DOCUMENT RESUME

ED 088 520 IR 000 362

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TITLE The Mohonk Conference. A Report on an International Symposium on the Role of Books and Other Educational Materials in Meeting the Educational and Economic Goals of Developed and Developing Countries.
INSTITUTION National Book Committee, Inc., New York, N.Y.
PUB DATE 73
NOTE 67p.
AVAILABLE FROM National Book Committee, 1564 Broadway, Room 822, New York, N. Y. 10036 ($3.50)

EDRS PRICE MF-$0.75 HC Not Available from EDRS.
DESCRIPTORS *Books; Conference Reports; Developed Nations; *Developing Nations; *Economic Development; *Educational Development; Educational Economics; Information Dissemination; *Instructional Materials; International Programs; Libraries; Symposia

ABSTRACT

A summary is presented of the symposium held in December 1972, at which 30 educators, economists, planners, librarians and publishers met to discuss the role of books and other educational materials in educational, social and economic development. The first section of the report offers a general statement from the director of the conference which deals with: 1) education and economic growth; 2) national plans and internaticnal cooperation; 3) strategic alternatives in the use of learning materials; and 4) practical considerations which impinge upon the production and use of books and other materials. The other main part of the report presents a series of papers by different authors which treat, respectively, the following topics: 1) the educational component of economic development; 2) the analysis of selected national budgets for educational purposes; 3) strategic alternatives and suggestions for allocations for educational materials; 4) book promotion through libraries; and 5) practical considerations in the creation, production, and distribution of books and other educational materials. (PB)

THE MOHONK CONFERENCE

A Report on an International Symposium on
the Role of Books and Other Educational Materials
in Meeting the Educational and Economic Goals of
Developed and Developing Countries

by
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and
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General Learning Corp.

Mohonk Mountain House
New Paltz, New York
December 10-13, 1972

National Book Committee Inc.
One Park Avenue
New York, New York 10016

Price: United States and Canada $3.50
Other Countries $4.50

Multiple copy rate on request.

Order from: National Book Committee
One Park Avenue
New York, New York 10016

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MOHONK STATEMENT

(As issued by the Conference Director on December 13, 1972)

The time has come—indeed is overdue—for a substantial increase in the proportion of national and international expenditure for the creation, production, and distribution of books and other materials for learning. In the developing countries, where hundreds of millions of literates have no meaningful access to books or libraries, 900,000,000 persons are illiterate—a number that is growing, not diminishing.

No modern economy can be erected on a basis of illiteracy. Men and women who cannot use reading to master new skills and to prepare themselves for new roles cannot participate productively in a modernizing economy, nor can they hope for personal dignity and control over their own lives in a time of change. Though the problem is too enormous for quick or easy solutions, immediate and vigorous attack is required.

The developing countries are all aware of this need. Most of them are making heroic efforts to meet it. Indeed, in many developing countries, even in the face of desperate needs for the minimum of food and clothing and shelter, a higher proportion of the national income is devoted to education than in the wealthier countries. In this situation there is an urgent need for measures that will achieve the maximum educational result in relation to expenditure.

A sharply increased availability of books and related materials is such a measure. The cost will not be small, but an increase of one or two per cent in total education expenditure could double the availability of books and other materials. The result would be a great increase in the effectiveness of the educational effort as a whole.

To some degree, the need for books can be met by the import of materials from more developed countries, especially books for secondary and college levels, and this international flow of books should be encouraged by practical measures.

But the most critical needs must be met within the developing countries themselves. Only they can determine their own needs, produce materials for their own national cultures, and use them effectively in their own schools.

Developing countries need not only the capacity to create and produce materials—not only to write and print books—but also to make them realistically available to each student or reader. Effective use of books in schools and a vigorous system of free libraries are both essential to this availability.

The capacity to produce materials, of course, requires printing presses and other technical equipment, and access to an adequate supply of paper. Practical measures to provide these are feasible and should be undertaken.

But far more important and difficult is the creation in each country of institutions to maintain the flow of books and other materials; the training of authors and editors; the fostering of competent publishing enterprises, public or private; the creation and strengthening of bookstores, libraries, and other channels of distribution; the encouragement of the reading habit itself. Readers cannot be created by instruction alone; they must have material to read that is relevant to the deep purposes of their lives.

Available resources for the production of books and related materials in the developing countries will have to be used with maximum effect. This will require careful planning. In addition, programs of assistance from UNESCO, UNDP, World Bank, UNICEF, regional bodies, and individual donor countries must be comprehensive, continued over an extended period, and matched to the varied needs and commitments of the developing countries.

In most developing countries, the most effective channel for such assistance and for focusing of the country's efforts will be the creation of a National Book Center or institution, which should be adequately funded to provide planning, technical assistance, training, and working capital at low interest rates for publishing enterprises.

If International Book Year has no other result, it will have been invaluable if it leads to a planned, a determined, a realistic, and a zealous effort, on the part of developed and developing countries and international agencies working together, to move toward providing for the people of all the world a generous access to books that can help open for them the door to a more abundant and a more meaningful future.

INTERNATIONAL SYMPOSIUM ON THE ROLE OF BOOKS AND OTHER EDUCATIONAL MATERIALS IN MEETING THE EDUCATIONAL AND ECONOMIC GOALS OF DEVELOPED AND DEVELOPING COUNTRIES

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SECTION I

DIRECTORS' REPORT

PREFACE

The Mohonk Conference was a part of the United States participation in International Book Year (IBY). Undertaken under UNESCO auspices, IBY sought to focus world-wide attention during 1972 on the role of books in modern societies. The United States, operating through its Secretariat for IBY and through the National Book Committee, made arrangements for 30 economists, educators, planners, librarians and publishers from 11 countries to meet at the Mohonk Mountain House in New Paltz, New York, in order to concentrate on one aspect of the over-all IBY purpose: The Role of Books and other Educational Materials in Educational, Social and Economic Development.

It was decided that a small conference would be more useful than a large and representative gathering. Problems of communication between specialists—in this case economists, educators, planners, librarians and publishers—are notoriously difficult, whatever the setting or the language used. Considering the shortness of time available, the planners of the Conference concluded that more would be accomplished in an atmosphere in which participants met together in plenary session and could benefit from informal discussions between these formal sessions.

Participants were invited as individuals, not as official delegates from their nations or as representatives of professional societies. English was the only language used. The Mohonk Mountain House, ninety miles north of New York City, was selected as a setting near enough to make transportation relatively efficient and yet far enough from distractions of daily duties and the attractions of a major city. Three days were set aside, December 10th through December 13th, and at the end of the Conference the Director issued the Mohonk Statement which is printed at the opening of this Report.

Grants from the United States Agency for International Development (USAID) and the Council on Library Resources provided the necessary financial support for the Conference. This Report, however, does not necessarily represent the views of USAID or the Council. The conclusions and recommendations resulting from the Conference, as set out in the Mohonk Statement and in the background papers which form a part of this document, are the results of the work of the participants. At the close of the Conference, those who took part expressed their thanks and appreciation to USAID and the Council, and to the *ad hoc* Committee for U.S. Participation in International Book Year which took charge of the arrangements and of which Emerson Greenaway, Librarian Emeritus of the Free Library of Philadelphia, and Theodore Waller, President of the Grolier Educational Corporation, served as Co-Chairmen.

PREPARATION FOR THE CONFERENCE

The decision to focus attention on "The Role of Books and Other Educational Material in Meeting Educational and Economic Goals" made clear that the Conference would require the participation of economists as well as educators, planners as well as publishers, experts in international development as well as librarians. If the Conference wished to reach any conclusions or to make any recommendations, it would have to rely on professional and scholarly expertise in these areas. In searching for materials that would be helpful to participants, however, it soon became evident that there was no precedent for a Conference of the type being planned.

Economists and planners, of course, have long benefited from academic and administrative collaboration. Educators have only occasionally been at the edge of such consultations, though they have more often conferred with librarians. Publishers and other creators and distributors of educational materials have necessarily dealt with educators and librarians as customers and suppliers, but have had little direct communication with those concerned with economic and international development. It was not hard to find records of conferences on the role of Education in Economic Development, or the role of Libraries in Educational Development, or the role of Publishing in Educational and Cultural Development. But there seemed to be both a lack of, and a need for, better communication and collaboration between all of these specialties if books and other educational materials were to play their most effective role in educational and economic development.

Three decisions were taken before the Conference convened in an effort to make communication and collabora-

tion easier and more effective. To begin with, five papers were prepared and distributed in advance, each designed to provide an insight for the participants into the ways the development planner, the economist, the educational planner, the librarian and the publisher saw the role in education of books and other educational materials in relation to economic and social development. These papers were designed to form the basis of discussions at the Conference itself and their authors or compilers were asked to be participants. The papers are printed in Section II of this Report, and the reader may wish (indeed is advised!) to read them if he wishes to understand the rest of this Director's report. While the views and the analyses contained in them are reflected in Section I, no effort is made to summarize them. To do so would be a disservice to authors who, by common agreement of the Conference itself, had prepared statements which deserved study in their entirety.

In the case of the first paper, the basic material consisted of *précis* based on five reports prepared for a conference entitled *Education and Development Reconsidered* which took place May 3-5, 1972, at the Villa Serbelloni in Bellagio, Italy, sponsored by the Rockefeller Foundation and the Ford Foundation and provided through their courtesy.

The second decision was to focus detailed discussion on the problem and opportunities of a limited number of developing nations. The basic purpose of the Conference was to contribute to a process of understanding rather than to recommend either global solutions applicable to both developed and developing nations, or specific solutions to any one nation. By providing both background data and time at the Conference itself for expert participants to interpret the data, it was hoped that a better understanding of the issues involved in creation and use of books and other educational materials would result. It was not the purpose of the Conference to bring attention to the needs of the developing nations for such materials, or the capabilities or performance of the developed nations to meet those needs. It was rather to analyze the *role* of such materials in Educational and Economic Development, and the selection of a few "case studies" was intended to help that analysis. During the Conference discussions, participants from Argentina, Brazil, Colombia, Ghana, Indonesia, Nigeria and Thailand made major contributions to the understanding of the central topic by their expert knowledge of the conditions in those nations.

The third decision was to plan a Conference that brought together *individuals* interested in a common topic, a topic which transcended national boundaries or stages of economic development. Recognizing that each participant in the Conference, whatever his or her professional specialization, also represented a nation and a complex of ideas on social and political issues, it was decided that the Report on the Conference should be made by one individual, its Director, as his personal statement of what he thought happened in the three days of discussion. It is unlikely that any other participants would record the Conference in the same way, or would emphasize the same issues. The problem was to assure frankness of discussion at the Conference and at the same time avoid the bland compromises that might result from a final report on a brief meeting of specialists not acquainted with each other as individuals or knowledgeable of each other's professional specialties or national views.

The report on the Conference which follows must therefore be clearly understood to be that of the Director and not of any participant or of the participants as a group. No individual is identified as responsible for any statement or representative of any point of view. No effort is made to record the ebb and flow of the discussion. In the judgment of the author each participant made an effective personal contribution to the topic of the Conference. As a result, a meeting of individuals became a group of friends joined in an effort to solve a common problem. The Conference was a heartening experience in international consultation, and a reason to hope for further collaboration and greater mutual understanding.

THE CONFERENCE

Introduction

Few Conferences achieve a unique style, a personality of their own. The Conference at the Mohonk Mountain House in New Paltz, New York, in December of 1972, was one of that number.

The abilities, the moods, the expectations and the personalities of the participants, of course, make the difference between a mere meeting and a Conference to be remembered. Experienced attenders at international meetings were well represented at Mohonk, and they arrived—guests as well as hosts—with the normal speculations on what might happen. Was the real purpose of the gathering stated in the invitation or was there a "hidden agenda"? Was it going to be just another meeting at which the known was restated and the unknown was avoided? Could so diverse a group reach any conclusions on policy and practice in so short a time?

