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BERKELEY, CALIFORNIA

SCHOOL OF EDUCATION

PROGRAM IN INTERNATIONAL EDUCATION FINANCE

REPORT OF ACTIVITIES 1973

JANUARY 1974

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University of California, Berkeley

SCHOOL OF EDUCATION

PROGRAM IN INTERNATIONAL EDUCATION FINANCE

INTRODUCTION

The Program in International Education Finance is concerned with research and training on the cost, efficiency and finance of education in developing countries.

In spite of large and rapidly growing investments in education, we witness an increasing disparity between educational needs and educational resources. At the end of the decade of the 1960s, the percentage of GNP invested in education by developing countries was comparable to that of the United States, Europe and the Soviet Union and, in terms of percentage of the public budget, it was even higher.

Between 1960 and 1970, the developing countries have increased their public expenditures for education by roughly 117%. During the same period, their school enrollments increased by about 100%, but the percentage of school age children enrolled increased by less than 10%. At the end of the decade, more than half the population of these countries will have attended school, less than 30% will have gone to secondary school, and less than 3% will have received higher education. Thus, despite these efforts, the gap between educational needs and resources continues to widen.

This dilemma arises from several interrelated factors, among which we can stress:

(1) growing populations and increasing popular demand for services in the face of inadequate funds for development;

(2) inadequacy of knowledge about practical alternatives in funding, efficiency and measurement of outputs in education; and

(3) archaic and rigid systems of education where content does not meet the changing demands of social, economic or political developments.

In February, 1973, a five year (211-d) grant of nearly one million dollars was allocated by the Agency for International Development (AID) to provide support and initial see money for research and training on the problem of funding, cost and efficiency. It is intended that resources for large scale field research will be sought from AID missions in developing countries or from other funding agencies.

GRANT OBJECTIVES

The initial objectives of the Program, as spelled out in the grant, are:

(1) to develop new knowledge and insights with respect to educational finance, costs and efficiency in developing countries, through problem oriented research, field investigations and dissemination of knowledge and comparative experience;

(2) to develop new or improved tools for analyzing and developing present and potential resources for education; for measuring educational inputs, allocation utilization and outputs; and for comparative studies of costs and benefits of various kinds and modes of education;

(3) to assist with the training of individuals from the United States and developing countries in the study of critical aspects of educational finance, cost and efficiency;

(4) to help create and participate in an international network of institutions working in this field in both developing and developed countries.

CONTENT OF REPORT

This review of the first ten months of work starts with a description of the core staff of the program. We go on to explain how we chose our research priorities, proceed to describe how our effort is focused on a specific target and how we are attacking the problem at three distinct levels. The end of the report details all activities during the period from February to November, 1973.

THE STAFF OF THE PROGRAM

During the first six months, a core staff was brought together. Some members of the staff came from the existing faculty at Berkeley. Others have been hired under our grant. In making these appointments we took care to include varied professions and experience. We have brought together economists, system analysts, sociologists, political scientists, historians and administrators. We have sought to include persons with considerable practical knowledge of education in developing countries, mixing younger staff members with more seasoned experts. Some members of the core staff are joining us for short periods of time. Others may remain with the program for several years. Our intent is not to create a permanent staff. The grant and other resources will provide a period in time when varied talents are brought together to work on a common endeavor. The group will vary -- some will join other universities, others will join us. In time we hope that our group will include staff members of cooperating institutions working with us on common problems. Some will join us in Berkeley and some of us will work in developing countries. In the long run our objective is to augment the world pool of talent in this field.

During the first year the core staff includes:

The Principal Investigator, Guy Benveniste, Ph.D., Sociology of Planning, Stanford University, is Associate Professor of Education at Berkeley. He has many years of practical experience in educational development work having served with the World Bank and UNESCO. He is the author of several books including Bureaucracy and National Planning and the Politics of Expertise, and of many articles on education and development. He is principally concerned with problems of organizational efficiency and implementation.

Judith Balderston, B.A., Mathematics, Swarthmore College, has worked as an econometrician with input-output and linear programming models. She has also taught in a mathematics program for disadvantaged students and has organized programs for in-service training of teachers in mathematics. She is the author of "Models of General Economic Equilibrium" and other articles. She is interested in the application of mathematical models in the analysis of educational systems.

Charles Benson, Ph.D., Economics, Columbia University, is Professor of Education at Berkeley. He has served for several years as advisor on educational finance to the Planning Commission of the government of Pakistan and was director of the staff of the New York State Commission on the Quality, Cost and Financing of Elementary and Secondary Education. He is the author of several books on educational finance, including The Economics of Public Education and The School and the Economic System. He is principally concerned with problems of equity in educational finance.

