisciplinary seminars, courses, and a third-year workshop-symposium, which is scheduled to evaluate the research framework and its results.

III. MAJOR ACCOMPLISHMENTS, 1970-1971

A. Development of Teaching Resources

### III. Major Accomplishments, 1970-1971

#### A. Development of Teaching Resources

##### 1. Curriculum Reform and Implementation

Bearing in mind the overall purpose of 211(d) legislation and the major shortcomings in most area study approaches, the Latin American Center developed its 1970 proposal for AID funds with special regard for its attempt since 1963 to strengthen UCLA's interdisciplinary research, evaluation, and consultation or service capabilities for a major area of the developing world. Thus, resulting curriculum reform and related program revisions introduced in January 1971 are directly related not only to UCLA's internal development plans but to a concomitant outgrowth of AID funding.

UCLA Latin American B.A. and M.A. curriculum reform has been directly related to the purposes stated in Section 211(d), which include making institutional grant awards available:

To develop or enlarge centers of competence by strengthening (1) teaching capability, including restructure of curricula as necessary, (2) relevant research capabilities, including the graduate level, (3) advisory services, (4) publication and dissemination of the methodologies and findings as utilized not only by AID but all organizations concerned with international development, and (5) pertinent library inventories and services.<sup>2</sup>

Implementation of the grant has involved each of the above five goals (discussed in detail below), and ongoing evaluation of UCLA's five-year program promises high refinement of institutional and AID goals with regard to curriculum reform.

Goal 1. Prior to the curriculum revision instituted in January 1971, UCLA's Latin American Center had specialized in building departmental strength as a basis for genuine interdisciplinary cooperation. Needless to say, without a high quality instructional staff in the University's

<sup>2</sup>Adapted from Foreign Assistance Act of 1966, Title II, Section 211(d), Entry 19006, "Institutional Centers to AID Foreign Development."

departments and professional schools (the linkage of these units being a UCLA innovation), the development of a coordinated and highly integrated program would not have been possible. Fortunately, by 1970 UCLA had achieved the desired infrastructure necessary to make curriculum revisions a real possibility, and the award of a grant-in-aid under the International Institutional Development Grants Program has enabled us to develop major changes in B.A. and M.A. degree requirements.

Under the new B.A. plan, selected students are encouraged to spend a portion of their undergraduate careers in Latin America, where they may directly learn the language and culture of the area. In order to give students opportunities to develop field research at an early stage in their careers and to encourage students to obtain on-the-job experience in national and international development agencies while receiving full academic credit, the curriculum has been liberalized within a carefully formulated framework.

Students are no longer required to take specific courses in disciplines but rather are permitted to take any course in a core of social science disciplines. When a particular theory or methodology course does not contain explicit Latin American content, the student may take the course upon agreeing to apply the principles of the course to Latin America. This aspect of the program simplifies transfer of credit for work in Latin America and enables Latin Americanists to become aware of rapid advances in other fields, especially in regard to theory and methodology.

In this manner, the revised B.A. program in Latin American Studies helps to overcome the criticism that area studies programs

have had very little impact on undergraduate education within their institutions: [and] more important, perhaps the output of their scholarship--in men and materials--has had relatively little effect (for the money invested in such studies) upon U.S. society and its understanding of other societies.<sup>3</sup>

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<sup>3</sup>Allan A. Michie, *Higher Education and World Affairs* (New York: Education and World Affairs, 1968), p. 20.

Goal 2. The development of relevant research capabilities is closely intertwined not only with curriculum revision at the M.A. level but with providing a resource base of men and materials that will have an impact upon U.S. society and its relationship to Latin America. The Center now cross-lists two courses offered through the Graduate School of Education (these will be discussed in some detail in the following section on course offerings). In these project-oriented courses, students are prepared for (a) alternate periods of course and field work leading to the ultimate preparation of a thesis series for publication by the Latin American Center and (b) critical analysis of Center materials being prepared for publication. Thus, the student's research capabilities are linked to a curriculum reform which is intended to increase research output in several practical ways.

Goal 3. In order to achieve effective interaction of Goals 1, 2, 4, and 5, the achievement of Goal 3 has involved the reorganization of the Center's advisory services. At the same time that the AID proposal was submitted in 1970, undergraduate and graduate advising of students was integrated into a single office under the direction of the Center's Associate Director, who has been charged with developing a long-range plan for students moving from the B.A. into the M.A. program. Many of the curriculum revisions which emerged in January of this year were developed from student interviews. Not only has the Center guided students, but in turn it has sought guidance from students on the restructuring of programs. The results have led to the new B.A. and M.A. programs,<sup>4</sup> with guidelines to students and faculty for administration of the new M.A. Comprehensive Examination and Thesis plan options. In the Comprehensive Examination plan, students must develop an interdisciplinary approach which was not possible when all students were

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<sup>4</sup>Printed copies are available from the Center.

expected to develop a thesis and when the faculty did not meet to examine the student's ability to relate knowledge across interdisciplinary lines. Under the new M.A. plan, only selected students are encouraged to write a thesis; this development is especially encouraged in relation to the project-oriented education program financed by 211(d) funds. In this latter case, the model being developed for special multidisciplinary competence in the analysis of education is expected to be transferred to other project-oriented topics in Latin American Studies by 1975-1976, with valuable advisory inputs projected for the scheduled 1972-1973 conference which will develop midcourse corrections in AID grant activities.

Advisory and curriculum reform activities since initiation of the AID grant in 1970-1971 have already resulted in the increased output of high-level manpower in that officials of government and international development agencies who return to school for one year of midcareer training can now obtain an M.A. degree in Latin American Studies in as few as three quarters. Previously, the lack of coordination in advisory and curricular problems meant that the attainment of an M.A. degree could take as long as two years. The new program permits these officials to participate in the interdisciplinary program and bring their field experience as well as theoretical and methodological experience to our programs. In short, our new program means that not only do our students learn from us but that we learn from them; at the same time officials can return to their agencies with a degree rather than merely a transcript listing diffuse course work.

Goal 4. As noted above in Goal 2, faculty and students are now working together to prepare thesis materials for dissemination. It is important to note that under Goal 1 the faculty is encouraged to cooperate with students to provide the broad infrastructural basis required for success of Goal 2.

In several cases faculty and student cooperation has led to preparation of statistical papers for inclusion in the Center's Statistical Abstract of Latin America Series.

Goal 5. The development of library resources (to be discussed in a later section), especially in relation to statistics on education and the socioeconomic structure which frames educational problems, provides a sound basis for curriculum reform. Without the resources provided by AID, our long-range development plans for Latin American Studies at UCLA would have been held back for 10 to 15 years.

In summary, it is apparent that the Center's curriculum reform is inextricably related to the overall AID grant-in-aid project to develop the institutional capacities of UCLA in its ongoing study of Latin American problems. The introduction of new B.A. and M.A. programs and the development of courses on education in Latin America not only provides a model for expanding Center activity in other project areas but also permit faculty and student cooperation on a multidisciplinary basis, which helps to bridge traditional barriers within the University itself. Clearly, the development of the University as a resource base for solving multidisciplinary problems is a vital ingredient in the problem-solving process, and within these broad goals curriculum reform is a most important factor.