The participants, on the evening of December 10th, looked at each other with interest and curiosity. Many had come directly from airports, exhausted after long hours of travel. Many needed to adjust to a different time zone, a foreign language and a strange climate, to say nothing of a meeting on a new topic. Some specialists knew each other from other gatherings, or had known of each other through their writings, but the majority met for the first time. The variation in their ages, their specialties, their national origins and their experiences in life, however, made it possible that they might combine to create something rare, something unique. And that is what happened.

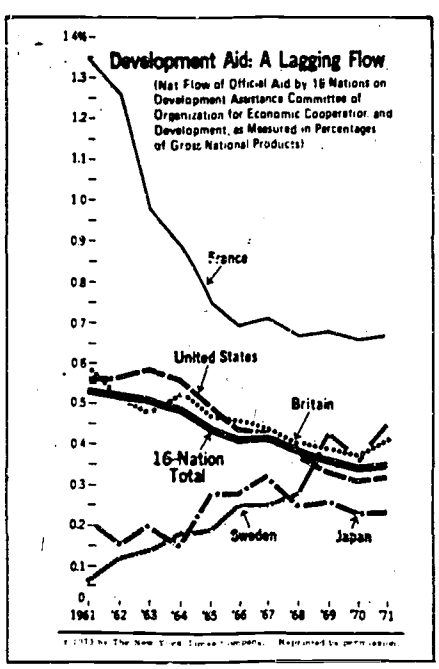
To begin with, Mohonk Mountain House was a new experience for almost everyone. Built upon the top of a rocky hill, far from other habitation, the placement of the House itself encouraged participants to take a long view, to look for perspectives. The result of decades of construction, reflecting different (and sometimes unexpected) architectural styles, the House seemed to symbolize change and adaptation to new circumstances. And the fact that the meeting was held in rural quiet in a nation that was struggling to understand and master its headlong urban rush was also symbolic. Could man by thought alone control his destiny, or was he helpless in a stormy sea of economic and social forces? What could a small gathering dealing with a specific issue be expected to accomplish in such times?

The tone of the Conference was troubled, thoughtful, even tentative. It was clear that all societies have their problems whatever their stage of development. No professional or national group was confident that it had all, or even most, of the answers. Participants were linked together by their need for new knowledge and new ways of applying knowledge to problem-solving.

This underlying sense of being fellow passengers on a vessel in stormy seas was reinforced by a common concern about the seaworthiness of the vessel itself. There were danger signs everywhere.

The participants were well aware that world population was growing so fast that economic expansion was barely keeping up. They knew that the rich were growing richer and that the gap between rich and poor was widening. Many feared that technology was running away with limited global resources, and that there was serious danger that man was fouling his own nest beyond even the powers of Hercules.

Perhaps most serious of all, there were indications in December of 1972 that many governments and individuals were turning away from such world wide issues and concentrating on their own affairs. The experience of a quarter century of international efforts to speed the process of economic development seemed to be leading to a sense of failure and disillusion rather than to a mood of accomplishment and optimism. Participants knew that "donor" governments were questioning whether their investments in support of economic growth in developing nations, either through bilateral or multilateral means, were achieving the desired result. The Conference realized that it was meeting at a time when international efforts seemed to be out of phase with human needs. Could the trends of recent years on development aid, described in Table I as "A Lagging Flow," be reversed?



The aid-giving nations on the O.E.C.D. committee, besides the five mentioned on chart, are Australia, Austria, Belgium, Canada, Denmark, West Germany, Italy, the Netherlands, Norway, Portugal and Switzerland.

Despite these reasons for gloom, the participants did not despair. Rather they set briskly about their task, first by finding useful ways to think about the topic of the Conference, and then by deciding on specific steps to propose that might lead to human betterment by means of education and books. Those who planned the Conference were more than once reminded in admiration of their countryman Adlai Stevenson's description of Eleanor Roosevelt: "She would rather light candles than curse the darkness."

Such was the style, the personality of the Conference. It sought common ground and practical proposals rather than the pleasure of ideological dispute or the search for scapegoats. It did not expect too much, but it refused to give up. At the end of their brief voyage, the passengers parted in the hope that they would meet again, and that others like them all over the world would pick up where they left off.

This general description of the Conference, however, should not mislead the reader into thinking that there were no disagreements, or that perfect understanding was achieved. The participants were far too independent of mind and too varied in their approach to problems to permit any superficial agreement to paper over or hide a basic divergence of view. Where there was basic disagreement, and no solution seemed possible, it was the sense of the Conference—not put into formal action—that the best thing to do was to agree to disagree, and go on to the next topic. Following that wise practice of the participants, therefore, this Director's report will describe what was discussed and agreed upon, hoping that other groups similarly constituted will both go farther and delve deeper into the issues.

Education and Economic Growth

The first session of the Conference, based on the paper dealing with the Educational Component of Economic Development, resulted in the first meeting of the minds. The analyses by the half-dozen economists and planners of two decades of investment in education for the purpose of economic and social growth included consideration of its record of social maladjustment and economic distress. This suggested to the participants that demonstrable contribution to economic growth was not by itself an adequate justification of the importance of literacy or for the use of books and other educational materials. It rapidly became clear that participants from both developing and developed countries were far from satisfied with the present situation, either as to the extent of understanding of the relation of education to economic development, or as to the role of books and materials in the development of national educational plans. Participants from developed countries indicated that they were far less certain than they had been even a decade ago that their goals and methods for economic development were appropriate and relevant if applied to developing countries. This view was shared, sometimes with sardonic smiles, by participants from developing nations.

The approach of the so-called "donor nations" was modest. Neither economists nor planners ventured confident predictions of economic returns from educational investments. Participants in general were aware of the danger of the wastage of human hopes and national resources when educational programs do not achieve literacy because of high pupil

attrition or lack of reading materials. Indeed, some of the social and economic results in the developed societies, and perhaps particularly the host nation, seemed to be more in question than those of the developing nations. Ecological imbalances, the disenchantment of youth, the dangers of rampant technology and the dehumanization of man were in the minds and words of many participants.

The argument that investment in education and teaching materials should be calculated by the extent of their contribution to national economic growth received short shrift at the Conference. Several approaches to the issue were reflected in the discussion, but they all led to the same conclusion that education's contribution to the growth of a nation's Gross National Product (GNP) is by no means an adequate measure of its contribution to national development. Even more significant, in the judgment of many participants, was the role of education in the enhancement of human dignity and individual fulfillment.

There was, to begin with, a good deal of doubt as to whether any adequate measures were now available, or were likely to become available soon, that could calculate in economic terms the role of education in general, or of books in particular, in national development. The statement by Michel Debeauvais (in his review that follows in Section II) that research on the economics of education is deceiving "only for those who place excessive hope in the possibility of directly tying together systems as complex as education and the economy by several easily calculated parameters" reflects the judgment of the participants. The concensus of the Conference was that neither human nature nor the nature of knowledge could be squeezed into statistical symbols and made a variable in an economic formula. The position seemed to be that the role of the economist was, on the basis of the evidence before him, to raise questions and to issue warnings related to allocations of scarce resources—but that fiscal decisions on support of education and books has to take into account such values as human dignity, social and cultural development and, in a general sense, the quality of life.

Evidence that many present educational policies and practices seemed to be maintaining the *status quo* or even widening the gap between the rich and the poor, both between and within nations, troubled the Conference. There seemed to be general agreement that education should be a force for social justice, and that the results of educational investment should be judged, at least in part, by the contribution they make to the goal of a just society. But the papers prepared for the Conference suggested that the results of recent decades of effort were not having the effect of promoting social justice. The participants were deeply troubled.

The Conference, however, did not evade the necessity for making hard decisions on the allocation of scarce resources. It recognized that planning was essential and careful economic analysis a vital factor both in national budget making and in the investment of international aid. But it seemed to sense a danger that decisions might be made on too narrow a basis, using few variables into consideration. Though no one put the matter into so many words, the tone of the discussion suggested that those responsible for national planning and budget making would be well advised to regard economists as guides and allies, but not masters. And planners and economists seemed to agree.

National Plans and International Collaboration

When the discussion turned to national plans and budget making, based on the paper prepared by Christopher N. Egwim, the wide variation between nations in their needs for education and for books and other materials became apparent. The Conference emphasized the need for national planning directly based on specific economic and social circumstances. It doubted whether any single approach to the allocation of resources to the different levels of education, for example, or to the promotion of books and other materials, would be wise. On the contrary, various approaches were needed to solve different problems, and the word "packaging" was often used to describe a strategy which contained different programs varying in content.

It was clear that there was need for increased aid from international sources to help developing nations work out their own plans and programs. The nature of that aid would necessarily vary depending on the particular circumstances of the nation under consideration.

In some cases, for example, the stage of a nation's economic development made it sensible to rely on internationally prepared materials. The number of those to be educated as well as its economic condition, was necessarily a factor in deciding whether a nation could afford to create its own capacity to produce both educational and general books and materials. As the Mohonk Statement noted, "To some degree, the need for books can be met by the import of materials from more developed countries, especially books for secondary and college levels, and this international flow of books should be encouraged by practical measures."

The Conference agreed that for many developing countries the highest priority should be placed on the development of primary education and the provision of materials and support of such education. It noted the tentative judgment of current economic analysis that primary education yields the highest rate of social and economic return, and many participants emphasized the need of linking such education to rural development. The lack of books and other materials essential to such primary level programs was noted and deplored. Nor was the concern of the participants limited to printed or other materials for use in formal schools. Reading and the use of numbers, it was noted, were essential skills for the individual throughout his lifetime, and they atrophied if unused. The special need for materials used in rural development was noted again and again, as was the need for a wide variety of printed information adjusted to the particular interests and vocations of those who had completed primary education.

Several participants pointed out that the high attrition rates, commonly in the order of 50% over the primary school years, were tragic for both the nation and the individuals affected. Recognizing that economic and social factors were major causes of these rates, they nevertheless pointed out that the lack of materials to motivate continued reading was a far greater issue than seemed to be generally recognized. As the Mohonk Statement emphasized "The time has come—indeed is long overdue—for a substantial increase in the proportion of national and international expenditures for the creation,

production and distribution of books and other materials for learning."

Having reached this general conclusion, participants found themselves limited by lack of data in estimating the present degree to which nations allocate resources to these purposes. They were therefore unable to make recommendations as specific as many would have wished on guidelines for the consideration of international agencies and national planners in supporting programs to provide books and other materials. Christopher Egwim noted with regret that "with very minor exceptions, it was practically impossible to get any reasonable data on expenditures for learning materials.... Thus one of the significant findings of this study is that of lack of data." The participants agreed with Mr. Egwim that high priority should be given to the collection of such data in order to help educational and economic planners in deciding how best to expand programs of producing educational and other materials.

Both Mr. Egwim's and Charles Benson's papers, however, provided some hints for the participants of the order of magnitude of planned allocations of resources for materials, based on evidence from a few developing nations. These ranged from 1.3% of recommended expenditures for education to 2%. Even in these cases, it was known by observation of classrooms and libraries that there were not enough materials to provide even a minimal amount for use by students. And the experience of the participants, covering many nations of the world, was that in all too many instances, allocations were even lower than the figures noted above. The conclusion of the Conference, therefore, was that enough evidence was available to show that a very substantial increase in investment in materials was justified *for primary education alone*, to say nothing of the continuing needs of further schooling and of the adult society.

There seemed also to be general agreement that materials for primary education should be created nationally. Differing historical, cultural, linguistic and economic circumstances require a special sensitivity and a particular adaptation to the needs of learners of whatever age. Several participants noted that such a policy would put severe strains on certain economies, and that the development of the capacity to prepare, produce and distribute such materials would be a highly desirable form of international aid, provided such aid was based on a national plan which reflected particular needs of the developing country. Once again it was noted that the content of the materials should reflect national priorities, and special attention in the discussion was given to agricultural education, to programs of population control, and to community development. It seemed to be the sense of the Conference that international support should take the form of technical assistance, training, and financing of capital needs where appropriate.