Lawrence Bezeau, Ph.D., Education, Stanford University, taught school for several years in St. Lucia, West Indies. He is trained in mathematical programming and is writing a book on the practical applications of mathematical programming in education. He is principally concerned with developing analytical models for use in setting educational finance policies.

Irene Blumenthal, Ph.D., Political Science, Stanford University, is Associate Research Political Scientist at Berkeley. She has considerable experience in comparative studies, particularly of non-Western societies. She is working on a book on Soviet experiences in educational development and is the author of The Soviet Union and the United Nations. She is also concerned with problems of organizational efficiency and implementation.

André Daniere, Ph.D., Economics, Harvard University, is Research Economist and Lecturer, School of Education, at Berkeley. He served in the middle sixties with the Education Commission, Delhi, India, and has had a distinguished career as an advisor in educational finance. He normally holds an appointment at Boston College and is on leave at Berkeley. He is the author of many reports and articles on the economics and finance of education, including Financing of Education in India, Strategies for Research in Education and Development and New Directions in Education and Human Resource Planning. He is principally concerned with problems of equity in educational finance.

Namdar Khan, Honours Graduate of the University of London, England, M.A., History and Government, University of the Panjab, M.S., Education, Indiana University, served as Education Secretary for the government of West Pakistan, later government of the Panjab, from 1970 to 1972. He served the government of West Pakistan earlier as Education Adviser and the government of Pakistan as chief of the Education Division, National Planning Commission, when that country's Third Five Year Plan was formulated. He is the author of several papers and articles related to educational planning and of the chapter on Education and Training in Pakistan's Third Five Year Plan. He initiated several research and publications enterprises in Pakistan relating to education, per se, educational statistics and educational planning.

Thomas Livingston, Ph.D., Education, Columbia University, is Assistant Professor of Education at Berkeley. He is an educational historian who specializes on Africa. He is the author of Sources for the History of Education in Africa and of Edward Blyden West African Cultural Nationalist. He has worked in recent months in Africa on a study of the school as a producing unit. He is concerned with problems of organizational and educational efficiency.

Rodney Reed, Ph.D., Education, University of California, Berkeley, is Assistant Professor of Education at Berkeley. He specializes in school administration and school effectiveness and has had much experience in school management. He has worked in recent months in Africa and is particularly concerned with developing a better understanding of characteristics of school systems in different cultures that lead to an efficient use of scarce resources. He is co-author of The Design of a Leadership Development Program for Educational Leadership and Development with Bela H. Banathy and T. Bentley Edwards.

Jo Ritzen, Eng., Delft University of Technology and Rotterdam School of Economics, is Lecturer in Education at Berkeley. He was trained in mathematics and economics. He has served as an educational adviser in Dacca prior to the creation of the state of Bangladesh and is now focusing on developing practical analytical models for use by policy makers in practical situations. He is the co-author of a book published in Holland titled Future Game and the author of many articles including "A Model for University Planning;" "The Optimal Trajectory for University Primary Education;" and "A Generalized Two Sector Model of Economic Growth."

Stuart Wells, Ph.D., Economics and Business, Stanford University, has done consulting work for the National Institute of Education planning unit. He has also taught in the community college system in California. He is the co-author of an article, "Effectiveness of Alternative and Instructional Media: A Survey," with Dean Jamison and Patrick Suppes.

Jo-Ann Work, Administrative Assistant, has worked for the University for several years and, prior to her involvement with this grant, was a staff member of the Campus Research Office, responsible for Federal Agencies activity (including AID) -- from proposal stage to final award.

In addition to the core staff, a number of faculty in other departments cooperate in the research program. These include: Professor Stephen S. Cohen of the Department of City and Regional Planning and Professor S. Prakash Sethi of the Schools of Business Administration.

HOW WE CHOSE OUR RESEARCH PRIORITIES

Several considerations led us to our choice of research priorities:

-- First, we recognized that education is a significant institution in the modernization and transformation of all societies. In the developing countries, education faces severe problems not least of which is the rapid rise of the costs of formal education; a rise that far outpasses educational revenues.

-- In the last decade, the developing countries have made strides in expanding, adapting and transforming their educational systems. Donor agencies including AID have made substantial contributions to these advances, yet the problems alluded to above have remained or even worsened. This suggests a second fact -- namely that there exist complex and difficult problems which past efforts have not surmounted. Thus the search for solutions must be addressed to the fundamental underlying causes for these problems. Easy solutions are not at hand and spectacular results cannot be expected.

-- Our own contributions at Berkeley need be in a limited and well defined area. Obviously we should and can only tackle non-political dimensions of these problems. This suggests that our research should concentrate on those technical dimensions that provide a basis for decisions and can be useful to policy makers in developing countries.