## 2. Course Offerings on Education in Latin America

The Department of Education at UCLA offers a Ph.D. degree in the area of Comparative and International Education with specializations in Latin America, Asia, Africa, and Europe. Two courses dealing specifically with education in Latin America are offered through this program. One of these is an introductory course which surveys the role and function of schooling in Latin America and the other is a research seminar on educational problems and issues in Latin America. Both the introductory course and the seminar are graduate-level offerings open to students enrolled in any department at UCLA.

The introductory course surveys the cultural, economic, and political institutions of Latin America as they pertain to increased understanding of the educational systems. The focus of the course, however, is empirical research on Latin American education. The articles comprising Professor Thomas J. La Belle's anthology, Education and Development: Latin America and the Caribbean, are used as the primary sources for the generation of this knowledge. This book will be published by the Latin American Center during the summer of 1971. The research for the book was undertaken through funds provided under the 211(d) grant-in-aid. This is the first anthology to be published on education in Latin America and represents a tangible outcome of the research and teaching effort of the grant. The following comprise the contents of the book:

### SECTION 1: Progress in Meeting National Needs

Education and Development in Latin America by J. Roberto Moreira

Development of Education in Latin America Since the Santiago Plan by Michel Debeauvais

The Futility of Schooling in Latin America by Ivan Illich

SECTION 2: Social, Political, and Economic Goals

Values, Education, and Entrepreneurship by Seymour Martin Lipset

Education and Political Development: The Latin American Case by W. Raymond Duncan

Forecasting Manpower and Education Requirements for Economic and Social Development in Peru by James V. Cornehl

The Political Economy of Education by Martin Carnoy

SECTION 3: Structure and Function of Educational Systems

Educational Differentiation and National Development: A Statistical Study by Joseph P. Farrell

Educational Reform in Colombia and Venezuela: An Organizational Analysis by Mark Hanson

The Organizational Climate of Paraguayan Elementary Schools: Rural-Urban Differentiations by James Stimson and Thomas J. La Belle

The Geography of Youth Employment and School Enrollment Rates in Mexico by Phyllis Goldblatt

Economic Development and Changes in the Composition of the Teaching Staff of Secondary Schools in Brazil by Aparecida J. Gouveia

SECTION 4: Social and Educational Change

Democratization and Class Segregation in Puerto Rican Schooling: The U.S. Model Transplanted by Leila Sussmann

Education and Pluralism in Selected Caribbean Societies by Joseph P. Farrell

Education and Social Stratification in Contemporary Bolivia by Lambros Comitas

The Cuban Revolutionary Offensive in Education by Gerald H. Read

SECTION 5: Perspectives on Students and Schools

Peasants' Sons in City Schools: A Inquiry into the Politics of Urbanization in Panama and Costa Rica by Daniel Goldrich

Socioeconomic Development and Secondary Education in Brazil by Robert J. Havighurst and Aparecida J. Gouveia

Preference for Different Types of Secondary School among Various Ethnic Groups in Sao Paulo, Brazil by Aparecida J. Gouveia

Discrepancy between Goal and Function in Educational Planning: The Guatemalan Experience by T. David Williams

Individual Decisions and Educational Planning: Occupational Choices of Venezuelan Secondary Students by Gordon C. Ruscoe

SECTION 6: Rural Environments

Rural Education and Socioeconomic Development in Brazil by J. Roberto Moreira

The Role of Village Schools in the Process of Cultural and Economic Modernization by Manning Nash

Culture and Education in the Midwestern Highlands of Guatemala  
by Robert Redfield

The Development of an Educational System in a Rural Guatemalan Community by Oscar H. Horst and Avril McLelland

Formal Schooling by Gerardo Reichel-Dolmatoff and Alicia Reichel-Dolmatoff

SECTION 7: Language and Literacy in National Integration

Language and Education in Paraguay by Joan Rubin

National Identity and the Language Issue in Puerto Rico by Erwin H. Epstein

Functional Literacy among Colombian Peasants by Everett M. Rogers  
and William Herzog

The Paulo Freire Method: Literacy Training and Conscientización  
by Thomas G. Sanders

SECTION 8: Continuity and Change: University Students

University Autonomy and Academic Freedom in Latin America by Luigi Einaudi

A Comparison of the University Reform Movements in Argentina and Colombia by Kenneth N. Walker

University Students in a World of Change: A Colombian Sample  
by Robert C. Williamson

Determinants of Castro Support among Latin American University Students by Kenneth N. Walker

Education and Social Change: The Argentine Case by David Nasatir

University Experience and Political Unrest of Students in Buenos Aires by David Nasatir

The Professional and Political Attitudes of Chilean University Students by Myron Glazer

The seminar on education in Latin America is designed to give students an opportunity to investigate recent research on Latin American education, pursue the preparation of research proposals prior to conducting their own research in Latin America, and analyze and present their research findings. Because the seminar is offered in the fall and spring quarters, students are

able to prepare themselves to undertake field research in the winter or summer and to return to campus the following quarter to participate in the seminar and report their results. If research in Latin America is not immediately anticipated, students are asked to write a library research paper on a topic related to Latin American education. Individual proposals and papers are presented to members of the seminar for general discussion of content and methodology. Twelve students have enrolled in the seminar this year. Five of these students will have been supported by the grant and will have conducted their research and returned to campus by the fall quarter, 1971.

The seminar also concerns itself with individuals who are active in Latin American education but who are neither students nor faculty members at UCLA. During the fall quarter, two such individuals were invited to address the seminar. The first, Mr. Ernie Maes of San Diego, California, spoke on "Education: The Nature of Technical Assistance Programs in Latin America" and the second, Mr. John McFadden of the University of California at Santa Cruz, spoke on "Paulo Freire: The Man and His Method."

### 3. Special Seminar on Education and Development

Mechanisms were instituted to involve as many members of the University community as possible in the evaluation and orientation of the grant. Also, a special seminar was held during the academic year to discuss possible theoretical approaches to the study of education and development. The seminar was co-sponsored by the Latin American Center and the School of Education for the purpose of increasing the correspondance between students and scholars and encouraging creative scholarship on education in Latin America. The seminar was held on March 3, 1971, with faculty representatives from the Departments of Anthropology and Latin American Studies and from the Schools of Education, Engineering, and Law.

A special paper on the role of education in the development process was prepared for this meeting by Professor Dave O'Shea of the School of Education.<sup>1</sup> The 48-page paper, Education, Underdevelopment, and Developmental Processes: Some Current Ideas and Suggestions for Further Research, adopts the development model of Gunnar Myrdal and relates research reports to the key aspects of relative underdevelopment and development. Treating Myrdal's theoretical approach as a tentative model, Professor O'Shea's paper raises a series of questions concerning the model's applicability for analyzing the process of development and generates several hypotheses regarding the role and function of institutional and noninstitutional schooling as potential contributors to development.

The seminar served an important function. It brought together individuals from different disciplines to relate to a single concern; in this sense it contributed to dialogue among scholars. In addition, the seminar served

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<sup>1</sup>Copies of this paper are available upon request from the Latin American Center.

as an instrument for augmenting the information base on education and development and thus was an incentive to promoting research thrusts within the parameters of the grant.