As the discussion progressed it became clear that the creation of a national plan, which included expansion of schools and libraries and the development of a national capacity to provide books and other materials, required the collaboration of all the specializations represented at the Conference itself. There seemed to be a consensus that such collaboration meant more than just the inclusion of programs of formal schooling, literacy education, production of books and other materials, teacher education, expansion of libraries, *et al.* It meant the combination and fusion of these specialities and interests into the over-all plan of national, social and economic development. To achieve this result required close working relations and mutual understanding between the disciplines and specialties represented at the Conference itself—and it seemed to be the view of the participants that the existing national planning process in general did not demonstrate such effective collaboration.

The conclusion reached, as expressed by several participants, was that the time had come to focus major efforts on improving the planning process itself by the organization of a series of Mohonk-type conferences, with comparable membership and with a specific focus on particular parts of the world's economies. Participants were well aware, of course, that the notion of mutual understanding and collaboration through the means of conferences was a long-term strategy, and that quick results should not be expected, especially in so complex a matter as the development and constant up-dating of a national plan for economic and social development. Yet an organized effort to prepare specialists to take part effectively in the collaborative creation of such plans and their fulfillment seemed essential. One sensed in the Conference a feeling of urgency: The time to start was right away even if the results might be long in coming.

Strategic Alternatives

The Conference was well aware of recent vigorous criticism of the effectiveness of education in both developing and developed nations. The ever growing proportion of the national budgets which education seemed to require, the alarming student attrition rates in many instances, and the tendency of educational systems to reinforce a social *status quo* in the judgment of many observers had already involved the Conference in two rather different lines of discussion.

The first was, in effect, on how best to improve the present world-wide approaches to education, literacy, and the best use of books and other learning materials. There was, however, an undercurrent throughout, which was particularly clear in the session on Strategic Alternatives, that there were deeper issues that had to be settled before sensible conclusions could be reached on the role of books and other materials in national development.

These deeper issues reflected grave doubts, particularly on the part of some participants from the developed nations, about the effect of formal education on the attitudes—in effect the philosophies—of those enrolled. Should we encourage the expansion of institutions whose development seemed to be correlated, too often, with unhappy personal and social results: Selfishness, greed, a lack of interest in such world-wide issues as environment or population? Could we reasonably expect the present methods of education, which were making little if any gain on illiteracy, to meet present needs, to say nothing of the future? Was the emphasis in formal education on the cognitive aspects of learning, on reading and writing and mathematics and science, too narrow when world problems demanded far more attention to moral and ethical and aesthetic issues?

The implications of these questions were mind-boggling. No three-day Conference, however constituted, could possibly

deal with them. It seemed to be the wish at Mohonk to return to the topic at hand after each exploration of these troubling and fundamental questions. And yet the mood of the Conference was obviously affected by what might be described as these humanistic considerations.

It was against this background of uncertainty that the Conference turned its attention to the strategic alternatives that faced both national governments and international agencies in allocating funds for educational programs and for books and other materials. Few, if any, members of the Conference were satisfied with the record of the past few decades. The natural hope that some new, and probably technological, solution to the problems of bringing learning and books to the world's population lead first to a consideration of the topic of using television and other modern aids to learning. Charles Benson's paper included an analysis of the brief history of instructional television in the Ivory Coast. This focussed discussion on whether this type of program pointed the way to future—and perhaps more effective—allocation of resources. It appeared that many participants were not surprised by the summary in Dr. Benson's paper that "since this program is a relatively high cost endeavor, its justification requires evidence of positive effects on productivity in the primary schools. As of now, no system of pedagogical evaluation has been established."

The Conference seemed to favor such experimental efforts to break out of the familiar ways of conducting mass educational programs. The hard facts of limited economic resources and manpower shortages in developing nations argued strongly in favor of more effective educational methods, and television seemed to be a logical and sensible choice among available technologies. Yet there seemed to be a feeling that neither economic nor pedagogical data from past or present experiments were persuasive enough to justify a radical change from the existing ways of allocating resources.

Clearly some participants held higher hopes than others of short term success in using technology in support of education. Perhaps everyone in Mohonk would have agreed that eventually the so-called revolution in communications technologies would have a profound effect on formal education. Few, if any, however, were prepared to go on record that the newer technologies would ever replace the use of something like the printed text in the educational process. Everyone seemed to agree that the human relation of the teacher and the learner was the key to the learning process, and that all technologies—whether the traditional print or the more recent television and cassette—were supplementary and supportive to that relationship. The question, therefore, was whether in the allocation of scarce resources the newer technologies had earned by performance the right to priority support over that of teachers or the printed word.

The answer of the Conference seemed to be "no," with regard to either developing or developed nations. While several participants noted that they were "prejudiced" against "machines" in general, the basic factors that lead to this conclusion seemed to be based on two judgments: 1) the major costs to any society in supporting education would have to be the costs of people engaged in the process of teaching individuals in relatively small groups, and 2) the print technologies were, at least so far, the cheapest and, so far as evidence was available, the most effective aid in that process of teaching.

At this point, the writer of this report may be permitted a personal comment. He sensed that he was not alone in feeling that economic realities in education (the rising costs of the traditional patterns in both developing and developed nations) were already on a collision course with the demands of other sectors of the societies for scarce resources. How much time was there available before the collision happened? Or were there indications that societies were already beginning to put controls on these rising costs in order to avoid the dangers of such dramatic collisions? Although there was relatively little indication in the discussions of the Conference in plenary sessions that this view was shared, he saw some indication in informal talks between sessions that participants were beginning to doubt whether the high priority for formal education, to which each had been accustomed during his or her lifetime, would necessarily be shared by the next generation. Perhaps this doubt resulted from recent changes in social patterns in many parts of the world which have given rise to the expression "generation gap." But whatever the reason for the views of the individual participants, it became evident that they did not wish to support the *status quo* in educational methods. They were therefore in favor of vigorous support, both national and international, of programs of research and experiment in new educational methods and the use of new technologies.

Had the matter come to a vote, which of course it did not under the rules of the Conference, it seems likely that most of the participants would have supported a larger relative allocation of resources to programs of educational research and development than is now customary, and would have pinned their hopes on the outcomes of such programs as the way to avoid the potential collisions between rising educational costs and the demands of other sectors of modern societies. It seemed to this writer, however, that in their hearts the participants did not have high expectations that the results of this investment would be effective in the short term. Throughout the Conference there was a pervasive—almost haunting—fear that there was not enough time to find the technical solutions to the onrushing human and social problems. Even though the Conference favored the support of programs of research and development, at the same time it sought better ways of using existing methods and existing technologies. The conclusion seemed to be that no single strategic alternative should govern future allocations of resources: Several alternatives would have to be followed at the same time and adapted as best as present knowledge would allow for the needs of the particular nation.

It was in this context that three aspects of Dr. Benson's paper attracted attention, in addition to the policy with regard to use of television and newer technologies: His comments on teacher education, on non-formal education, and on the current allocation of resources for books and other educational materials.

There seemed to be general agreement that not enough attention had been paid to the training of the teaching staff in the use of materials. The Conference recognized that the basic education of many teachers was inadequate for their task. It therefore was obviously sympathetic to programs of reform in

pre-service teacher education. The agenda of the Conference focussed discussion on the use of books and other educational materials in schools and libraries, but it was inevitable that special attention would be given to both pre-service and inservice training related to materials. There seemed to be general agreement with Dr. Benson's statement that "it would, however, be a waste of resources for government to supply materials that teachers would not cause students to make use of. Unless teachers are interested in seeing the materials become a part of daily instruction, students cannot be expected to use texts efficiently on their own." The implication of the brief discussion on this topic seemed to be that national plans should include more explicit programs than were now the case to prepare teaching staff to use both existing and future materials.

Discussion on the topic of non-formal education once again reflected the concern of the Conference on the lack of materials directly responsive to the lifetime needs of individuals in any society for knowledge of personal and vocational matters. There was a clear consensus that the library was an essential institution whose development demanded high priority in any national plan, for all the purposes served by modern libraries. The nature of that development, of course, would have to reflect national priorities and the economic situation of the nation. As Herman Liebaers stated in his paper, "it is normal that in developing countries libraries come into existence before bookshops, but it is the experience of the West that a satisfactory library development requires a sound and healthy book trade. When libraries serve rural areas, which they should by all means do . . . they reach the potential buyer of books when he goes to town. So the simple existence of libraries–apparently 798,217 spread over the world–is a major factor in book promotion." And the Conference agreed that the promotion of books or related materials was the basic necessity for non-formal education–to say nothing of their role in the formal system of education. Without them, non-formal education could not be effective, and the Conference seemed to note with particular satisfaction, as Mr. Liebaers also stated, that "the growing concern of librarians with other media shows that they have accepted the challenge of our time."

The Conference was impressed with the importance of non-formal education in both developing and developed societies. And it seemed certain that books and other materials were essential to its development. But the Conference found it difficult to separate the contribution of non-formal education to national development from that of formal education, or to distinguish the role of all communications media from the infinite variety of factors which motivate an individual, regardless of his circumstances, to pursue his interest in learning. As the Mohonk Statement pointed out, the major problem is the "creation in each country of institutions to maintain the flow of books and other materials . . . the encouragement of the reading habit itself. Readers can not be created by instruction alone; they must have material to read that is relevant to the deep purposes of their lives."

Therefore, in considering whether the current allocation of resources for production and dissemination of books and other materials was adequate, the Conference had in mind more than just the availability of such materials for formal education. It was also concerned with the needs of individuals throughout their lifetime and of societies at all stages of economic development. The data available to the participants dealt primarily with expenditures for "educational" materials, and the discussion therefore used these as its point of departure, but the larger issues were never out of mind.

The Conference was of one mind on the matter of the adequacy of resource allocation for these purposes. The opening sentence of the Mohonk Statement declared flatly: "The time has come–indeed is overdue–for a substantial increase in the proportion of national and international expenditures for the creation, production, and distribution of books and other materials for learning." It should be noted that this statement sought to reflect the views of economists and planners as well as those educators and librarians and publishers, who might reasonably be expected to favor more money for printed and other materials. And the use of the words "a substantial increase in the proportion" deserves special attention. Such an increase presumably has to be considered in the light of other areas which are also seeking financial support.

Two aspects of this conclusion of the Conference deserve special emphasis. The first relates particularly to materials for formal education. There seemed to be general agreement that current allocations of funds for such materials underestimated their importance in learning. There was no disagreement with Dr. Benson's statement, for example, that "it is not at all impossible to imagine that having more and better instructional materials available in the developing countries could raise the productivity of teachers, on the average, by 20 to 30 percent." Indeed, there was some speculation that similar estimates might be made with regard to the developed countries. The participants seemed to be fully aware that their judgment had to be based on observation, professional experience and common sense rather than on the result of any controlled experiment or economic analysis. But they seemed just as confident that they were right and that national and international plans should be based on this conclusion.

The second aspect led the Conference to a realistic consideration of the demands on national budgets. Participants were well aware that the salaries of teachers, librarians and other personnel were generally inadequate and that their increase had a strong claim on any additional funds that became available as the result of national economic growth. The discussion lead to the general conclusion that any increase in the proportion of expenditures for the purposes of making materials available would have to come as the result of a somewhat larger share of *additional* funds allocated to educational purposes. This conclusion, it will be noted, reflected the basic commitment of the Conference that learning is a profoundly human and individual matter, and the role of the teacher must be accorded first priority. But the Conference seemed to conclude that this role would be enhanced, not diminished, if the teacher were provided with more and better materials in the schools, and the librarians with more and better materials in the libraries, by using a higher percent of increased future funds than has been the practice up to now. As the Mohonk Statement put it: "an increase of one or two percent in total educational expendi-

tures could double the availability of books and other materials." The Conference was clear that future national and international planning should take advantage of such dramatic leverage.