-- This led us to decide that our program should focus on the analytical instruments used in policy making. In other words, we should attempt to develop new ways of thinking and analyzing the issues of educational finance, cost and efficiency and we should attempt to create analytical instruments that can be used by decision makers in developing countries. Our research should be geared to the kind of issues, the kind of data and data processing systems that are or can be used in developing countries. This means that we should attempt to cooperate in field work in a few selected countries.

-- Initially, our research should have two dimensions. The first is theoretical. It is the development of theories and the uncovering of information which illuminates the problems. The second is practical. It consists in working in selected developing countries, using existing data, and facilities to implement operational systems to aid decision makers. Our purpose is to uncover alternatives and make these explicit.

-- Ultimately we should be able to generalize from our experience. We want, once we have practical instruments or models that have been tested by decision makers in developing countries, to disseminate our results. Therefore, in a later phase, we will want to be able to publish our work, organize seminars to make the results better known and, in general, transmit our knowledge.

-- This means that, as we go along, we will want to tailor our own training activities closely to our research and make sure that our training reflects the latest developments of our research.

THREE LEVELS OF ATTACK

Our research program has a central purpose which we propose to undertake in cooperation with universities and other research groups in developing countries. This is to invent a set of practical analytical models that can be used by decision makers in these countries to better manage the raising, distribution and control of educational resources.

The central purpose is being pursued by a multi-pronged attack at three levels:

First level: This is the development of practical macro models using data and computer facilities available in developing countries. Our purpose is to improve existing macro policy instruments so as to better link decisions about education with an integrated view of other significant sectors. This work is headed by Jo Ritzen and includes Judith Balderston, Larry Bezeau, André Daniere and Stuart Wells.

Second level: The second level serves to expand theoretical thinking as back up to the work being initiated by Dr. Ritzen and his co-workers. At this point, we are focusing on the distributive consequences of the way resources for education are raised and allocated. That is, who pays and who gets educational services. This work is closely tied to the research already underway by having members of each group participate in the others. In the near future, we need to obtain new empirical data about the kinds of choices and preferences actually faced by decision makers in developing countries. That is -- how do various legal and social factors constrain the kinds of revenue raising that can be contemplated -- and affects the way education is paid for and used. These and other data can be used in model building, thus improving their coverage and effectiveness. This research is headed by Dr. André Daniere and involves Judith Balderston, Charles Benson, Larry Bezeau and Jo Ritzen.

Third level: The third level is intended to provide additional backup research results to help improve subsequent models. Here our efforts concentrate on organizational dimensions of the problem. For example, we are interested in exploring in some detail how it is that some systems of education in developing countries are more effective or even efficient than others. What variables and characteristics are associated with such success? We are interested in a number of other issues -- the role of informal education, the issues of centralization and decentralization, the possibility of using the schools as producing units. Our strategy here is to scan and search for new facts and make these available to the model builders at our first and second levels of attack. The work is coordinated by Guy Benveniste and each project is headed by its own manager. Integration with the work of the model builders is achieved by interaction of the research staff in seminars, analysis of results, etc. This group includes Guy Benveniste, Irene Blumenthal, Stephen Cohen, Thomas Livingston, Namdar Khan, Rodney Reed and Prakash Sethi.

DETAILED REPORT OF ACTIVITIES 1973

On February 28, 1973, the Agency for International Development made a 211-d grant of $998,354 to the Regents of the University of California to strengthen the School of Education's Program in International Education Finance. The grant is intended to provide resources in the area of research and training. The grant is also intended as seed money to assist the program in setting up cooperative arrangements with universities and research centers in developing countries. Additional field research outside of Berkeley is to be financed separately.

SETTING OUR PRIORITIES

Considerable time was spent during the first ten months to establish our priorities. Our immediate concern was to focus our efforts in areas where our staff could make contributions and where our energies would not be hopelessly fragmented.

We met on a number of occasions with individuals in bilateral or international organizations familiar with the field: for example, with Drs. Robert Schmeding, William Charleson, Robert Bostick and Dan Rogers from AID; Drs. Duncan Ballantine and Jean Pierre Jallade at the IBRD; William Platt at UNESCO; James Storer from ILO; Raymond Poignant and Jacques Hallak at the International Institute for Educational Planning (UNESCO); Drs. Ladislav Cerych and Angus Maddison at the OECD.