III. MAJOR ACCOMPLISHMENTS, 1970-1971

B. Development of Research Competence

## B. Development of Research Competence

The Grant Coordinators' Committee, in determining whether an individual project merits support, asks the following types of questions. 1. Is the study directed toward the investigation of either institutional or non-institutional schooling in the development process? 2. Does the investigator have the requisite research capabilities, including linguistic and related Latin American experience, to adequately undertake the proposed research? 3. Will the study provide data and conclusions relevant to solving problems recognized by host country institutions? 4. Does the investigator have individual or institutional sponsorship in Latin America to conduct the research?

The projects listed on the following pages are those which were funded between October 1970 and June 30, 1971, in accord with the objectives of the grant. The complexity of studying educational phenomena and the interrelated nature of the objective of the grant preclude the placement of any one project under one specific objective. For this reason, the following abstracts include an indication of the several objectives to which each project relates.

1. The following studies analyze alternatives through concentration on sociocultural variables in a rural context. The rationale for support of these projects rests with the assumption that most learning occurs outside of school and consequently influences in-school content and process. The instruments and procedures for analysis are drawn from several related disciplines.

Kenneth Ruddle: Education in an Indigenous Venezuelan Society of Incipient Cultivators--The Yukpa Case

Dr. Ruddle's investigation concerns both institutional and noninstitutional schooling as well as enculturative processes among the Yukpa Indians of Venezuela. Agricultural extension programs of various private and governmental organizations are analyzed for their influence on crop and animal assemblages. Cultivation technologies also are studied. These more formal

operations are contrasted to the patterns of traditional behavior evident among the Yukpa. This project is part of a larger investigation headed by Professor Johannes Wilbert on enculturation and schooling among the indigenous populations of Venezuela. Dr. Ruddle is a geographer and a member of the Latin American Center staff. (Objectives 1,2,5)

Field work: summer, 1971

Lawrence Watson: A Study of Socialization and Education Adjustment among Venezuelan Guajiro Urban School Children

The purpose of this project is to identify the socialization and socio-cultural variables that predispose successful educational adjustment among Guajiro urban school children in Maracaibo, Venezuela. The study is designed to test the hypothesis that the Indian child is successful in his school performance only when the parents understand the requirements of the new urban environment and are able to convey to the child an accurate picture of the relevance of education for achieving valued urban goals. The children's adjustment behavior in the classroom and parental behavior which impinges upon the children's attitudes are important variables to be investigated. Dr. Watson is an associate professor of anthropology at San Diego State College. He has done extensive field work among this large indigenous society of Colombia and Venezuela. (Objectives 1,2,5)

Field work: summer and fall, 1971

Barbara Watson: Concepts of Education among the Guajiro of Venezuela with Emphasis on Education for Girls

Dr. Watson is investigating traditional educational concepts among Guajiro Indians with emphasis directed toward influences of urban residence on socialization patterns. Implications for the design of institutional schooling programs for female Guajiro Indians are anticipated. This project is part of a larger investigation headed by Professor Johannes Wilbert on enculturation and schooling among the indigenous populations of Venezuela. Dr. Watson's investigation is oriented toward the enculturative factors which, in a matrilineal society, tend to promote special behavior patterns for women. Dr. Watson has a Ph.D. in Anthropology and is associated, through research activities, with the Latin American Center. She has conducted previous field work among the Guajiro which formed the basis of her doctoral dissertation. (Objectives 1,2,5)

Field work: summer, fall, and winter, 1971-1972

Karen B. Reed

Karen B. Reed embarked on a long-term study of culture-specific schooling in relation to economic development among Indian populations in highland Guatemala and western Mexico. A monograph by her focusing on educational and other development projects by the Mexican Instituto Nacional Indigenista among the Huichol Indians of Nayarit and Jalisco will be published in Spanish under the auspices of INI and the Mexican Secretariat of Public Education in 1971. In the second phase, during 1971/72, she will undertake a study of the present status of culture-specific education for

Mexican Indians in general, in light of recent changes in responsible government personnel and policy. The project is so designed as to generate optimum guidelines for educational programs specifically designed for the indigenous population. The project has the approval and cooperation of the relevant Mexican educational and Indianist authorities, specifically Dr. Gonzalo Aguirre Beltran, Undersecretary of Education for Cultural Affairs, and Professor Salomon Nahmad Sitton, director of the Direccion General de Educacion Extraescolar para el Medio Indigena in the Secretariat of Education. (Objectives 1,2,5)

Field work: summer, 1971

Peter Furst: Enculturation and Schooling among the Huichol Indians of Mexico

Through ethnographic research, including film and recordings, Dr. Furst is studying both the enculturative and the noninstitutional aspects of schooling among the Huichol Indians of western Mexico. The project focuses on the transmission of traditional Huichol values and skills to the younger generation within this relatively intact, aboriginal culture. Major emphasis will be placed on the several ways children learn the religious and ritual aspects of becoming a Huichol. Professor Furst is an anthropologist. He has conducted considerable prior research among the Huichol. This research is being pursued with the cooperation of the Ministry of Education and the Instituto Indigenista of Mexico. (Objectives 1,2,5)

Field work: summer, 1971

Johannes Wilbert: Enculturation and Noninstitutional Schooling among the Warao Indians of Venezuela

Dr. Wilbert will conduct a comprehensive study of the enculturative and noninstitutional aspects of schooling among the Warao Indians of Venezuela. The study proposes to describe the general process of socialization and to probe the socioeconomic importance of more structured schooling arrangements that exist for the purpose of transmitting religious knowledge. This study of enculturation and schooling of a subsistence-level society will be complimented by Heinen's study which examines formal missionary and secular schooling among the same tribe. Insight into the autochthonous and acculturated tribal life is expected to produce guidelines for the formulation of meaningful curricula which take into consideration both traditional values and exigencies of the modernization process. (Objectives 1,2,5)

Field work: summer, 1971

Dori Reeks: Psychological Techniques as a Tool for Educational Reform in Rural Bolivia

Over the past 250 years the much abused Mojos Indians have been under the influence of different missionary and political pressure groups. They have attempted to replace the autochthonous value systems with European patterns of thought. The modern descendants of the Mojo, known as the Trinitarios, have succumbed to the psychological pressures

and, like so many acculturated Indian societies of Latin America, have adopted a fatalistic outlook on life. Miss Reeks has spent her term as a Peace Corps Volunteer with the Trinitarios and is convinced that large parts of rural Bolivia are affected by much the same fatalism. She has been asked to examine the situation among the Trinitarios from a social psychological point of view and recommend specific techniques that would bring about positive reforms. (Objectives 1,2,5)

Field work: spring, 1971

2. Implied in most of the studies which concentrate on schools and alternatives to schools is a concern with the institution's impact on the population which it serves and on the environment in which it is located. The community is viewed as one extremely important consideration in terms of what is expected from these institutions in the fulfillment of aspirations and expressed needs. Thus, these studies encompass additional instruments and procedures for assessing the importance of schools and alternatives as they relate to sociocultural aspects of rural and urban environments.