Practical Considerations

The Conference was ready and eager, by the time it reached its fourth session, to dig into the practical considerations involved in the creation, production and distribution of books and other educational materials. The paper by Mr. Liebaers from the point of view of the librarian, and the paper by Dan Lacy from the point of view of the publisher, formed the basis of the discussion.

There seemed to be substantial agreement from the start that national and linguistic considerations demanded the creation or strengthening of the national capacity to create and produce materials. In order to accomplish this goal it was agreed that a national commitment to creating or developing materials for use by students in formal education would be essential to establishing the economic base. Without such a base the "publishing" enterprise (including all print and audio-visual materials) would have difficulty getting started and would surely have serious administrative and financial troubles. It was also agreed that primary education would benefit particularly from materials designed specifically for national needs. Greater reliance could reasonably be placed on the import of international books for secondary and college levels if the economic circumstances of a developing nation made such a policy necessary and desirable.

The Conference seemed to agree that the establishment of such national capacities to create, produce and distribute materials deserved a high priority in international aid programs. It took note of the specific analyses in Mr. Lacy's paper dealing with the factors and conditions that might limit a nation's capacity to attain its goals: Equipment, paper, printing trade craftsmen, authors and editors, distribution, publishing management, finance and working capital, and copyright. There seemed to be substantial agreement that the following considerations in his paper deserved special attention by both national and international groups:

1) "publishing capacity is a complex, interrelated undertaking; and an activity at one point in this complex may be unrewarding unless planned in the light of the whole."

2) Time and consistency of support are essential.

3) A clear statement of priorities of types of materials and quantities is needed at the start. These statements should take into account the factors of tariffs, foreign exchange controls and taxation.

4) Ministries of education have to decide on criteria and specifications, and make model texts available to interested publishers.

Particular interest was shown in the suggestion that "the real test of national commitment is the allocation of public funds to the purchase of school books and books for simple libraries." Many participants seemed to be in agreement that investment of this sort should be given high priority in both national plans and in the programs of international aid. This conclusion, of course, fitted well with the earlier discussions on the need to increase the proportion of funds allocated for materials in educational and cultural budgets.

Finally, the Mohonk Statement reflected the Conference discussions on the need in many developing countries for creating a National Book Center, or publishing development center, which could provide planning help and technical assistance, training and (of special importance) working capital at low interest rates for publishing enterprises.

It will surely not be a surprise that in a Conference so widely diverse in national origins and personal views, there seemed to be less agreement on the respective roles of government and of the private sector. This was one of the areas of discussion on which it was, in effect, agreed to disagree. But there was no disagreement on the immediate need for a vastly increased nationally based and nationally planned capability of creating, producing and distributing materials. Participants were well aware, of course, of both national and international activities that had been undertaken already to accomplish this goal. Examples were given of programs underway around the world, and the devoted efforts of countless men and women were obviously in the minds of the Conference participants when they reached their final conclusions, as expressed in the Mohonk Statement. Much has been done—but there is much more still to be done.

Some Personal Conclusions

As Chairman of the Conference, I have tried in the preceding sections of this Report to reflect both the mood and the views of the participants. Only they can assess the accuracy of this account. Only they can comment on what has been omitted that should have been included. In short, their patience has probably already been sorely tried. Yet I hope they will understand if I close the Report with a section which attempts to summarize *from my own point of view* the implication of their discussions on the strategies and tactics that might be adopted in the use of books and other educational materials in national development.

1. *The first lesson from Mohonk is that International Book Year was the year for renewed effort, not the time for loss of courage*. The solution to social and human problems lies in the capacity of people to read and communicate. Education, literacy and learning materials are part of the solutions to national problems; they are not just problems in themselves. Both national and international plans should therefore put education and the need for related learning resources, including books and libraries, at the top of the list of priorities for national development. The present tendency to count losses rather than gains should be revised.

2. To assure the wisest use of scarce resources, national plans should be designed according to stages of development. International aid, of course, should fit into those plans at the right place. But above all, *each plan should reflect the cooperative effort of planners, economists, educators, librarians and publishers* in deciding on priorities and the desirable sequence of developments. In many cases, international aid could be particularly significant in the training of these personnel and in arranging for regional collaboration in developing appropriate programs.

3. The allocation of funds for the creation, production and distribution of books and learning materials should be markedly increased, both in national plans and in international

aid. The value of such materials in both formal and informal learning is seriously and dangerously underestimated in the world today. If one accepts the fact that illiteracy and ignorance are in a race with social catastrophe, then it seems foolish not to make adequate use of the only instrument, in addition to the teacher, that the world knows to be essential for learning. It is my own view, therefore, that *national plans should at once treble, and perhaps quadruple, present allocations of resources to make these materials available.* It should be noted that such a step would not mean a major over-all shift in resource allocation for educational and cultural purposes. And I suggest going one step further: *International aid programs in support of all kinds of primary and secondary education should be based on an understanding that national plans will include such an increased allocation and should support publishing plans* over an extended period of years. It is even possible that experience and better data would justify a larger multiple.

4. At the primary level, materials that are not linked to the training of teachers in their use are likely to be ill used or unused. This is probably true in secondary schooling as well. Every modern device—television, radio, films, cassettes—should be employed in this training for both pre-service staff and, above all, for teachers on the job. Evidence of the value of such techniques for specific skill training of educated adults is persuasive. *Every national plan and all programs of international aid for books and other educational materials should include a provision for such training, even at the partial expense of other expenditures that might absorb available funds to raise salaries or to expand higher levels of education.*

5. The creation, production and distribution of books and other educational materials is an area in which international collaboration is attainable. There is no excuse for international competition to discourage national publishing. The hunger for learning is world wide, and every society has problems which can only be solved by mass understanding, the development of individual skills and the fostering of human growth. *A massive effort to provide these materials would be recognized throughout the world as an essential step and a sensible form of international aid.* The degree to which such aid is now provided is unsatisfactory. It is entirely reasonable to assume that the creation, production and distribution of such materials can become a self-sustaining enterprise in time and can repay its initial investment. This is something modern man knows how to do. All the technology is available. What is missing is the will to do it.

6. Developed nations and international aid programs should continue to undertake vigorous experimentation with the use of modern educational technology, such as radio, television and cassettes. It is essential that a careful watch be kept on the effectiveness of these methods, both in terms of what is learned and in terms of cost-effectiveness. *The evidence is not adequate today in formal schooling to recommend the replacement of existing educational methods and printed materials by new technologically based means of communication.* The risk of learning failures and the high cost are too great. The allocation of perhaps five or ten percent of resources available from international aid for such research and development programs should, however, be supported vigorously. A reasonable test of their world-wide applicability might be the extent to which they are used successfully by the developed nations in their own programs.

7. Books and other educational materials are essential for both formal education and for adult life in all modern societies. The school and the library, the radio and the television, the pamphlet and the newspaper, the Book Center and the press, are part of a seamless web, and should be so considered in planning for national development. *It would seem that certain technologies are better adapted to preparing individuals to understand and to manage specific personal and immediate problems*: For these, the more sophisticated technologies may be particularly appropriate. The examples of agricultural education, population control and health education come to mind. For some purposes the "middle level" technologies, however, are better suited, such as teacher training. For most, the longer, slower but more lasting methods of literacy in both words and numbers are irreplaceable. The lesson for the world in International Book Year is that all technologies for teaching and learning are necessary, and have to be varied according to national needs. *Libraries and book development are as essential for national development and human growth as schools are.* The conclusion, at least to me, is clear: Every national plan which deserves support at home and from international aid agencies should include both provisions for using modern educational technologies to inform the adult population on ways of solving personal and vocational problems, and also specific plans to develop modern library services to serve the needs of both the student and the adult population.

8. It is necessary to discard the arbitrary dividing line (reflected, alas, in this Report) so often used in thinking about books and other educational materials for schools as opposed to those needed for the adult population. This is one of the lessons that developing nations might be advised not to learn by example from the economically developed nations and instead might adopt a new concept. *The implication for national planning and international aid is to be sure that programs include provisions for motivating continued learning after formal schooling is completed.* The second most serious failure of present world-wide efforts, following the inability to control population growth, is attrition in formal schooling. This is only partly a problem of the schools; it is just as much a problem of the lack of materials outside the schools. A criterion for international support should be the demonstration by proposed national programs that they make provision for this aspect of providing services and materials designed to foster individual growth and understanding throughout the individual's lifetime. A specific requirement for aid programs, with regard to investment in publishing developments, is that they show evidence that printed materials will be adapted to national needs for both youths and adults.

9. The final lesson from Mohonk, therefore, is that modern man can not afford the luxury of separating formal from informal education. There is nothing new about such a statement: Some societies have long recognized its truth and based their plans and programs upon it. But the forces of specialization and bureaucratization tend toward separation despite good intentions. *The rapid development of national programs to provide books and related materials for all purposes, supported by international aid for publishing and*

translation, would assure that the rest of the 20th Century would be spared the mistakes of its earlier decades. Libraries are a part of schooling, and publishing a part of adult education. The UNESCO policy of supporting lifelong learning is a good policy for developing and developed nations alike, and good policy makes for better international relations.

The Mohonk Conference was designed to be a small step in a long journey. These suggestions for national and international policies and programs will have served their purpose if they are useful to responsible authorities in making decisions.

SECTION II

THE EDUCATIONAL COMPONENT OF ECONOMIC DEVELOPMENT

by

Francis Keppel

AN AMERICAN VIEW OF THE RELATION OF ECONOMIST AND EDUCATOR

When the compiler of these documents on the Economics of Education started secondary school in 1930 a study was being made in the United States which resulted in a massive report on *Recent Social Trends*. Neither the Review of Findings, which was presumably influenced by the economist Chairman of the study Committee, nor the chapter on Education, contain any mention of economic theory in relation to education or to economic studies of the effects of education. The only reference to scholarly disciplines in a section headed "Scientific Studies of Education" were to philosophy, psychology, psychlometrics and pedagogy.[1]

A decade later the classic study by Gunnar Myrdal on *An American Dilemma*, subtitled the Negro Problem and Modern Democracy, treated both economic and educational issues–but in separate volumes. Indeed the treatment of the contribution of economics in Appendix 2 is less than enthusiastic:[2]

> Economics–or "political economy," to use the old-fashioned but more adequate term (the attribute 'political' has been dropped for convenience and as a tribute to the purity of science)–is the oldest branch of social science in the sense that it was the earliest to develop into a system of observations and inferences organized under the principle of social laws. In economics we can most conveniently study the influence of the static and fatalistic general bias upon the development of social science discipline. From natural science it early borrowed the concept of "equilibrium." This concept, as well as the derived concepts of "balance," "stability," "normal," are all often heavily loaded with the static and fatalistic valuations. To an extent these concepts have taken over the role of the conservative variant of the old harmony doctrine. It is, of course, possible to utilize them in a purely instrumental manner and the success of generations of economists in gradually perfecting our knowledge of economic relations is due to such a utilization of the various notions of social equilibrium and disequilibrium. The "assumptions" of economic theory have been useful. But their load of inherited static and fatalistic valuations is heavy, and they will often turn into convenient covers for biases in this direction.

Twenty years later, in 1950, a study of the role of the U.S. Federal Government and Education was prepared by a Professor of Education with funding from the Brookings Institute, a Washington organization devoted primarily to governmental and economic research. The author noted that members of the Brookings staff acted as a "sounding board" for ideas and interpretation of data. Yet the reader will find no reference to education as a factor in economic growth or as an instrument of national economic policy. Indeed only one of the titles of the 41 volumes in the Series in Education, of which this book was a part, promised any consideration of economic issues, and then under the heading of "Public School Finance."[3]

For the educator brought up on these and similar studies in the mid-century years, the economist was a distant if impressive figure. He was rarely considered an ally in the educators' ceaseless search for more funds. Indeed there was some suspicion that his placing of education on the "consumption" side of the ledger, rather than on "investment" or "return on investment," implied doubt of its "real" value.