Members of our staff visited some fifteen countries in June-September, 1973 to discuss our program with policy makers in developing countries. In July of 1973, Drs. Guy Benveniste and Charles Benson attended a coordinating meeting organized by Dr. Selma Mushkin of Georgetown University bringing together a number of U.S. universities working on education problems in developing countries. During this meeting, we had occasion to discuss our programs with a number of U.S. specialists including Drs. Frederick Harbison of Princeton, Selma Mushkin and Manuel Zymelman of Harvard University who has recently completed a survey of educational finance alternatives for developing countries titled <u>Financing and Efficiency in Education: Reference for Administration and Policy Making</u>.

Contact was established with other recipients of 211-d grants from the AID agency. We therefore discussed our research plans with the relevant persons at Florida State University, Stanford University, UCLA Latin American Center and with the staff of the International Education group at Michigan State University. (This last group is under contract with AID). Since informal education is of particular significance, we were fortunate to be able to arrange for a one-month visit at Berkeley of Dr. Manzoor Ahmed of ICED in Essex, Connecticut who has been working with Mr. Philip H. Coombs on two major studies of informal education for the IBRD and UNICEF. In early December, Drs. Guy Benveniste and Stuart Wells attended a two day meeting at Stanford University on educational technology. The purpose of that meeting was to explore potential areas of cooperation between 211-d recipients interested in the uses of educational technology in developing countries. The meeting brought together Florida State, Stanford and Berkeley.

Other persons assisted us in this early planning phase and some came to Berkeley to consult with us. Dr. Tyrell Burgess came from England. We consulted with our colleagues at the SIDEC program at Stanford and brought Dr. George Nihan who had been working with the 211-d grant to the Latin American Center at UCLA for two days at Berkeley.

RESOURCE PANEL OF ADVISORS

Many of these consultants compose the embryonic nucleus of our Resource Panel of Advisors who assist us in our work. For the moment, we have not attempted to formalize this resource panel and we may want to delay such formalization until the work begins to yield results. Up to now we have used our resource panel on an ad hoc basis recognizing that the individual contributions of each member vary in content and duration. In due time and when appropriate we intend to bring members of this group back to Berkeley or elsewhere to help us evaluate our program.

First Level: Building Practical Analytical Models

Ing. Jo Ritzen visited Bangladesh and Tunisia. He was in Dacca from August 10 to September 1, 1973 and in Tunis from September 4 to 14.

In Bangladesh, a number of organizations have expressed interest in developing a working relationship with our program at Berkeley. The suggested studies include one on the cost and efficiencies of the five existing universities; a study of equality of opportunity in educational finance and a study of non-formal education with a focus on functional literacy.

In Tunisia, the Ministry of Education and the Directorate of the Human Resource and Sectoral Planning Division of the Planning Ministry would like to seek our cooperation to develop a simulation model for educational finance and planning for Tunisia, and to train one of his assistants to use it. We agreed to look into the possibilities of bringing a Tunisian expert to Berkeley for about six months. This expert and Dr. Ritzen would develop the model and put it on tape so that it can then be made operational in Tunisia. In early December, Dr. André Martens of the International Institute of Quantitative Economics in Montreal, Canada, came for two days to Berkeley to coordinate the Institute's work in Tunisia with our possible program. They have been assisting in model building for the Tunisian economy and it was agreed to submit a joint proposal for longer term research to potential sponsors.

While these projects are being elaborated, the team working with Jo Ritzen has initiated theoretical research.

Present educational planning methodology for resource allocation can be roughly categorized into two types: rates of return studies and production function studies. Manpower planning can be shown to belong entirely to the second type. Both these planning methodologies have serious limitations, some of which have been expressed repeatedly. The staff is now preparing a critique of these methodologies. A paper titled "The Rate of Return Planning Fallacy in a Two Generation Two Sector Model" is being elaborated.

The team is also developing more advanced and sophisticated techniques to remedy the deficiencies in existing methodologies and several draft working papers were produced during this period. One is titled: "Dynamic Rates of Return" and the other "Optional Rates of Return." Two papers by F. B. Puttick and P. Chatterjee (two student Research Assistants on the team) are in preparation: "A Critique of Conventional Theories on Investments in Education and Welfare" (Puttick) and "A Note on the Effects of Investments in Education versus Investments in Family Planning on Population Control" (Chatterjee).

Along these lines, Dr. Larry Bezeau is preparing a monograph or "manual" on Mathematical Programming for Education. This manual is aimed at educational planners and students of educational planning who must either collect data, code and interpret the output of mathematical programming, or who must communicate intelligently with those who do. The manual is intended for readers who have no mathematical training beyond the secondary level, and who have little if any background in economics. It will familiarize the reader with the input and output of mathematical programming and provide an introduction of how to code, run and interpret a practical MP problem in educational planning using the most widely available computer code for this purpose (IBM's Mathematical Programming System). At present, no such manual exists in this field. This manual will be completed in the fall of 1974.