Ray Chesterfield: Education and Modernism in Two Venezuelan Schools

Mr. Chesterfield is gathering and analyzing data on the relationship between the economic setting in which schools are located and the attitudes of students and parents toward modernization. Two schools in western Venezuela, one located in a subsistence economy and the other in a market economy, were used to test Gunnar Myrdal's assumption that schools in these settings have a differential impact on attitudes and values. Mr. Chesterfield is conducting this research for his M.A. thesis in Latin American Studies. (Objectives 1,2,5)

Field work: winter, 1970

Vincent Gil: Differential Attitudes of a Mexican Urban Working-Class Community toward the Neighborhood Primary School

A federal school in Tijuana, Mexico is the basis for this investigation of parental attitudes toward neighborhood schools. The author conducted a census of the colonia which surrounds the school and is now utilizing several distinct questionnaires and personal interviews to ascertain the attitudes of the adult population toward education in general and the federal school in particular. The statistical analysis is being combined with reports from participant observation within the school to provide increased understanding of the school's role and function within the community. Mr. Gil, a Cuban, is conducting this study to generate data for his M.A. thesis in Latin American Studies. (Objectives 1,2,5)

Field work: winter, 1970

H. Dieter Heinen: Missionary and Secular Schooling among the Warao Indians of Venezuela

Mr. Heinen's investigation concerns the structure of institutional schooling maintained by both the missionaries of the Capuchine Order and the Venezuelan government for the Warao Indians of the Orinoco Delta. This project is part of a larger investigation headed by Professor Johannes Wilbert on enculturation and schooling among the indigenous populations of Venezuela. Mr. Heinen's contribution will revolve around in-depth studies of a sample of missionary and national schools in an attempt to formulate curricular designs meaningful to the modernization process. Mr. Heinen is a graduate student in Anthropology. (Objectives 1,2,5)

Field work: summer, 1971

William Lee: Documentary Film on an Elementary School in Mexico

Mr. Lee, in conjunction with Drs. Thomas La Belle and Peter Furst of the Latin American Center, and Mr. James Irwin, a student in Latin American Studies, has utilized Mr. Irwin's thesis on a private school in Tijuana, Mexico as the basis for the first documentary film on institutional schooling in Latin America. Mr. Lee has coordinated this project and filmed the school and its environs in the cinema verite technique. The 16-mm black and white film will be produced by the Latin American Center and is expected to be approximately 45 minutes in length. Mr. Lee is a graduate student in Anthropology and is a member of the research staff of the Latin American Center. (Objectives 1,2,5)

Field work: spring and summer, 1971

Wendy Friedman: The Effectiveness of Formal Education in a Highland Guatemalan Community

This project is designed to assess the effects of institutional schooling in transmitting both literacy skills and non-Indian attitudes and in creating higher academic and occupational aspirations of Guatemalan Indian youngsters living in a highland community. A purposive sample of all upper-grade children attending school, a random sample of children who do not attend school, and a random sample of the parents of these groups will be investigated through questionnaire and ethnographic techniques. Miss Friedman will utilize these data for her M.A. thesis in Anthropology. (Objectives 1,2,5)

Field work: summer, 1971

Barbara Ramsey: The Impact of Schooling on Cognition and Attitudes in Northeastern Brasil

The purpose of this research is to test for the impact of institutional schooling on cognition and attitudes in terms of racial categories in Brazil. The data for the study will be gathered from a random sample of 100 children at two grade levels in primary and secondary school, and their counterparts of the same age who are not in school. Miss Ramsey is to utilize these data in the preparation of her M.A. thesis in Latin American Studies. (Objectives 1,2,5)

Field work: summer and fall, 1971

3. Although most of the studies funded through the grant are concerned with the role and function of schools in order to better comprehend alternatives, the following projects are directly related to the various components which are characteristic of the operation of schools. These include studies of administrators, teachers, and the curriculum as integral aspects of the schooling process.

Jan Van Orman: Teachers' Attitudes in Venezuela: An Aspect of the Process of National Development

This project is part of a larger statistical and descriptive study on teachers in Latin America directed by Dr. Thomas La Belle. It proposes to investigate prospective secondary school teachers' attitudes toward occupational and career prestige and toward education as an aspect of the development process in two pedagogic institutes of Venezuela. Numerous independent indicators are used to assess the differential impact of background, field and year of study, and personal aspirations as they relate to the formation of attitudes. This project is being conducted with the cooperation of individuals from the two institutes and the Ministry of Education in Venezuela. Mr. Van Orman is a doctoral student in Education specializing in Latin America. (Objectives 1,2,3,4,5)

Field work: summer, 1971

Thomas J. La Belle: Teachers' Attitudes in Venezuela: An Aspect of the Process of National Development

This study proposes to investigate prospective secondary school teachers' attitudes toward occupational and career prestige and toward education as an aspect of the development process in two pedagogic institutes of Venezuela. Numerous independent indicators are used to assess the differential impact of background, field and year of study, and personal aspirations as they relate to the formation of attitudes. This investigation is part of a larger statistical and descriptive study on teachers in Latin America. The investigator, in addition to directing this project, will be establishing contacts with educational institutions for future research possibilities as coordinator for the 211(d) grant-in-aid. Dr. La Belle is also an Assistant Professor of Education. (Objectives 1,2,3,4,5)

Field work: summer, 1971

Nassim Mehedff: Statistical Abstract of Latin American Education: Teachers

This project involves a library search for statistical materials on teachers in Latin America and is being conducted in collaboration with Dr. Kenneth Ruddle, editor of the Latin American Center's Statistical Abstract on Latin America. It is the intention of the Center to publish a special series of

statistical monographs on educational issues in Latin America; this would be the first contribution. Mr. Mehedff is from Brazil and is a doctoral student specializing in education in Latin America. (Objectives 1,2,3,4,5)

Library work: fall, winter, and summer, 1970-1971

Elmer Dunsky: The Administration of Elementary Schools in the State of Guerrero (Mexico) and Its Relationship to the Socioeconomic Development of the Republic

Mr. Dunsky is investigating the role and function of the elementary school principal in the State of Guerrero, Mexico. He is concerned with illuminating the principal's functions as they relate to direct administration, supervision of teachers, pupil personnel activities, and public relations. This study will investigate these areas within the framework of Gunnar Myrdal's model of development and will use as controls both rural and urban environments in which the schools are located. This questionnaire and interview study will be the basis for a doctoral dissertation on educational administration. (Objectives 1,2,3,5)

Field work: summer, 1971

Winston Estremadoiro: El Programa Unico como Politica Educacional en Bolivia

This research describes the present educational policies in the rural areas of the altiplano of Bolivia. The investigator is analyzing the programa unico, or unified curriculum, in the policy-forming stage at the ministerial level and in the implementation stage at the level of the local school. The study focuses on the town of Calamarka and its environs, where the Aymara Indians reside. These two orientations will be contrasted in the research. The investigator, himself a Bolivian; is utilizing these data as a basis for his M.A. thesis in Latin American Studies. (Objectives 1,2,5)

Field work: winter, 1970

4. The investigation of institutional and noninstitutional schooling in the development process, including the collection of data at the macro and micro levels, is the subject of the following studies, which deal with economic, social, and political perspectives. They concentrate on what is the impact of schools and alternatives on the alteration of behavior through the collection of institutional as well as national and subnational data.