Conferences between economists and educators were few and far between. And any notion that libraries or books or other educational materials might somehow be related to economic research or economic theory on growth was not in the air.

Yet in barely a decade, by 1960, two factors were to bring about a dramatic change. The developed nations found it necessary to seek some rational way to allocate scarce resources to help developing nations–and every developing nation put education high on its priority list. How much should go for education? To what educational level, and how? What was the relation between investment in education, employment and growth?

At roughly the same time, leaders in economic thought were pointing to new directions. In a chapter entitled "Concepts of Human Resource Development," for example,

one finds these words:[4]

> Modern economists, however, have not paid as much explicit attention to human resources in economic growth as did some of the great classical economists like Smith and Marshall. Perhaps because physical capital was measurable, and a capital-output relationship was given an apparent quantitative respectability, some modern economists virtually ignored the human resource factor in economic development. But within the past five years, a number of economists in the United States have called attention to the importance of human resources, and particularly to investments in education. For example, in his presidential address to the American Economic Association in 1960, Theodore W. Schultz said:
>
> The failure to treat human resources explicitly as a form of capital, as a produced means of production, as the product of investment, has fostered the retention of the classical notion of labor as a capacity to do manual work requiring little knowledge and skill, a capacity with which according to this notion, laborers are endowed about equally. This notion of labor was wrong in the classical period and it is patently wrong now. Counting individuals who can and want to work and treating such count as a measure of the quantity of an economic factor is not more meaningful than it would be to count the number of all manner of machines to determine their economic importance either as a stock of capital or a flow of productive services.
>
> Measures of capital formation based on fixed capital are deficient, as Simon Kuznets has pointed out, because they omit expenditures for education, nonprofit research, health, recreation, etc., which 'contribute to economic growth by increasing the efficiency of a complex productive system.' Few economists have been concerned specifically with the relationship of better health and nutrition of the labor force to productivity and economic growth. But the rediscovery of the importance of human resources by Schultz and others has led to more recent efforts to incorporate investments in education into the mainstream of economic analysis. The principal approaches have been the following: 1) determination of the relationship between expenditures on education and growth in income or in physical capital formation over a period of time in one country, 2) the residual approach in determining the contribution of education to gross national product (GNP), 3) calculation of the rate of return from expenditures on education, and 4) making intercountry correlations of school enrollment ratios and GNP.

In the same year of 1960 in which Professor Schultz gave his presidential address, an international group advising the Nigerian government entitled its report "Investment in Education" and wrote:[5]

> We do not make our proposals lightly, or without regard to these economic realities. But if the facts of national income have to be considered, so also do the facts of economic growth. In the modern world economic advance depends on skilled manpower, and the manpower must come first. Investment in Nigerian education is therefore an investment in her economic future and political stability, and as such may command international attention.

From the educator's point of view, this was heady stuff. He began to think of himself in a different way. No longer the seeker of government or private philanthropy, he dreamed of a place at the head of the table. The rhetoric used in obtaining financial support began to change. The compiler contributed himself to a general escalation of promises on the effect of educational investment in testimony before a Committee of the United States Senate in 1964:[6]

> In a complex, technological society that lives and grows by innovation, education cannot be considered solely as a service to the individual in the cultivation of his talents and intellect. It is also an area of essential public investment in economic growth and national security. Educational policy is inexorably linked to equality of opportunity, to full employment, to economic growth, to international trade, to foreign policy. For the Federal Government to neglect the instrument of society best adapted to develop its greatest resource—the intelligence of its people—would be as foolhardy as to neglect its responsibility in national security. The Government must have a polity and a program; the question is not whether to have them but what policy and what program should be adopted.

And in another statement in the same year, he argued in favor of an educational program in Washington, D.C., for disadvantaged youth, on the ground that a year's training cost $216 "but the lifetime difference in income between a man with marketable skills and one without them is about $50,000. So in terms of purchasing power alone, the capital community stands to get a return of $45 million on its investment—a fantastic 23,000 per cent."[7]

The use of those quotations is only partly to show the need for training in economics for the educator. It is even more to demonstrate the high hopes of the mid-sixties, hopes for the effect of investing in education for development which were shared by many economists, even if their language was more accurate and sedate.

Yet by 1970 the clouds were growing thick on the horizon. Somehow the promises were not working out in the United States, and there were haunting doubts about the wisdom of investments in education abroad. In late 1972, a book was published which flatly denied that schools had much effect on the earnings of the individual later in life, at least in the United States.[8] And other studies were raising similar questions, or providing disconcerting answers.

It is against this background that the compiler and Director of the IBY Conference found the following *précis* of four reports to be of particular interest. All were prepared for the second session of a conference entitled *Education and Development Reconsidered*, which took place May 3-5, 1972, at the Villa Serbelloni in Bellagio, Italy, sponsored by the Rockefeller Foundation and the Ford Foundation, and are provided through their courtesy. (The complete text of all the papers were available for members of the IBY Conference.) They reflect a troubled mood, which will doubtless have its influence on the policies of national governments and international funding agencies in years to come. The non-economist members of the IBY Conference, however, will

recall the history of the past half century. It is only a short decade in which collaboration has been attempted between educators and economists. Perhaps too much was expected; certainly unexpected social results were experienced. The Conference will no doubt wish to discuss whether further collaboration is desirable in the future, in what way, and with what relation to the provision of books and other educational materials.

Investment in Education

From the beginning, some rough connection between employment and economic productivity, on the one hand, and educational achievement, on the other, has been at least surmised by both assisting agencies and developing countries. However, attempts to demonstrate the existence and nature of such a connection and to draw its implications for investment in education awaited the recent work of the economists of education.

A number of economists have contributed papers for the discussion of this subject. Messrs. Todaro and Edwards, both of whom have had sustained experience in connection with economic development in East Africa, have challenged some familiar assumptions underlying past investments in education in the light of growing unemployment, and on the basis of this analysis have drawn implications for future investment strategies. Three economists of education, Professors Blaug, Debeauvais and Schultz, have responded to an invitation to say, in very brief compass, what guidance to "investors in education" their young discipline can now provide.

Two other authors raise questions about some of the working assumptions underlying most treatments of investment in education. An economist, Mahbub ul Haq, looking back on his experience as a "Western-trained" economic planner in Pakistan, asks that the then-prevailing theory of economic development be "stood on its head" to provide, *ab initio*, employment and other minimal benefits to all. Finally, Professor Ralph Miller advances a thesis about the meaning of development itself which questions the basic and (he holds) narrowly Western conception that the central aim of development is to bring about growth in GNP and "the creation of employment."

FOOTNOTES

1. *Recent Social Trends in the United States: Report of the President's Research Committee on Social Trends*, McGraw-Hill Book Company, New York, 1933, Volume 1, see pp. XIVII-XLVIII, 325-381.

2. Gunnar Myrdal: *An American Dilemma*, Harper & Brothers, New York, 1944, Volume II, pages 1047-1048.

3. Hollis P. Allen, *The Federal Government and Education*, McGraw-Hill Book Company, 1950.

4. Frederick Harbison and Charles A. Myer: *Education, Manpower and Economic Growth*, McGraw-Hill Book Company, New York, 1964, pp. 4-5.

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Introduction and Précis

EDUCATIONAL DEMAND AND SUPPLY IN THE CONTEXT OF GROWING UNEMPLOYMENT IN LESS DEVELOPED NATIONS

by

Edgar O. Edwards
and
Michael P. Todaro

1. The idea that education in abundance beyond literacy is an umitigated social good and an engine for development deserves challenge. That challenge is taking the form in developing countries of growing open unemployment in urban areas, reaching in the 60's percentages such as 13.6 in Bogota, 7.9 in Venezuela, 15.0 in Ceylon, 9.8 in Malaya, 11.6 in the Philippines, 14.9 in Kenya, and 11.6 in Ghana.[9] Moreover, the average level of education among the unemployed appears to be rising, suggesting that the growing investment in educational systems is increasingly an investment in idle human resources. For example, in the middle and late sixties the highest rates and longest durations of open unemployment were found among those with a secondary level of education. The prospects, therefore, given present employment patterns, surging educational enrollments and rapid population growth are not encouraging. In the face of these facts, the further

rapid expansion of education beyond literacy levels without constructive efforts to create meaningful employment opportunities is likely to generate political as well as educational unrest.

2. Obviously the numbers being educated in developing countries exceed the employment opportunities available to them when they emerge from the educational system. Yet educational ministries with the implicit endorsement of donor agencies continue to press for the expansion of educational opportunities on the tacit assumption that so long as the demand for educational places exceeds the supply, expansion is socially justified. But the signals reported above on employment suggest that the demand for education is itself excessive and a supply of education which responds exclusively to that signal may lead to a serious misallocation of development resources. It is our contention that an educational supply responsive to demand was not inappropriate in the 1950's and the early 1960's when shortages of educated manpower were general, but to continue to adjust supply to demand through the 1970's and 1980's when opportunities for education already exceed requirements for it is clearly bad policy. We further contend that tinkering with educational supply alone will not close the fundamental, troublesome and growing gap between the demand for education and the supply of employment opportunities. To achieve that end more basic policy changes will be required.

3. The fundamental question we address is why the demand for education in developing countries is so high and growing when job opportunities are obviously scarce and growing at a distinctly slower pace. One possibility to which we accord little weight is that education is wanted in significant quantities as an end in itself, as a consumption good. This may be an important factor in advanced countries but given low per capita incomes, urgent needs for other consumption goods essential for a minimum standard of living, and limited numbers of families with incomes large enough to afford education as a luxury, we are not convinced of its significance in developing countries. We shall argue instead that the demand for education in LDC's is primarily determined by the balance between 1) the prospects of earning more income through future employment in the modern sector as perceived by the student and 2) the educational costs which the student or his family must bear. An *excess* demand for education results then from a combination of lagging job opportunities and an overly optimistic, though privately rational, pursuit of education.

4. We shall also argue that employment opportunities in the modern sector are artificially restricted largely because 1) factor prices are distorted, capital being underpriced and labor being overpriced, favoring labor-saving methods of production, 2) technologies are often borrowed from advanced countries where labor is a relatively scarce resource, 3) job specifications require excessive education partly in emulation of advanced country standards and partly because the educational system is itself over-producing, and 4) excessive resources are devoted to education diverting them from more productive and more labor absorbing investment opportunities elsewhere in the economy.

5. On the other hand, the demand for additional education is inflated because 1) the income differential between modern and traditional sector employment is artificially high even when modified by the existing probability of employment, 2) perceived employment probabilities may be exaggerated because of the visible success of predecessors in the system and the temporary surfeit of employment opportunities as expatriates are replaced following independence, 3) employers give preference to the better educated even though additional education adds only marginally to productivity, and 4) the portion of the cost of education which is borne privately is usually nominal. Moreover, the demand for education may be even greater at higher levels because of the artificial stimulus created by government financial policies (in many cases made possible by the assistance of donor agencies) which reduce the proportion of total costs borne by the individual as he moves up the educational ladder. In addition to stimulating excess demand for higher education, these policies also raise serious questions of equity since often they lead to a situation in which the higher education of the rich is being subsidized out of public revenues extracted from the poor through regressive tax systems. These several factors suggest that privately perceived benefits may exceed the private costs of education even though the net *social* benefits are very low or even negative, and this divergence may be greater at higher than at lower educational levels.