Another member of this team, Dr. Stuart Wells, is working half-time with us and may also work with the recent 211-d AID grant to the Institute of Communication Research at Stanford. This is a grant to help Stanford in the area of the new technology of education. Initially, Dr. Wells is preparing a short manual which clarifies how to consider the economics of the new technology of education. One purpose of this manual is to provide procedures for making decisions about investments in new educational technologies and the work is to be closely linked to the model building undertaken by the Ritzen team. This work is expected to be completed in the summer of 1974.

Second Level: Distributive Consequences of the Way Resources for Education Are Raised and Allocated

For any contemplated level of resource allocation to education, planners must seek the combination of financing sources and methods that is most equitable in terms of contemporary national standards or, at a more practical level, that is least likely to generate political resistance. The achievement of these objectives, however, is constrained by the planned distribution of education among different social groups: A specific fee or tax policy may be efficient in generating funds toward the aggregate of planned education activities, yet it would enhance or retard the access of specific groups in such a way as to frustrate equitable distributive objectives. Furthermore, there is a limit to the amount of funds that can be mobilized (under the best possible set of financing policies) in support of any given plan of educational development. Given the autonomy of important sources of revenue (local school taxes, fee payments by students and families, private donors) which are subject to manipulation, but not to fiscal directives, and given the relative independence of fiscal decision makers within the central apparatus itself, it is clear there is a limit on practical alternatives. Planners and policy makers at all levels of education must therefore engage in financial planning, at least to the extent of ascertaining the financial feasibility of proposed resource allocations.

The recent record of LDC's brings out the importance of planning education <u>and</u> its financing in the light of stated distribution objectives. Education development plans have often failed due to unrealistic projections of available financing. Often targets had to be bent all around (usually through cuts in education quality rather than enrollments) or were subject to selective cutting (or swelling) in response to actual financing opportunities. More disturbing still is the fact that inadequate use of available financing alternatives has led to greater overall stringency than was necessary. This has resulted in grossly unequal levels of access to education among social groups, and has distributed burdens without reference to benefits received.

Dr. André Daniere and his team are now getting ready for work. At present, Dr. Daniere is still at Boston College but he will be coming full time with the program in the spring of 1974. Nevertheless, groundwork is underway and definitions of the models to be elaborated are in progress. Moreover, Dr. Daniere is already examining the possibilities of coordinating field work with that of Jo Ritzen (i.e., in Bangladesh and possibly in other countries as well).

The "models" to be developed are required to meet two conditions: (1) potential users must retain the option to select objectives and their relative weights, while assisting them in the identification, formulation and quantification (where necessary) of objectives; and (2) models should be usable by education policy makers with minimum intervention on the part of professional "system analysts" or other practitioners of the art of optimization.

For a number of reasons, however, it is essential that the work not only proceed "in the field," i.e., merely within the context of selected countries, but that it involve the active participation and commitment of local counterparts. It is important that the proposed instruments remain "open" in terms of numerous pieces of highly localized behavioral information. Reaction by different groups (varying in identification from one country to the next) to various forms and levels of taxes, education fees, subsidy incentives, loan and grant systems, voluntary service calls, etc. is closely related to the social make-up of each country, and the job of relating "fiscal" behavior to social structure characteristics from one to another nation has not even begun. This means that specialized studies - or informed evaluations - will be required on the part of each user-government if the planning process is to be adequately informed. Short of a sample of such studies and some guidance on their conduct and utilization, however, the task may well seem to carry excessive cost and risk in relation to expected benefits. It follows that field studies must be conducted in selected countries and that the resulting experience must be codified. More significantly, without precise knowledge of the variety of behavioral patterns and value systems, instruments developed for eventual incorporation are likely to prove inadequate when put to the test of local implementation. This adds another powerful reason for developing planning instruments and associated behavioral surveys in the context of selected countries offering a high variance of social characteristics.

Dr. Larry Bezeau, a member of this team and of the Ritzen team, is also looking at the feasibility of developing useful materials based on census data. A joing project with Alex Toledo of Stanford University on education and income distribution in Peru has reached the point where our group will be given access to raw census data from Peru. This data will be obtained early in 1974. Meanwhile, theoretical work is being done to improve the models relating education and income.