James Wilkie: Mexican Education and Social Indicators Project, 1930-1970

This project is an outgrowth of the investigator's book, The Mexican Revolution: Federal Expenditure and Social Change Since 1910. Through the use of census data Professor Wilkie will follow his macro study with a micro investigation of the quality of life within Mexico's 32 political entities in order to illuminate the function of education as part of a complex of variables, all of which place stress on social organization. By drawing on three sets of data, the author wishes to show how intensive base line information holds up over time and how the substructures of Mexican life must be central to successful political decisions if Mexico is to resolve technical problems of development. (Objectives 1,2,3,4,5)

Field work: summer, 1971

Philip Gillette: Mechanisms for Maintenance of Upper Class Monopoly of the Peruvian Higher Education System: An Historical Elite Analysis

This project concerns the examination of mechanisms utilized by the Peruvian upper class to maintain inequality of access to higher education in the period 1895 to 1970. Data on the historical development of Peruvian educational institutions, including organizational, curricular, and philosophical bases, will be utilized as will an analysis of the political and sociocultural milieu of the country in order to discern the reasons for the elitest orientation in educational policy. Mr. Gillette and his associate, Mr. Bill Bollinger, are graduate students in Latin American Studies. (Objectives 1,2)

Library research: 1971

C. Paul Roberts: Analysis of Higher Education As an Investment in Costa Rica

Mr. Roberts is conducting a comprehensive analysis of the costs and benefits of educational services to both society (the macro approach) and to the individual (the micro approach), with special emphasis on higher education in Costa Rica. Two techniques comprise the macro approach: the social internal rate of return and the Klinov-Malul benefit/cost model (a variation of the standard present value technique). The macro approach will focus on a comparison of the primary, secondary, and tertiary levels of education, whereas the micro approach will concentrate specifically on higher education. Mr. Roberts is a doctoral student in Economics and is working closely with the Ministry of Education in Costa Rica in completing this study. (Objectives 1,2,3,4,5)

Field work: winter, spring, and summer, 1970-1971

Leroy Hoinacki: Religious Motivation and Political Socialization in Venezuela

Mr. Hoinacki is investigating religious motivation, socialization, and resultant behavior among Venezuelans involved in the founding and leadership of the Christian Democratic party. It is anticipated that the study will increase understanding of the impact that religious and political training has on the behavior of publically active citizens in Venezuela. This study analyzes the

International Center for the Formation and Training of Christian Democratic Activists as well as other formal educational activities in which such individuals have been engaged. Mr. Hoinacki is utilizing these data for his doctoral dissertation in the Department of Political Science. (Objectives 1,2,5)

Field work: fall, winter, and spring, 1970-1971

James W. Wilkie: Land Reform and Educational Policy in Bolivia and Venezuela

This study will examine Venezuela's and Bolivia's hopes of easing urbanization through programs of land distribution to the peasant. Implications for long-term educational policy in meeting the educational needs of the rural populace will be made clear and related to political decisions in the two socially distinct countries. The relationships among heads of families, family size, and land productivity by region in various presidential periods are used to gauge the impact of national policy on the rural area. Dr. Wilkie is an Associate Professor of History and Associate Director of the Latin American Center. (Objectives 1,2,3,5)

Field work: summer, 1970

Susan Kaufman: Educating Women for a Modern Society: The Cuban Case

This investigation seeks to analyze Fidel Castro's policies of "reeducation" in Cuba. The policies are designed to change the traditional role of Cuban women, thus enabling them to participate in the new Cuban society on equal terms with males. Examination of political, economic, and social programs and of specific institutional aspects of schooling are planned in order to illuminate Castro's program. This research will be carried out through documentary evidence and will be directed toward modernization of the individual in society. Dr. Kaufman is an Assistant Professor in the Department of Political Science. (Objectives 1,2,3,5)

Library research: summer, 1971

Thomas La Belle: Anthology Entitled Education and Development: Latin America and the Caribbean

This project involves: (1) a survey of the literature on education and development in Latin America and the Caribbean, (2) the selection of scholarly research papers, both published and unpublished, on the topic, (3) securing permission from publishers for reprinting selected contributions, and (4) organizing and preparing the articles for publication. All of the above have been accomplished during this academic year and the completed anthology, the first in the field on Latin America and the Caribbean, will be published by the Latin American Center during the summer of 1971. The book contains 37 articles on education and political, social, and economic development. Dr. La Belle is an Assistant Professor of Education and Coordinator of the AID 211(d) grant at the Latin American Center. (Objectives 1,2,3,4,5,6)

Library work: fall, winter, spring, and summer, 1970-1971

E. Bradford Burns: Intellectual Origins of Brazil's Modern Educational Problems

This project will focus on the educational plans and ideas of the more progressive elite in Brazil during the nineteenth century and suggest how these ideas are reflected in Brazil's educational system today. This case study of the impact of education on the modernization of the major Latin American nation will take into account the precedents in Brazilian educational history which impinge on current reforms in Brazil. Dr. Burns is Associate Professor of Latin American History. (Objectives 1,2,5)

Field work: summer, 1971

Milton Roemer: Schooling in Rural Health Centers in Mexico: Impacts on Health Behavior and Health Status

This project focuses on the health behavior of two rural populaces in Mexico. One of the matched communities is served by a rural health center; the other is not. The impact of the center will be assessed in terms of its efforts to provide instruction leading to behavioral changes in such areas as nutrition and child care. The project is being conducted by Drs. Milton Roemer and Hector Garcia of the School of Public Health. Dr. Garcia is also associated with the Mexican School of Public Health and the Division of Health Education in the Secretaria de Salubridad y Asistencia in Mexico. (Objectives 1,2,3,4,5)

Field work: summer, 1971

Kenneth Karst: Effects of the Mexican Ejido on Development Attitudes and Behavior

The research by Professor Karst centers on the role of law as an integrating thread in the development process. Following his previous study of the urban barrios of Caracas, the investigator is turning his attention to rural ejidos in Mexico as informal educational mechanisms of the development process. The ejidos are studied as "alternatives" to institutional schooling and as a means to "participatory development," thus providing information through which it may be possible to capitalize on attitudes and behaviors conducive to development. Dr. Karst is a Professor of Law at UCLA, and his major interests concern Latin America. (Objectives 1,2,3,4,5)

Library work: summer, 1971

5. There are several investigations and activities which attempt to augment the University's resources for coping with the problems and issues of national development and which support the Latin American Center as a research, training, and service institute.