6. Unlike the demand for education, which is essentially privately determined, and the supply of employment opportunities in the modern sector, which is partly privately determined, the supply of educational opportunities is almost universally a government responsibility, an important political variable, and a natural focus of government policy, often to the neglect of educational demand and employment considerations. In most developing countries today it would appear that demand-for-education exceeds the supply-of-educational-opportunities which in turn greatly exceeds the supply-of-employment-opportunities. The advancing educational level of the unemployed in most LDC's makes it clear that opportunities for education exceed opportunities for employment; the continuing need to ration places in educational systems suggests that the demand for education outruns enrollment capacities.

7. Despite these basic inequalities little has been done in most ldc's either to temper the demand for education toward more realistic levels or to create more jobs through the elimination of factor price and other distortions. Instead policies have focused on the supply of school places, the manipulation of which within the bounds given above has little to do with closing the gap between the demand for education and opportunities for using it productively.

8. In the present circumstances of most developing countries, as opposed to earlier periods when education could not meet employment needs, the supply of educational opportunities acts as a "decoy" variable which at one extreme leaves many dissatisfied because they are locked out of the educational system and at the other spews out growing numbers of educated unemployed. When educational capacity is geared to employment opportunities, it creates an enormous and complex problem of rationing educational opportunities; when it is accommodated to educational demand, it compels the rationing of job opportunities.

9. In the political situation of most LDC's it has been expedient to minimize the rationing of education and to undertake instead the rationing of jobs. Indeed, for the latter task, the educational system itself can be used as a rationing device. Jobs in the modern sector can be allocated (not necessarily equitably) to those with the most advanced education, leaving others less fortunate educationally to fend for themselves on the periphery of the urban sector or in the subsistence setting of the traditional economy.

10. Taking these several factors into account, we feel that developing countries have overexpanded educational opportunities at levels above that necessary to ensure literacy. A continuation of this policy, therefore, must be looked upon most critically by both national governments and international donor agencies. We feel that it would be preferable to give greater weight to prospective employment opportunities in planning educational expansion. It should be recognized, however, that this can only be a partial solution since it does not come to grips with what we perceive to be the basic issue, namely, that the demand for education continues to outrun opportunities for productive employment.

11. To make the demand for education more realistic, governments of LDC's should strive to bring the private calculations of the benefits and costs associated with education closer to the social benefits and costs by:

a. Making the beneficiary (as opposed to his family or society as a whole) bear a larger and rising proportion of his educational costs as he proceeds through the system (with appropriate subsidies for the able poor at low levels of education and through loan programs at higher levels of education) as the most effective means of rationing available places.

b. Reducing income differentials between the modern and traditional sectors and within the modern sector to ensure a more realistic appraisal of the prospective benefits of education.

c. Ensuring that minimum job specifications do not overvalue education.

d. Ensuring that wages are related to jobs and not to educational attainments.

12. To increase the supply of job opportunities, governments should:

a. Reduce wages relative to the price of capital as these enter into employment decisions in both the public and private sectors.

b. Give more careful consideration to improving rural infrastructure and to the possible location of new modern sector activities in areas where wages have not yet reached the distorted levels typical of established urban centers.

c. Allocate a larger share of development budgets to productive employment creating activities as opposed to education than has been the pattern in the last decade.

13. We feel that reasonable efforts along these lines will leave a residual rationing problem in education of substantial magnitude. Dealing with this on the basis of merit rather than favor will be a continuing challenge for LDC's.

14. The past policies of international donor agencies with respect to educational expansion were for the most part well grounded and responsive to the diverse manpower needs of developing nations. However, circumstances are changing rapidly, and donor postures must now be framed in the light of needed national policies such as those identified above. Shortages of educated manpower are rapidly being overcome and a general extension into the future of present rates of growth in educational supply will surely produce new and hopeful school-leavers greatly in excess of the new employment opportunities for which they must compete. Consequently it is now a matter of urgency that donor agencies reexamine their educational assistance policies. Rates of future educational expansion appropriate to realistic appraisals of manpower needs can for the most part be met out of national resources. Moreover, substantial outside support even for lower levels of education where expansion continues to be justified may simply free national educational resources for the less economically justifiable expansion of higher levels. In short, donors should assist LDC's to do what is socially wise rather than what seems to be politically expedient in the field of education.

15. To the extent that LDC's can and will finance needed educational expansion of traditional kinds out of their own resources, donor agencies are given an opportunity to be more selective and innovative in their own contributions to educational development. We would give priority to the following kinds of activities:

a. Intensified and expanded applied research, particularly in the developing countries themselves, on alternative educational and informational delivery systems appropriate to the diverse employment needs and opportunities of these nations. Special attention should be given to those opportunities outside of the modern sector, the sector towards which western type industrial training and higher educational systems are presently oriented.

b. Systematic and controlled pilot experimentation with educational innovations emanating from research efforts. Given the risks and costs associated with experimentation it is unlikely that developing nations will be able or willing to bear the cost of systematic experimentation.

c. Selective assistance to overcome unanticipated manpower scarcities and bottlenecks.

16. The extent to which the various international aid agencies can associate themselves with these kinds of activities will undoubtedly vary but we feel that they merit serious consideration.

Précis

EDUCATIONAL POLICY AND THE ECONOMICS OF EDUCATION– SOME PRACTICAL LESSONS FOR EDUCATIONAL PLANNERS IN DEVELOPING COUNTRIES

by

Mark Blaug

I. The Optimum Shape of the Educational Pyramid

1. The single most striking presumption in the literature is that almost all LDC's suffer from persistent underinvestment in primary education, hand-in-hand with persistent overinvestment in higher education.

2. There is a growing "sense of disillusionment with manpower forecasting," in part because of the crudity of the techniques employed by manpower forecasters, in part because of the absurdly rigid view which it implies of the capacity of the economic system to absorb school-leavers into employment, and in part because of the growing fear that it constitutes an open-ended invitation to expand secondary and higher education without limits.

3. Since the manpower forecasting methods employed do not consider the requirements for primary-educated workers, and since the costs of education do not influence the final results, the typical manpower forecast necessarily commits the bulk of educational expenditures to the expansion of secondary and higher education. Thus it is only after the first call on public funds is met that the planner can think about such alternatives as quantitative expansion versus qualitative improvements, formal education in schools versus informal training in industry, and adult literacy versus schooling for children–questions on which he gets no help from manpower forecasts.

4. The mounting evidence that an amazing variety of manpower structures are compatible with identical levels and rates of growth of national income has still not been adequately assimilated.

5. The leading alternative to the manpower forecasting approach is cost-benefit analysis, sometimes labelled rate-of-return analysis.

6. Though we do not know enough about "externalities," they are not considered to be a serious objection unless we are trying to compare investments in education with investments in, say, health or transport. A deeper question is whether the higher earnings of better-educated people really reflect their superior productivity. For that reason, rate-of-return studies in developing countries increasingly couple analysis of the economic value of education with a study of the operations of the labor market.

7. Most of the evidence, from developed and developing nations, shows that lifetime career opportunities (higher earnings of better-educated people) are not rigidly determined by circumstances of birth. Home background and length of education are of course correlated, but the correlation is nowhere as high as is sometimes suspected.

8. With few exceptions in the developing world, primary education yields higher social rates of return than any other level of education. Between secondary and higher education, however, the situation is more mixed. In half of the developing countries, secondary education also ranks above higher education, but in the other half the ranking is reversed.

9. Though rate-of-return analysis appears to show a general underinvestment in primary education, this is a conclusion about quantities: Existing rate-of-return data cannot tell us what would happen if the content of primary schooling were radically altered; they cannot even tell us how far to carry the reallocation of resources because rates-of-return only provide signals of direction, not statements of actual amounts to aim at. However, the discrepancies in rates of return to the different levels of education are, in most cases, so large that even huge shifts of resources over a period of five to ten years would not serve to close the gap.

II. The Vocational School Fallacy

10. If we could more or less accurately forecast the requirements for specific skills, there would indeed be a case grounded on economies-of-scale for training people on a full-time basis to acquire these skills. But even the most enthusiastic manpower forecasters agree that medium–and particularly long-term–manpower forecasts cannot be expected to do more than to distinguish the needs for people with general academic education from the needs for those with scientific and technical preparation.

11. Vocational training in formal educational institutions makes little sense on either educational or economic grounds. It is impossible to accurately foresee the requirements for specific skills in an economy two or three years hence; for that reason, vocational training on a full-time basis must necessarily impart general skills, at which point it ceases to be "vocational" in the sense in which that term is usually understood. The most that schools can do is to provide a technical foundation for on-the-job acquisition of specific skills.

12. (However), schooling makes people more productive not just by imparting cognitive knowledge but also by "socializing" them in various ways; punctuality, achievement motivation, the willingness to take orders and to accept responsibility are no less vocationally useful skills than the ability to turn a lathe or to read a technical instruction.

13. The notion that there is one kind of education, called general education, which has nothing to do with the world of work, and another called vocational education, which is firmly geared to the "needs of a growing economy," is part-and-parcel of the rhetorical folklore that continues to impede rational educational planning in LDC's.

III. Private Costs and Social Costs of Education

14. Perhaps the chief merit of rate-of-return analysis of educational investment is to emphasize the enormous gap that prevails in almost all countries between the private and the

social costs of education. Private rates of return to education everywhere exceed social rates of return. The reason for this is simply that the total resource costs of education everywhere exceed the costs that students and parents must bear themselves.

15. The policy of allowing higher education to grow at its own natural rate is steadily undermining the goal of equality of educational opportunity. Both economic and social objectives would be served by redirecting resources in favor of the lower stages of the educational system.

IV. Cost-Effectiveness Analysis

16. Rate-of-return analysis or cost-benefit analysis is in fact only a species of a much larger genus which can be used to evaluate any activity, however many objectives that activity aims to satisfy. This genus (cost-effectiveness analysis, systems analysis, management science) involves three steps: 1) specifying each of the multiple objectives in such a way that they can be scaled; 2) in terms of that scale, measuring the effectiveness of all projects per unit of costs for each of the objectives; and 3) choosing the "best" project by applying the planner's "preference function," that is, a set of weights or order of priorities among objectives.

17. Steps 1 and 2 involve positive social science, while 3 demands normative. The problems are that non-economic goals have hardly begun to be operationally formulated. The concept of educational planning for economic objectives may be an untidy mess, but it is a paragon of order compared to educational planning for social, political and educational objectives.

V. Concluding Comments

18. Recent work in the economics of education does not provide a list of concrete recommendations, but it does provide some presumptions in favor of investing in primary education and generally opposed to vocational schooling.

19. Other suggestions rest ultimately on the inherent uncertainty of the future and the limited capacity of social scientists to reduce the level of uncertainty by accurate forecasting. This uncertainty argues in favor of teaching general rather than specific skills; of late rather than early specialization; of part-time rather than full-time education; of expenditure on the provision of information, if necessary at the expense of facilities; and, in general, of postponing all "lumpy" decisions as long as possible.

20. We still know very little about the learning process in schools and even less about why schooling is so highly rated in the labor market.

21. Our appalling ignorance of the functioning of labor markets in LDC's is undoubtedly the Achilles heel of the economics of education, which continues to sow seeds of doubt about its major findings. It is clearly the problem-area on which future research ought to be concentrated.

Précis

THE CONTRIBUTION OF THE ECONOMICS OF EDUCATION TO AID POLICIES: A CRITICAL COMMENT

by

Michel Debeauvais

1. "After a period of perhaps exaggerated confidence in the effectiveness of economics as applied to the realm of education, we are now going through a phase of critical reevaluation of methods and concepts recommended in the course of the past ten years. The theoretical hypotheses concerning the relations between the economy and education have not been confirmed by the research of the past few years; the methods of planning for so-called 'human resources' have been revealed to be neither as certain nor as effective as had been thought."