Third Level: Organizational Arrangements Conducive to Improving Internal and External Efficiencies

During the year, a number of specific projects were initiated; these projects are intended as backup source material for the model builders. We selected these projects on the basis of their relevance to the issues contemplated and heir potential payoff. For example, we are unsatisfied with the current Western literature on socialist experiences in these areas. We assume that countries such as the Soviet Union are facing similar problems of rising costs and dwindling revenues. What are they doing about this? How does their experience relate to our research? Similarly we know little about the opportunities for having schools become producing units and we know little about the potential role of multinational corporations in education. Part of our early effort is of a scanning nature. Other projects were initiated because they dealt with intrinsic aspects of organization and control. Thus we began studies on informal education, on the difference between private and public education and on organizational arrangements.

a) A study of Soviet policies toward cost and efficiency of Education

Though Soviet authorities continue to give high priority to education, they have become increasingly cost conscious, leading to extensive research and surveys. For example, recent Soviet research has shown that the much vaunted evening and correspondence schools not only turn out inferior products, but are in fact more expensive to operate when measured in terms of the number of students graduating as compared to full-time day school graduates.

Past Soviet experiences and experiments promise useful comparative material. Some of the approaches and methods taken bear closer investigation, especially since the Soviets proceeded to develop their educational system with limited resources.

In scanning the collected material, both primary sources from the USSR and secondary material from the West, it has become apparent that some of the most valuable data relates to Soviet non-formal education, a subject largely neglected by Western observers. Such areas as on-the-job training, the literacy campaign, out-of-school educational opportunities, the role of youth organizations, the utilization of mass media in education, etc. illustrate the wide ranging educational efforts pursued by the USSR in support of economic development and modernization.

Though the Soviet model for financing of education as a whole cannot be readily applied to non-socialist countries, there are certain features which have broader validity. Thus Soviet authorities from the very beginning have encouraged and, at times, required efforts from those institutions of society which benefit from public education to share in the burden. State economic enterprises, collective farms, the trade unions, etc. have assumed direct responsibility for building and operation of schools, either by financial support or other forms of sponsorship, such as sharing of facilities and equipment, providing the free services of experts and other personnel, etc.

The Soviet Union has also shown ingeniousness in the use of existing non-educational facilities, programs and resources (both human and materi ' for educational purposes. This linkage of education to other social, political, economic and cultural endeavors and the integration of education and other activities has not only provided savings in scarce resources, but has enhanced the role of education in the mobilization of society for modernization and economic development. In the process, the utilitarian tradition of Russian education has been reaffirmed and so has the notion that continuing education is rewarding both for the individual and society. Other preliminary findings of interest indicate among others that there are definite limits to the coordination between education and manpower needs even in a rigidly planned and controlled economy.

The Soviet model of an educational system geared for development and modernization is also viewed in terms of its shortcomings. The rigidit and high level of centralization of the formal education system has been an impediment to creative experimentation and innovation, expect when initiated at the highest level. Clearly, there was at first need for centralized policies and centralized efforts so as to obtain the desired results as rapidly as possible. But was continued centralization justified in terms of efficiency? Or were political considerations the only justification? A clear cut answer to these questions is probably beyond the reach of this study but consideration of these and other questions may shed further light on the potential impact of education on rapid economic development and modernization.

The study, conducted by Dr. Irene Blumenthal, when completed, will be between 150-200 pages long with a target date of 2/1974.

b) Historical Study of the School as an Economically Self-Supporting Unit

This project focuses on organizational arrangements whereby schools can be self-supporting through the productive activities of students. The study is largely historical in nature although field work to review contemporary efforts in Africa has been undertaken.

The project is headed by Dr. Thomas Livingston who visited Tanzania, Zaire and Ghana in the months of August and September, 1973. Research was also conducted in the archives of the French and British governments.

The project will provide a short handbook for use by policy makers in developing countries. Completion of this handbook is now expected for late winter, 1974.

From results to date, it appears that the most relevant contemporary efforts are those in Tanzania where the larger rubric of "Education for Self-Reliance" encountered for the entire program: some headmasters encouraged all students to spend vast amounts of time on farms and consequently school work in a pedagogical sense suffered. Initially those headmasters most productive in agriculture were praised and those less so, chastised. Now there is greater emphasis upon the "social and moral" implications of "self-reliance" and less on the overtly economic objectives, although plans and programs are projected for greater and more efficient school farms. Schools such as Kivukoni Colleges, which is the training center for

TANU, the political party, have been self-sufficient in food production since the 1960's.

These and other endeavors are being systematically examined and practical implications for policy are being analyzed.

c) The Role of Multinational Corporations in the Training of Higher Level Professional Managers in Less Developed Countries

Professor Prakash Sethi of the Schools of Business Administration at Berkeley is undertaking this study as part of a larger research project designed to look at the "Multinational Corporation as a Political Institution." The purpose of this segment of the study, which is funded by the AID, is to evaluate the role played by large multinational corporations (MNCs) in the development of skilled technical and managerial talent in the less-developed countries (LDCs).