Several of the sections of this report directly concern this area. Such activities include: the incorporation of the Deans' Advisory Committees into the education grant-in-aid project, making the project truly multidisciplinary; the planning of a special seminar on education and development involving further faculty participation; the Latin American Center's extensive curriculum reform, encouraging increased student flexibility in the planning and execution of a studies program; the course offerings on education in Latin America co-sponsored by the Center and the School of Education; the examination, analysis, and augmentation of library holdings and resources; and the changes in orientation and content of the Statistical Abstract of Latin America. In addition, the following projects have been funded and are felt to be directly related to institutional building:

#### Education/Psychology Library: Acquisitions

The Education/Psychology Library at UCLA houses all materials directly related to the field of education. This grant provides funds for the acquisition of books, theses and dissertations, periodicals, special reports, and other materials related to the role of education in national development with special reference to Latin America. In addition, similar materials which are related to the fields of comparative and international education and provide substantial data or theoretical perspectives on the role of education internationally are also being purchased. (Objective 6)

#### Student Association for Latin American Studies (SALAS) Conference: "Dependence in Latin America: Problems and Solutions"

The Student Association for Latin American Studies Conference was held at the University of California Conference Center, Lake Arrowhead, California on March 5-7, 1971. The invited scholars included Frank Bonilla, Julio Cotier, Paulo Freire, Maria del Rosario Green Macias, Arnold C. Harberger, Anthony Leeds, Osvaldo Sunkel, and Maurice Zeitlin. Each of the scholars prepared and discussed a paper developed on the interrelated theme of educational, intellectual, and economic dependence on foreign influence. More than 100 students and faculty members participated in the proceedings, which were then taped for general reference. (Objective 6)

Simon Gonzalez: Mexican American Educational Leadership Project

Professor Gonzalez is exploring the possibilities of increased collaboration of institutions of higher learning in Mexico and the U.S. in an attempt to provide institutional building in both countries. The project is concerned with reviewing the literature on this relationship in order to eventually submit a proposal to the Ford Foundation on Chicano and Mexican cooperative and exchange programs. Professor Gonzalez is an assistant to the Chancellor at UCLA and is primarily concerned with Mexican American education programs. (Objective 6)

Field work: winter, 1970

Elvin Svenson: UCLA-Venezuelan Institutional Relations

In an attempt to promote further long-range cooperative programs of research and training in education among UCLA and certain Venezuelan institutions, Dr. Svenson will visit several individuals associated with public and private agencies in Venezuela. Dr. Svenson is an assistant to the Chancellor and is involved with several international education programs. (Objective 6)

Field work: summer, 1971

III. MAJOR ACCOMPLISHMENTS, 1970-1971

C. Development of Competence for  
Consultations and Service

### C. Development of Competence for Consultations and Service

In connection with UCLA's involvement in research on Latin American education, several special projects have been undertaken which, although not supported by the grant, are related to the overall research thrust. One of these special projects concerns the development of community colleges in Venezuela. Such a project has interested UCLA faculty members because it pertains to both research and development and because it can be viewed as an alternative to existing higher education institutions in Latin America.

In January 1971, the Venezuelan government provided the legal bases for the development of institutos tecnicos, or postsecondary institutes directed at the training of middle-level technicians. The Ministry of Education followed the legislative action by authorizing the establishment of several such institutes, one of which is to be developed in the city of Cabimas on the eastern side of Lake Maracaibo. This particular institute, or community college equivalent, is to be owned and operated by the La Salle Foundation with support from the Creole Foundation, the World Bank, and several Venezuelan government ministries.

In early February 1971, Dr. George Hall, Executive Director of the Creole Foundation, and Brother Gines, President of the La Salle Foundation, arrived at UCLA accompanied by Alberto Armitano, Director of Basic and Technical Education of the Venezuelan Ministry of Education. A program of formal conversations among these individuals and more than 20 faculty members from the School of Education and other pertinent departments on campus was held during a period of two weeks. These individual meetings centered on such topics as educational planning, evaluation, student selection, curriculum development, library and learning resources, educational technology, language laboratories, the role and function of community colleges,

and a host of other topics. In addition to these discussions, visits to community colleges in the Los Angeles area were made to provide actual contact with existing institutions.

Following these visits the Latin American Center and the School of Education hosted Mr. Lorenzo Monroy, Director of Secondary and Higher Education of the Venezuelan Ministry of Education. Mr. Monroy also participated in numerous formal conversations regarding the development of community colleges and visited several institutions in the metropolitan area of Los Angeles. He is interested in the possibility of UCLA providing technical and professional expertise for the planning and establishment of the institutos tecnicos in Venezuela. During the week of meetings with Mr. Monroy, a program was planned for nine Venezuelan educators directly involved in the community college project.

The nine Venezuelan educators arrived in Los Angeles in mid-April for a 10-day seminar on community colleges. The program was sponsored at UCLA by the Latin American Center and the School of Education and arranged through the Council on Leaders and Specialists with a grant from the U.S. State Department. Two- and three-hour discussions were conducted by eight UCLA faculty members on the following topics: higher education in the U.S., planning a community college, curriculum planning, instructional strategies, learning resources, student services, and research and development. In addition, the nine participants were transported to three community colleges selected on the basis of their relevance to Venezuelan goals so that the theoretical concerns of the classroom could be seen as they apply to actual institutions.

The value of these discussions to both the Venezuelans and to UCLA is multidimensional. First, the knowledge gained by both parties enhances the probability of successful implementation of Venezuelan plans and possible

UCLA involvement. Second, the request for UCLA participation in these deliberations came from Venezuelans; thus the programs were designed to meet their particular needs as they defined them. Third, such programs enhance multiinstitutional involvement in technical assistance projects and promote closer ties between participants. Fourth, such programs contribute toward institutional growth at UCLA and augment the current thrust in areas of research and development on Latin American education.

It is too early to judge the concrete outcomes of these several programmatic activities, which have occurred over the past several months. It is evident, however, that the UCLA and Venezuelan participants found the sessions to be profitable and worthwhile. A research and development proposal has emanated from these discussions which is directed at UCLA involvement in the establishment of the private institute planned for Cabimas. It is anticipated that as this particular proposal is evaluated by potential participants it will be submitted for funding. If such funds are forthcoming, UCLA's involvement will be on a long-term basis and will be related to research on and the development of community colleges in Venezuela.

## 2. Additional Service and Consultantship Activity

During the 1970-1971 academic year several UCLA faculty were involved in collaborative endeavors with Latin Americans related to the analysis of educational phenomena. UCLA faculty, for example, have collaborated with Guatemalans concerned with developing a literacy program, and with Venezuelans and Mexicans concerned with curricular change in higher education. Collaborative work has also proceeded with private foundations in Venezuela and Mexico, and with AID personnel in Mexico, Guatemala, Venezuela, and Brazil. It is felt that one of the most beneficial ways UCLA has carried on consulting work results from the faculty and students who carry out research activities with host country counterparts in Latin America.

In this regard, increasing the possibilities for pursuing research with Latin American institutions concerned with education and development has been a concerted goal of the University through the grant funds. To date, considerable success has been achieved in this area. Several private and public institutions in Mexico, Guatemala, Costa Rica, Panama, Venezuela, Peru and Brazil have invited and received UCLA students and faculty as colleagues in various research efforts. Students and faculty are also able to take advantage of the Centro Latinoamericano de Venezuela, a special institution created 10 years ago to bring together UCLA's Latin American Center and a large number of Venezuelan institutions for the purpose of sharing resources and reaching common goals. More than 10 students and faculty members used the resources of the Centro during the 1970-1971 academic year.