2. "For the '*policy-maker*,' the contribution of the economics of education may be judged as follows: Are the results of research sufficiently certain and concordant to allow determination of more favorable decisions? Are the proposed solutions realistic? The *planners* tend to pose a different type of question: Are the theoretical decisions applicable within the present state of available information? If the economic theory does not appear useful in a given concrete situation, can one extract from the present facts, historical examples, or international comparisons, statements which are sufficiently precise and stable to serve as a basis for the future? The *economists* are more interested in the theoretical significance of these statements, in trying to find a rational base for their decisions, independently of their conditions for application."

3. "Knowledge does not progress in a linear fashion, nor in terms of the demands of action. Divergencies among the three points of view are inevitable, and it is neither possible nor desirable to make them disappear, as each is an essential element of the social dialogue."

4. Research on education as a factor of growth consisted of: Looking for a direct relation between the level of educational development of different countries and the level of their economy; constructing synthetic indices combining quantitative and qualitative facts about the educational system and the labor force; the analysis of correlations between indices with the aid of different forms of factorial analysis;

and comparative research based on the educational (or professional) characteristics of manpower relative to the levels of productivity."

5. "The majority of correlations thus obtained are significant . . . but also rather low: more than half of the differences established between the countries must be attributed to other factors."

6. "The results do not give an univocal indication in the sense of causality: is education the cause of economic development (effect of investment) or only the consequence (effect of consumption)?" .

7. "On the whole, each country presently carries on efforts proportionate to its economic resources. Moreover, considering the high rate of growth of the educational system (and not the present levels, which reflect as much historical evolution as present efforts), the characteristic differences established between countries do not seem related to economic rates of growth, nor to the level of economic development, nor to any universal economic variable."

8. "International experience has not provided the criteria to permit the determination of a 'percentage of the GNP' which should be devoted to education as a requirement of economic development."

9. "Research conducted in the fifties on economic growth . . . has shown that the economic factors . . . accounted for only a fractional amount of the total expansion. Among the different explanations put forth in an attempt to identify this 'residual factor' the one which cites education as the 'third factor' of growth has had the greatest success." Other economists "prefer to consider that the 'unexplained residue' can be explained by the progress of knowledge, which essentially is incorporated into the capital in the form of increased productivity". E. Denison "considers education to be the transmission of existing knowledge, and not the producer of new knowledge."

10. "The important contribution of micro-economic analysis was that it allowed the application of methods of costs-benefits analysis to the formation of the criteria of choice concerning education, from either an individual or a collective viewpoint."

11. Economists are far from being unanimous on the subject of practical conclusions which can be drawn from educational rate of return studies.

a. The extra-professional satisfactions which the individual may draw from education are not included in these calculations, nor are the indirect benefits to the entire community, such as the progress of knowledge.

b. By using average salaries for the different levels of study, there is a tendency to greatly overestimate the effect of education on salary disparities, without taking into account their dispersion at each of those levels, nor of other factors capable of influencing them.

c. The present rates of return are those measured in these studies, whereas the future returns are those which must be considered for guiding choices in educational matters.

d. The hypothesis of a "perfect market" for salaries, where income disparities indicate individual contributions to production, seems difficult for many to admit, particularly in the case of developing countries.

12. This research has posed questions "concerning the relationships between the educational system and the job market . . . the generally higher rates characterizing primary instruction . . . the relatively weak return on higher education . . . very low, zero or negative rates for post-university training. . . ."

13. "The Mediterranean Regional Project (1962-1964) was the best known example of these studies in 'human resource planning' . . . one of its principal weaknesses is the difficulty in quantifying the relationship between the professional structure and the economy, without taking into account the possibilities of substitution between professions or different levels of training."

14. Research on the economics of education is deceiving "only for those who place excessive hope in the possibility of directly tying together systems as complex as education and the economy by several easily-calculated parameters."

Précis

A GUIDE TO INVESTORS IN EDUCATION WITH SPECIAL REFERENCE TO DEVELOPING COUNTRIES

by

T W Schultz

1. In the absence of a "known path," "probing" and "learning from experience" are the only possible courses of action. Such probing must take account of "three critical attributes" of the economies of developing countries: *capital scarcity, dynamics of development* entailing numerous economic disequilibria, and *lags in adjustment* to these changes.

2. "Investment in human capital in the form of education" is both a response and a contribution to economic growth. The economics of education has "identified and substantially quantified" the following important interactions" between economic growth and education:

a. The accumulation of human capital represented by education occurs at a higher rate than that of nonhuman capital.

b. Although the difference in the relative earnings between workers with little education and those with much, decreases, the absolute difference in earnings tends to be sufficient to warrant further increases in the level of education.

c. As economic growth proceeds, the inequality in the distribution of personal income shows signs of decreasing. Increases in education and in on-the-job training appear to be important explanatory factors.

3. Yet, in spite of the attractiveness of investment in education, its real costs have been underestimated, particularly *earnings foregone* by students and their families. Also, the benefits of education have been "misspecified," particularly the "unsubstantiated" social benefits ascribed to higher education, while two social benefits have been overlooked. The deferred benefit to the next generation resulting from the education of females, and the "allocative benefit" whereby education enables individuals to adjust to changes and new opportunities more rapidly than the uneducated.

4. "What are the priorities among the educational options? What is the ranking of education as an investment?"

a. Among the educational options, the highest private rates of return in most of the developing countries are to be had from additional investments in elementary schooling, mainly from completing the fifth to the last elementary year.

b. When account is taken of the benefits bestowed on the next generation the highest social rates of return are to be had from investments in the education of females.

c. The efficiency of the schooling investment process tends to be the highest where there is a general framework of public rules concerning school attendance and granting equal treatment in receiving public funds, designed to maximize the domain of family and local community decision-making.

d. Given 1, 2 and 3 above and given a *successful development* process, the rates of return to schooling tend to be fully as high as they are on the better half of the investments in nonhuman capital.

5. In support of proposition a above, the current "bias" toward investment in higher education is criticized. In support of proposition b, the "wide array of effects" of educating females is adduced—household efficiency and family consumption are enhanced, the age of marriage is raised, and children of educated mothers receive a "head start."

6. In connection with proposition c, further analysis and "fine tuning" are needed to develop: *Standards* for the use of public funds for education which will maximize "family and community involvement and decision-making" and yet be politically acceptable in societies inclined to "overcentralization of their educational systems"; widespread *information* concerning "the quality of instruction"; *incentives* to "mobilize the private self-interest of students (families)" and to help them make "socially efficient choices."

7. In connection with proposition d, although investment in human capital emerges as capable of enhancing "the future economic well-being of a developing country fully as much as the better half of the investment opportunities in nonhuman capital," the payoff from that investment depends upon conformity to the guidelines supplied in propositions a, b, and c, and upon an active setting of "successful development" within which "the additional skills and abilities associated with more schooling are in demand and the rates of return to the investment in them become . . . as favorable as the best investment opportunities."

8. A postscript suggests lines of research and analysis which should be pursued if further "probing" is to be rendered more efficient and "if learning from experience" is to be maximized.

Précis

EMPLOYMENT IN THE 1970's: A NEW PERSPECTIVE

by

Mahbub ul Haq

1. We still know very little about the dimensions and nature of unemployment in the developing countries. Certainly, in the developing countries, employment has been a secondary objective of planning. Too often we have assumed that a high rate of economic growth insures total employment.

2. Upon examining such a supposition, we find ourselves with another one; that is, if we increase the GNP, we will also eliminate poverty. Accomplishments to date indicate the opposite. The economic rates of growth in many developing countries were fairly respectable, according to historical patterns. However, accomplishments indicate that—although there is a great need for adequate data in this field—in reality, in a number of these countries, poverty of the masses has not diminished.

3. "What has gone wrong?" First, we placed emphasis on the achievement of high levels of income per capita, without noting adequately that statistically high income per capita does not necessarily signify the eradication of extensive poverty. Second, we incorrectly assumed that income distribution policies could be divorced from growth policies and added

later, with a view to obtaining desired distribution. In doing this, the pattern of development dictates a pattern of consumption which becomes politically very difficult to change.

4. We need, therefore, a new perspective on development. The first step would be to define development as a selective attack on the worst forms of poverty, signifying preoccupation with the content of the GNP more than with its rate of growth. Secondly, the developing countries ought to define minimum patterns of consumption which they should reach within an acceptable period of time. Third, greater production and distribution should be brought together in a unified manner in planning for development. Fourth, total employment should become a primary objective of planning.

5. The experience of China suggests that she has followed such policies and has thus eradicated the worst forms of poverty. It is no use insisting that such results must have been achieved at tremendous social and political costs; the peoples of a great portion of the developing countries bear such costs now without obtaining visible economic results.

Précis

THE MEANING OF DEVELOPMENT AND ITS EDUCATIONAL IMPLICATIONS

by

Ralph M. Miller

I. The Meaning of Development

1. Though "development with social justice" might be the slogan for the effort of the last two decades, this assistance has promoted an industrial model of development, assuming that prosperity was the basis of social order and that a programmed increase in the level of economic activity was the key to prosperity. A Western model of development has been predicated, designed to modernize agricultural economies so the new nations might have greater access to the modern international economy.

2. Since the entrepreneurship and individual initiative that were crucial to Western development are expected in contemporary development efforts, must not the same inequalities, rivalries and disruptions be expected?

3. The histories of the industrialized nations suggest that development is not likely to promote social justice and must inevitably introduce disruptive elements of change. The level of general prosperity which is conducive to stability "would seem to be the product of a 'mature' economy which has not only achieved relatively high prosperity but has had time to diffuse prosperity through most levels of the society."

4. Though development is now less often referred to in simple economic terms, the economic rationale still underlies most thinking. The "human resource" approach still "deals only with training a greater variety of workers in more diversified programs and with stimulating employment in sectors which have been neglected."

5. "If growth in GNP is not an adequate criterion of development, neither is the creation of employment. Both are essentially economic and they suggest development should be towards a cash economy wherein the work role is the key to individual status and participation in the goods of society."

6. "A program of western-type economic development for the third world is really asking these nations to commit themselves to a system in which they are already the losers.... The basic question is whether all nations can be winners, or even come close to breaking even, in the world trade game as carried on under competitive conditions."

7. "Why should everybody work? ... The question is pertinent in strict economic terms when the most efficient technologies are steadily less labour intensive and where the highly organized work of the best operatives can produce more than what is needed by all."

8. What we have not recognized is that work has three distinct functions:

a. as an element in the productive process

b. as the means whereby men qualify to share in the goods produced

c. as the means of establishing a man's function and status in society

9. Work for everybody is not needed to satisfy the productive function, since "this century marks the first time when human muscle has been seriously in oversupply," but as long as the LDC's rely upon jobs for the sharing function and as a means of determining status, they are "trapped in a situation where the struggle to create jobs for all undercuts the utilization of technologies and economies of scale essential to achieving success in international competitive markets." Rural development programs which concentrate on bringing the rural sectors into the money economy may not be significantly different from other economic development programs.

10. "Traditional societies have various ways of conferring status and a variety of social roles which give meaning and satisfaction to the people in those roles." In technological societies, as status is measured in monetary terms, "the meaning of a job is largely reduced to the salary it commands. . . . With increasing numbers of people in developing countries obviously failing to gain places in the wage economy, their meaning, as persons, is jeopardized as it would not be were they marginally employed or under-employed in a village."

11. "Instead of pursuing the futile objective of develop-

ment in our (economic) terms, we must try to become more sensitive to possibilities in other environments and ways of life. . . . If it is wasteful to create jobs simply so people may qualify to share in the material goods of life then we must arrange so that they share on some other basis."

12. "A broader approach to development will be 'uneconomic' in that it will not aim primarily at economy and efficiency, but will take as its objective the welfare of human beings and will recognize that human welfare does not simply depend upon increased cash flows or greater success in international markets."

II. Educational Implications of a Broader Conception of Development

13. Education systems and almost all of educational assistance are bound up with the pattern of development which emphasizes preparation for the modern sector. "The 'formality' of these systems . . . is an outcome of the vocational emphasis and the close linkage with the modern sector; formal education requires a curriculum, or a schedule of skills and knowledge, which it is assumed can be taught under certain conditions of instruction and then applied in out-of-school situations.