The question of trained technical manpower in general, and managerial manpower in particular, is of critical importance to LDCs because continued economic growth cannot be sustained without it. It is also clear that, with few exceptions--notably Brazil, Argentina, Taiwan and South Korea--the LDCs have largely failed in achieving that elusive goal, the takeoff into self-sustaining growth.

The study was specifically designed to evaluate:

(1) the nature and extent of technical and managerial training provided by MNCs in LDCs;

(2) the positive and negative aspects of their training from the viewpoint of LDCs;

(3) the alternative strategies that the LDCs might pursue to either improve the nature and magnitude of this training or to seek other avenues by which such training could be provided the LDCs' nationals without the alleged negative aspects associated with the MNC-provided training.

Preliminary findings based on studies of American and Japanese firms are to be detailed in a brief report which will be issued in the fall of 1974.

d) Comparative Study of Government and Non-Government Schools in Liberia and Ethiopia

The objective of this study, headed by Dr. Rodney Reed, which is in the process of being discussed in both Liberia and Ethiopia, is to provide practical information about the different characteristics of private and public schools in two developing countries so as to be able to provide information on relationships between selected school descriptive and economic inputs and measured cognitive and non-cognitive outcomes.

In Liberia (West Africa), approximately 40% of the primary and secondary school population attend non-government schools and in Ethiopia (East Africa) non-government schools are attended by approximately 25% of the school enrollment. The reasons for this situation are not clear, especially when student cost to attend these schools is higher than the cost to attend government schools. One might conclude, therefore, that non-government schools are more effective and thus more desirable to attend.

If non-government schools are more effective, are there identifiable programmative and operational aspects of these schools that can be utilized to enhance the performance of students in government schools? Or, are differences in student performance in government and non-government schools associated with differences in student characteristics, teacher characteristics, or economic characteristics?

The proposed study will provide information which will 1) enhance the national educational planning capability by recognizing the impact of government and non-government schools, 2) enhance school efficiency by providing information that can be used to develop or update uniform school budgeting, reporting and assessment systems, 3) provide an analysis of school effectiveness based on economic and human inputs, and 4) provide an analysis of the curriculum in meeting desired educational outcomes which may vary by geographical location.

Dr. Reed travelled to Liberia and to Ethiopia during the summer of 1973 and also discussed this study with officials at UNESCO in Paris. It is hoped that this project could be operational in six to eight months time and that it would then take two years to complete. It would result in a handbook of practical use to policy makers in developing countries plus an ongoing research capability in both countries.

e) The Economics of Non-Formal Education

Dr. Manzoor Ahmed who has been working with Dr. Philip H. Coombs at ICED came to Berkeley in August 1973 to initiate a study of economics of non-formal education. The purpose of his study is to provide an easy to read manual on how to think about the economics of non-formal education, particularly how policy makers can assess effectiveness and efficiency. What are legitimate costs of non-formal education? What are the advantages and disadvantages of non-formal education in terms of raising revenues? These and other issues are to be discussed in a short manual to be issued in the summer of 1974.

f) Educational Organization of the Future

Professor Benveniste and Dr. Blumenthal and Professor Stephen Cohen are working on organizational problems of education likely to obtain in the future. The first two are more concerned with issues of centralization and decentralization. Their work is to start in earnest next year but during the recent months they have been conducting preliminary reviews of the literature. Dr. Cohen's study is focused on the sources of productivity in different kinds of economies; and newly "modernizing" economies. He is particularly concerned with the role of education (i.e., the dominant human capital concept of education but expanded to social as well as individual forms) as a source of increases in productivity in these different stages of development and under varying institutional arrangements. His approach is that of long-cycle or "inflection point" analysis. His central hypothesis is that the dominant item on the political agenda for the most advanced economies is that of a complete reorganization of the service institutions. This sectoral transformation is seen to be quite as profound and far reaching in its effects as the analogous "reorganization" or transformation of the industrial sector which dominated the European economies since WWII. Education is the key here, both as a major service sector in a very rapid transition: A center of financial, political, social stress and strain: -and the locus of conflict and reform that a key sector becomes when it is forced by powerful long-cycles of development into basic reorganization. The financial (and administrative and substantive) stress and strains experienced by education systems all over the world are not due merely to recent expansion in these systems, but more broadly to fundamental changes in the sources of productivity in services: growth in education is only one aspect of that transformation, only one aspect of its impact upon the educational system. His research attempts to locate the changing sources of productivity in different phases of development and to trace out the patterns of stress as the educational system is forced to change its institutional and financial structures, its substantive content and its social functions in response to the basic pressures of the long-cycle development. This giant transformation of the institutional structures and social functions of education in the advanced countries will have direct effects on, as well as important indirect lessons for, the underdeveloped countries and even greater impacts on the middle group of countries who are in the most exposed position in this realm.