III. MAJOR ACCOMPLISHMENTS, 1970-1971

D. The Involvement of Other  
University Resources

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1. The Latin American Center and the Dean's Advisory Committees

The grant is administered at UCLA through the Latin American Center. The Center is a multidisciplinary and interdisciplinary research and training unit which acts as the organizational and catalytic agent for numerous Latin American activities. The Center is organized around eight Deans' Advisory Committees representing eight schools and colleges at UCLA. These Committees, appointed by the Deans of the Colleges, meet on a regular basis with the Director and academic staff of the Center to consider the Latin American program within their colleges, schools, and departments and to plan for and advise on research and training projects of the Latin American Center involving their various disciplines. The chairmen of the eight Committees also meet as a Policy Committee advisory to the Director of the Center. Such a structure attempts to ensure that all areas of the campus are involved and permits one office to have an overview of all campus activities related to Latin America.

After the grant was approved on July 1, 1970 and the funds allocated in late August of the same year, these Deans' Committees became the primary units for the dissemination of information regarding the grant. In addition, these Committees, along with the Policy Committee, performed their roles as advisers and consultants to the Director and the academic staff of the Center in terms of the utilization of funds and the programmatic thrusts of the grant. The following Committees, with their respective members, met on two separate occasions during the academic year to discuss the grant and the potential contribution of the funds to research and training at UCLA. As will be noted in the following list, 18 such meetings, including two by the Policy Committee, were held during this period.

FINE ARTS

Richard C. Hawkins, <u>Chairman</u>	John Jones	Dec. 14, 1970
Juana de Laban	Lee Mullican	May 21, 1971
George Ellis	Robert Stevenson	
Peter Furst	Roger Wagner	
Sharon Girard	Dean Charles Speroni	

GBA & ECONOMICS

David Eiteman, <u>Chairman</u>	Peter Nehemkis	Jan. 13, 1971
Theodore Anderdon	Charles Nisbet	May 24, 1971
Bruce Herrick	Robert Williams	
Raymond Jessen	Michael Yoshino	
Robert Hal Mason		

PUBLIC HEALTH

Alfred Neumann, <u>Chairman</u>	Telford Work	Nov. 30, 1970
Gladys Emerson	Paul Zukin	June 11, 1971
Milton Roemer	Dean L.S. Goerke	

EXTENSION

Lois Smith, <u>Chairman</u>	Peter Furst	Nov. 24, 1970
William Evensen	Phillip Frandson	May 28, 1971

EDUCATION

Thomas La Belle, <u>Chairman</u>	John McNeil	Dec. 10, 1970
James Farmer	David O'Shea	June 3, 1971
C. Wayne Gordon		

ENGINEERING

Allen Rosenstein, <u>Chairman</u>	Russel O'Neill	Dec. 2, 1970
Morris Asimow	Craig Smith	June 7, 1971
Gary Hard	A.J.A. Morgan	
Alfred Ingersoll		

LAW

Kenneth Karst, <u>Chairman</u>	Joel Rabinovitz	Nov. 13, 1970
George Fletcher	Dean Murray Schwartz	June 10, 1971
Melville Nimmer	(ex-officio)	

LETTERS & SCIENCE

E. Bradford Burns, <u>Chairman</u>	Susan Kaufman	Dec. 8, 1970
Jose R. Barcia	Henry Nicholson	June 1, 1971
Henry J. Bruman	Norman Thrower	
Christopher Donnan	Dean Trueblood	
Claude Hulet		

POLICY COMMITTEE

Johannes Wilbert, <u>Chairman</u>	Lois Smith	Nov. 11, 1970
Richard C. Hawkins	Thomas La Belle	May 19, 1971
David Eiteman	Allen Rosenstein	
Alfred Neumann	Kenneth Karst	

## 2. The Grant Coordinators' Committee

In addition to the Deans' Committees and within the Center itself, a Grant's Coordinators' Committee was established early in the academic year. This Committee met at least once each month, after the grant was actually put into operation in late September, to establish procedures for housing the grant at the Center and to establish criteria for the funding of proposals. The Committee was composed of the Director and Associate Director of the Center, Drs. Johannes Wilbert and James Wilkie, and the Coordinator for the grant, Dr. Thomas J. La Belle. Functionally, this Committee studied, funded, and rejected proposals and counseled prospective grantees regarding the procurement of funds. Because of the wide variation in the types of proposals which were received, the Committee asked for advice from members of the Deans' Advisory Committees regarding the merit of different proposals and the capabilities of the prospective grantees. At times throughout this period, Chairmen of the various Deans' Advisory Committees and others immediately connected with the Center were asked to attend one of the meetings of the Grant Coordinators' Committee. Thus they would have firsthand experience with the deliberations preceding the acceptance or rejection of a proposal and would also be able to discuss other research thrusts relevant to their respective disciplines. In addition, an open invitation was extended to the more than 50 members of the Deans' Committees to attend these meetings.

### 3. Library Resources

Through the combined resources of the librarian of the Education/ Psychology library and the Latin American bibliographer of the University Research Library, and with the aid of student assistance funded through the 211(d) grant-in-aid, work has begun on analyzing and improving UCLA's collection of Latin American educational materials. Thus far, five major steps have been taken.

1. The Public Affairs Service of the University Research Library has checked the current holdings of the various Latin American Ministries of Education "memorias" and either gifts or exchanges have been requested to make the collections complete.
2. One student assistant is compiling a card file of Latin American educational periodicals and professional journals based on the following bibliographies: (1) Irene Zimmerman, Guide to Latin American Periodicals (1961), (2) Charmion Shelby, Latin American Periodicals Currently Received in the Library of Congress...(1944), (3) UNESCO, International Guide to Education Documentation, 1955-1960, (4) UNESCO, America's Education Press...International List of Education Periodicals (1957), and most importantly (5) Handbook of Latin American Studies (1935+). The student, to date, has prepared a preliminary list of periodical holdings. Subscriptions for additional journals as well as orders for backfiles will be made from the items lacking.
3. A student has also checked the holdings on important basic serials and monographs and orders will be placed for those items which the library does not have.
4. Another student assistant is in the process of preparing a card file of all items listed in the "education" sections of the Handbook of Latin

American Studies from 1935 to the present. These cards will then be checked against present holdings and orders will be placed for the more recent items that are lacking. Older materials are to be ordered from Latin American book dealers. When completely annotated with current holdings, the card file and the serials file should serve as basic bibliographic tools for persons engaged in research on Latin American education.

5. As will be noted later under the discussion of projects which have been granted funds, the Education/Psychology library has received an acquisitions grant for the purchase of materials on the role of education in the development process in Latin America and for the purchase of materials which provide substantial data or theoretical perspectives on comparative and international education.

#### 4. The Statistical Abstract of Latin America

The Latin American Center has recently published the thirteenth edition of its Statistical Abstract of Latin America. Since July 1, 1970, major changes have been made in this annual publication. For example, the newly appointed staff of the Abstract (Dr. Kenneth Ruddle as editor and Mr. Muhktar Hamour as co-editor) initiated a program to expedite the production of this publication. Statistical data are now stored in a way which permits rapid, annual revision. With the new system, camera-ready copy can be produced directly from magnetic tape; this camera-ready copy can be used by the printer with no further modification.

Major changes in the orientation and content of the Abstract have been effected. The publication is still a convenient reference tool and guide to other statistical sources. However, the provision of base line data for the more specialized analysis of statistical series in connection with the education project is receiving considerable attention.