A report on Dr. Cohen's research is expected in the spring of 1975.

Training

Dr. Charles Benson and Mr. Namdar Khan are initiating new training activities. It is too early to detail these. But administrative steps were taken to create the new Program in Economics and Finance of Education within the School of Education. Meanwhile, existing programs in the Division of Policy Planning and Administration of the School of Education are used by students enrolled with us.

Therefore, our training program under this grant is an integral part of the normal activities of the Graduate School of Education. Students joining the Program are usually candidates for the master's or doctorate degree in Education. They apply for admission according to normal procedures of the University. In addition, informal arrangements have been made with the Business School, the departments of Computer Science, Industrial Engineering and Operations Research, and Economics to facilitate admission to these departments for a few (selected) foreign students interested in the Program who, by reason of their past training and specialization, would logically be admitted in these departments.

An applicant to any program in the School of Education must be admitted to the Graduate Division. There is a limitation on the number of students who may be admitted each quarter for graduate study on the Berkeley campus. Each program within the School of Education, therefore, operates on a quota basis and students are urged to submit applications for admission and re-admission as early as possible. Applicants for admission should write to Professor Charles Benson, Chairman, Program in Economics and Finance of Education, School of Education, University of California, Berkeley, California, 94720, USA, to receive the necessary forms and information.

Generally, applicants to the Graduate School of Education are admitted for the fall quarter (starting in late September or early October). Decisions on admission for the fall quarter are made in the spring and complete applications must, therefore, be received beforehand. Applications to this Program should have all forms and letters of recommendation filed before February 1 for admission in the fall. In other words, the admission process requires a one-yaar lead time.

Attention is called to our two step master's and Ph.D. program. Essentially the two step program consists in having candidates for a master's degree come to Berkeley for a two year program. During this period they also become familiar with the requirements for the Ph.D. They return to their country after these first years having completed work toward the master's degree. After one or two years in service in their country, they may return to Berkeley to undertake further academic work toward a Ph.D. and return to their country to complete their dissertation.

LIBRARY

The Library of the Program in International Education Finance is located within the Library of the Institute of Governmental Studies, Room 109, Moses Hall. The PIEF Library staff is composed of one half-time librarian. Non-professional clerical duties - the reproduction of catalog cards, filing, and the paging of materials from the closed stacks - are being provided by IGS for the PIEF collection.

The library has contacted 53 governmental agencies, private associations and research organizations throughout the world - 26 in the Western world and 27 in non-Western nations. Contact has consisted of a request to be placed on the mailing list for one or a combination of the following publications: catalogs and announcements of publications, free publications, and accessions lists of their library. As contact is made with more and more agencies, reciprocal exchange programs of publications and bibliographic information will increase significantly.

COOPERATIVE ARRANGEMENTS

a) Research

The Program seeks to establish working relations with selected universities or research centers in developing countries wishing to participate in joint research and/or training activities. It is expected that such working relations would usually involve specific research or training projects. These projects would usually have to be funded separately. However, it is anticipated that where local government support exists, U.S. government AID missions will consider support for carefully formulated joint undertakings. In addition, support will be sought from other sources such as foundations or international organizations.

Results from joint research projects will be published in the host country by the organizations. Where appropriate, the results will also be published by the Program and distributed in other countries.

b) Library cooperation

The program will apprise cooperating institutions of acquisitions in its collection. Where possible, copies of specialized materials unavailable upon request to cooperating libraries in developing countries.

c) Exchanges of Personnel

In some cases exchanges of personnel may be arranged. This will be particularly important where joint research programs are underway.

d) Conferences, short-term training, etc.

The program may make mutually beneficial arrangements for conferences, workshops or other short-term training programs in developing countries. Again, this will be particularly important where joint research projects have been initiated and research results from one country can be generalized.

HOW TO CONTACT THE PROGRAM

The general address and telephone number of the program is:

Professor Guy Benveniste, Principal Investigator
Program in International Education Finance
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Berkeley, California 94720
Cable Address: UNICALB
Telephone: (415) 642-6632

For information on training and admissions, the address is:

Dr. Charles Benson, Chairman
Program in Economics and Finance of Education
School of Education
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Berkeley, California 94720
Telephone: (415) 642-6632

For library cooperation, write:

Ms. Joan Bowlby
Assistant Librarian
Program in International Education Finance Library
I.G.S. Library
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Respectfully submitted,

Guy Benveniste

Guy Benveniste, Ph.D.
Principal Investigator