The format of the Abstract has also been changed. Data for the so-called "Dependent Territories" have been discontinued. Focus is now upon the 24 republics of Middle and South America. Although the spatial coverage of the Abstract has been reduced, the tabulated thematic coverage has been considerably augmented by the inclusion of 29 new tables. Plans for the 1971-1972 academic year include continued expansion of the tabulated material to provide current data on topics not hitherto covered. To ensure the continued development of the Abstract, the Center is actively enlarging its contacts with statistical collection agencies throughout Latin America.

Plans for the coming year also include the preparation of several supplements to the Abstract. The first supplement, published in December 1970, is entitled Cuba 1968: Supplement to the Statistical Abstract of

Latin America and has been very well received both within and outside the academic community.

In addition to the Abstract and its supplements, the grant-in-aid funds for educational research have promoted initial work on a statistical analysis of the growth and change of the teaching profession within several Latin American countries. An analysis is being made of the national educational census material on teachers from preschools to teacher-training colleges.

The gross characteristics of the teaching profession are to be established by examining published statistics. The objective of this preliminary data analysis is to establish parameters for future field work, which in turn will generate primary statistical data concerning the socio-economic conditions of the teaching profession in Latin America. The examination will cover historical and contemporary conditions, and projections will be made for the future.

At the present time the different levels of teachers in Venezuela are being statistically analyzed in terms of the following variables: (a) number of teachers and percentage of teachers among professional workers, (b) marriage patterns, (c) age and sex, (d) education and qualifications, (e) income by age and experience, and in comparison with other professions, (f) mobility of teachers, (g) family status and living conditions, (h) occupations and income of other family members, (i) teachers in the labor reserve, and (j) future supply and demand.

A vitally important part of this analysis is the examination of the above characteristics on a spatial basis. Detailed data will be amassed for each of the national territorial units; it is anticipated that definite regional characteristics will be manifested in the data which will prove to be important indicators of the regional problems faced by Latin American nations.

#### IV. DIRECTIONS FOR THE FUTURE

#### IV. Directions for the Future

It should be apparent to the reader of this fiscal report that considerable research, teaching, and consultant or service activity has taken place at UCLA since the 211(d) grant-in-aid became operational in the fall of 1970. This activity is the result of an energetic and capable faculty and study body at UCLA and the nature of the innovative funding provisions embodied in Title II of the Foreign Assistance Act of 1966.

Having reviewed these activities, it is perhaps appropriate to discuss briefly some of the directions which will be pursued during the next several years in teaching, research, and service.

##### A. Teaching

Considerable progress has already been made in terms of curricular reform and requisite changes in the course offerings on education in Latin America. The next step is to attract capable students, especially Latin Americans, who wish to pursue advanced degrees through the various programs of the Center and the University. Therefore, the recruitment of individuals, particularly those who already hold positions of leadership in agencies concerned with Latin American educational problems and including personnel from AID, will be actively pursued. Several Latin American students have already received funds to pursue research. As previously suggested, this practice will be strengthened and broadened to include educational leaders in Latin America who are interested in bi-institutional arrangements with UCLA faculty and students and who will be able to spend a minimum of one academic quarter on the UCLA campus to plan such projects.

An additional direction which might be viewed as an aspect of training includes the building of the library resources at UCLA. In the future a

research assistant will be retained by the Center to coordinate the preparation of bibliographic material on education and development. At the same time, a full-time librarian assistant will coordinate the analysis, purchasing, and cataloguing of materials relevant to the project. An acquisitions grant to the library will ensure the acquisition of pertinent resources.

B. Research

Assuming that investigations of a descriptive and analytical nature continue to be proposed, considerably more attention must be paid to the applied aspects of education in Latin America. These projects might involve investigations of an experimental or control group nature which assess teaching techniques, curricular content, and administrative decision making not only in schools but in other institutions. Such institutions might include factories, community development agencies, agricultural extension and health facilities, and various media agencies. The investigations should be directed at reforms which produce more effective learning among children and adults and must involve the use of control populations so that results can be adequately assessed. Such studies should enable more astute observations as to the effects of alternative educational processes. It should be noted that there has been no aversion toward funding such projects during this past year. Rather, such project proposals have not been forthcoming from either Latin American institutions or faculty and students at UCLA.

This state of affairs, however, appears likely to change. Recent discussions with representatives from the School of Public Health suggest that a major multidisciplinary research proposal concerned with alternative institutional, curricular, and instructional approaches to fostering change

in health behavior is in preparation. There has also emerged, within the School of Engineering, heightened interest in securing funds for studies of curricular development in Latin American professional schools. This investigation will involve both the preparation of change models and longitudinal evaluative studies in conjunction with Latin American universities.

A second area of research concern centers around the necessity for developing coordinated investigations among faculty and students which center on one aspect of education in the development process. Several thrusts are becoming apparent in this regard and should be augmented in the future. Indigenous populations, the incipient work on teachers, alternatives to schools, and economic returns to educational investments are concerns which need further collaboration.

In both of these areas, i.e. applied research and increased coordination when dealing with specific educational problems, there is the need to foster long-range working relationships between several Latin American institutions and UCLA. Only in this way will UCLA and the host country institutions reap the benefits of research activity and at the same time share in the costs of producing such outcomes. There is ample reason to suggest that the necessary institutional relationships will be forthcoming. Several Latin American agencies not only have expressed an interest in working with UCLA faculty and students but have actually done so during this first year of operation. These include the following: numerous institutions of higher education in Mexico, Costa Rica, and Venezuela; the Ministries of Education in Mexico, Guatemala, Costa Rica, Bolivia, and Venezuela; the Instituto Indigenista and the Secretaria de Salubridad y Asistencia in Mexico; the La Salle and Creole Foundations of Venezuela; and the Asociacion Venezolano del Nino.

limited funds available through the grant will necessarily be viewed as seed money for the establishment of additional funding provisions. This in turn necessitates increased relationships between UCLA and counterpart institutions in Latin America as well as with AID. An example of this process, although no funds of the 211(d) grant-in-aid have been used for this purpose, is the possible involvement on the part of UCLA in the research and development of community colleges in Venezuela discussed in a preceding section of this report.

### C. Service

In terms of service, two thrusts are becoming apparent. The first thrust is to publish the results of the investigations conducted through the resources of the grant and to disseminate such materials, in the appropriate language, to Latin American agencies. The second thrust is to honor requests from Latin American institutions to evaluate and promote effective alternatives in meeting their stated goals.

The Latin American Center has for some time employed a full-time editor on its staff who is responsible for the technical aspects of the Center's publications. In the future, as investigations are completed the editor will be partially supported through funds from the grant. In addition, a part-time research assistant will be supported through the grant to coordinate the selection of completed investigations for possible publication. The publications themselves will take the form of books, monographs, and special papers and will, when feasible, be published in Spanish, Portuguese, and English.

The consultant activity of students and faculty has probably occurred often during the past year on an informal basis between these scholars and their counterpart institutions in Latin America. More formal contacts with these institutions, such as the collaborative discussions with various Venezuelan institutions on community colleges mentioned earlier, must be established so that both UCLA and the host country institutions will benefit from the expertise available.