14. The educational implications of any broader conception of development are primarily four:

a. Education must become less formal.

b. Education must be freed from system restrictions and be developed through a variety of specific projects on a smaller scale.

c. Education projects must be recognized as experimental and must be monitored so that we may find out what works in specific situations.

d. Education must become more of a service within a complex of development efforts and less of an instructional program for the sake of instruction.

15. "The moment we suggest that education is not simply a preparation for [a given] vocational system, all illusions about the adequacy of curricula must be given up. We are no longer talking about designing a system to prepare pupils for roles already established . . . Education must then become less formal in the sense of taking account of local conditions and assisting people in a process of development which includes working out new roles for themselves."

16. "Much of this educational pioneering should go on in rural areas simply because that is where most of the people live. . . . If people are to find meaning in their lives . . . they must be encouraged and helped to find new possibilities in rural living. Education alone certainly cannot revitalize rural life, it can only be a part of the total effort . . . If education is really to assist persons who are going to stay rural, it may have to focus upon the young adult group and it will certainly have to start giving instruction without going through the preliminary of teaching reading. . . . If we accept that education can accomplish nothing in this respect and that the only education people will accept is that aimed towards modern sector jobs, then we must confess the utter irrelevance of education to current development imperatives."

17. "It is only schooling—education carried on under the familiar ritualistic forms—which is irrelevant. What we need to turn attention to are alternative forms of education which are developed in relation to local needs and which utilize local skills." Making education less formal "leads directly into the encouragement of smaller-scale projects, adjusted to local conditions and not confined within the requirements of any national, or other widespread, systems."

18. "Much of the effort of finding a more appropriate form of development and of giving it appropriate educational support must come from the indigenous people. . . . Rather than offering assistance through support of large projects and system development educational assistance must be made more flexible and more swiftly responsive to small projects requests. . . . Aid donors must find ways of responding to that sector which is least able to articulate its needs."

19. "The aim should be to support a variety of local programs and, without burdening these programs with outsiders, to monitor them so that we may learn about the efficacy of specific educational strategies in relation to specific regional conditions and aspirations. . . . Recognizing that we must attempt not only a different kind of education, but an unknown kind of education which is also to have a new functional relation to development, we must also incur the risks of experimentation."

20. "Donor assistance . . . may not be possible in 'pure' educational packages, and may be more a matter of finding out how to render material support to development, in ways most conducive to helping people learn to do more for themselves. Simple notions of efficiency may have to take second place to exploiting the learning possibilities of development projects."

ANALYSIS OF SELECTED NATIONAL BUDGETS FOR EDUCATIONAL PURPOSES

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Until very recently, investment in human capital has not received its due attention in many less developed parts of the world. The negligible amount of human investment in those countries has done very little to extend the capacities of the people to meet the challenge of rapid economic development.

Evidence from the educational statistics of some of the less developed countries has revealed that the cost of education is rapidly increasing. Education is still looked at as a luxury, totally priced out of the reach of large majority of the masses. It therefore becomes the "snob-appeal" purchase of the few, the elitist few. Some governments have responded to this problem by launching much needed free primary education and some have put up large public school buildings with appropriate staff, but then given very little or no attention to equipping the schools with some of the modern instructional and learning materials[1] essential to effective education.

The statistics have also shown that in almost all the countries, the school age population is rapidly increasing; the primary school and secondary school enrollment ratios are almost doubling; teachers' salaries are increasing. In other words, both the capital and recurrent education expenditures are increasing. This being the case, education is therefore apparently fated to remain an industry that requires an ever increasing proportion of the national income. But, given the smaller rate of growth in the Gross National Product of the less developed countries, educational financing and planning present many difficult questions:

1. What proportion of the GNP should be devoted to education?

2. Should education and human resource development become a problem of the state or that of the individuals?

3. Where will the emphasis be placed, quality or quantity education; lower level or higher level education; formal or informal education, or both and how?

4. What may be other additional sources of funds for education?

Whatever the answers may be, the main fact is that education expenditures are very little. A major study of education throughout the world, conducted for United Nations Educational, Scientific and Cultural Organization has found that

> in the educational race, as in the march to economic progress, attempts to narrow the gap between industrialized and developing countries have all failed. The enormous difference in educational expenditures between have and have-not nations is still widening despite large-scale efforts—financial sacrifices and considerable results in the nineteen-sixties.[2]

Following this report, the course of action recommended for any attempts to narrow this gap was

> the elimination of the disparate availability of the right to education for people in different parts of the world.[3]

This study also took a special note of what it calls "Spending Gap," showing that in 1968 developed nations spent more than $120-billion on education while the developing nations spent less than $12-billion, yet the developed parts of the world have only one-fourth of the school-age world population.[4]

The main purpose of this paper, therefore, is to show how the developing countries attempt to close these gaps—both the gap on the education race and the gap on education expenditures. The countries selected for study are the following: Brazil, Colombia, Ethiopia, Indonesia, Malaysia, Nigeria, and Thailand.

In other words, this research aims at finding out the central government's total expenditure (capital and recurrent) on the first and second levels of education, i.e., primary and

1. Learning materials can be defined to include books, educational radio and TV, science equipments, maps, globes, tape recorders and cassettes, film projectors, wall charts, bean bags, etc.

2. Farleer, M.A., "Poorer Nations Failing to Cut Education Gap," *The New York Times*, Oct. 2, 1972, p. 1, col. 5.

3. Ibid., p. 20, col. 1.

4. Ibid., p. 20, col. 1.

secondary levels. The task also is to go beyond the general budget and concentrate on the recurrent expenditure to find out how the money *is* really spent on some specific item in the recurrent expenditure such as textbooks, educational televisions, and radios, and many other instructional and learning materials that have been developed to help the art of learning.

The center point of this research was Washington, D.C., where the researcher spent almost six weeks at the World Bank Education Project Department. Special permission was obtained for using the World Bank Education Mission Reports.

In addition to the World Bank the researcher paid constant visits to such other offices as: I.M.F. and the World Bank joint library; the U.S.A.I.I. Office, U.S. Department of Health, Education and Welfare; the U.S. Department of Commerce and Information Center on Instructional Technology. In most of these places it was possible to get such data as the total country budgets on education. But with a very minor exception, it was practically impossible to get any reasonable data on expenditures for learning materials. A final attempt to collect such data was made by visits to the Embassies of the countries. Still such an attempt was not very successful.

One cannot help but conclude that such an effort is tantamount to looking for a black cat in a dark room when the cat is not there in the first place. Thus, one of the significant findings of this study is the lack of data.

It is important to note, however, that some countries are better than others, benefiting from foreign grants specifically made to carry out such projects as textbook production and distribution, and the establishment of experimental stations for educational televisions and radios.

Another limitation of the study is the dependability of the available data, since most of them are sort of political statements of what the governments said they spent. It is difficult to find out what was actually spent.

Comparative Education Indicator and Some Common Characteristics

As Table 1 shows, most developing countries share some common characteristics. They have been shown as countries of low per capita GNP, low public expenditure on education, low literacy rates, and, also, low primary and secondary school enrollment ratios.

In most of these countries, school management and administration are highly decentralized. Generally, the Federal Governments are in charge of the financing and management of higher education, but often the ownership and management of the lower level standards, e.g., primary and secondary schools, are distributed among different groups such as local authorities or state governments, religious authorities or foreign mission boards and, in some cases, parent-teachers associations. With this also comes the problem of decentralized quality and standards. While in some countries public schools have better quality and many more facilities than private schools, in others the reverse may be the case.

In most of the developing countries there are great disparities between the rural and urban populations. In some cases, over 80% of the entire population live in rural areas. This presents many difficulties, especially communication problems as in the case of Indonesia. The children in rural areas, in most cases, are presented with lower quality educational opportunities because their parents cannot afford to finance quality education. It is in the rural areas that the lack of learning materials is a particularly serious problem. In some of the local areas, children have to bring their chairs to school every day, and some parents can hardly provide their children with copy books. Sometimes less than 50% of the children will own the textbooks while the rest will habitually shift to both left and right to share with their neighbors.

Table 1 — Selected Developing Countries: Comparative Education Indicators

	Year	Population (Millions) (1)	GNP/Capita at factor cost (Constant 1968 US $) (2)	Literacy Rate (% of Adults) (3)	Public Education Expenditures Per Capita (Market Prices US $) (4)	% of GNP Devoted to Education (Public Expenditures only) (5)
Sweden	69	8.0	2,884[f]	99	250[d]	7.1
United Kingdom	69	55.5	1,831[f]	97	94	5.8
U.S.A.	68	203.2[e]	4,000[f]	98	228[c]	4.8
Ethiopia	70	24.8	66	7	2	4.0[p]
Nigeria	71	68.0	104[f]	...	3	3.2[n]
Brazil	69	92.3	272[f]	65[d]	10	3.2
Colombia	68	20.5[e]	286[f]	73[a]	12	4.0
Indonesia	70	124.2[g]	113	43[a]	2	...
Malaysia	70	11.0	340	89[b]	17	4.7
Thailand	71	37.6	163	70	8[v]	4.1[v]

	% of Total Public Expenditures Devoted to Education (6)	Primary Enrollment Ratio Net (7)	Primary Students per Teacher (8)	Secondary Enrollment Ratio Net (9)	% Secondary Enrollment in Vocational Schools (10)	Secondary Students per Teacher (Full time equivalent) (11)
Sweden	14.6	99[d]	16	75	34	11
United Kingdom	13.8	98	28	58	5[c]	18
U.S.A.	15.1	97	26	80	...	20
Ethiopia	20.0	17	51	5	2	34
Nigeria	...	34[x]	37	4	18	23
Brazil	14.0	64	31	16	17	
Colombia	13.6[b]	70	40	21	22[c]	13
Indonesia	16.0	71[x]	40	13[x]	21	22
Malaysia	18.5[e]	89[x]	31	29[x]	3	25
Thailand	17.1	90[x]	42	25[x]	14	33

Education as defined in the table includes all education and training, formal and non-formal;

Primary education refers to education at the first level and *secondary* education refers to all education at the secondary level regardless of type (e.g. general, technical, agricultural);

Vocational education (Col. 10) includes enrollments in technical, commercial, agricultural, vocational and home-economic courses;

Literacy rates (Col. 3) are usually obtained from country censuses. In many countries they are only approximations and it is doubtful that any uniform definition of "literate" has been followed consistently;

Public expenditure in education (Columns 4 and 6) refers to all capital and recurrent expenditures devoted to education by public and quasi-public agencies;

Enrollment ratios (Columns 7 and 9) refer to school year and mean the percentage of eligible children enrolled full-time in the appropriate school, public and private, by level. They are often subject to a wide margin of error in the developing countries owing to variations in the accuracy of basic data (i.e. age-specific population and enrollments). Enrollment figures frequently are higher than the number of students actually in school. Overaged students whose inclusion is indicated by footnotes also can inflate the ratios.

Notes:
a = 1965 or before
b = 1966
c = 1967
d = 1968
e = 1969
f = 1970
g = 1971
n = G.D.P.
p = Including foreign aid
v = Public only
x = Including overaged students

Sources: Columns (1) and (2): World Tables (LBRD) Provisional Figures: Columns (3)–(9) and (11): IBRD Missions. Column (10): UNESCO Statistical Yearbook and IRBD Missions

In most of the developing countries experiments are underway for the establishment of modern education technology (radio and TV). Some countries have allocated reasonable funds for this project. Under some usual situations, the experiments have really proved successful. But in most of the others, there are unusual situations. The installation of educational television, for example, requires availability of good electricity for its operation; affluent societies to enhance wide ownership and use of television sets; trained technicians and teachers. Most of these are not yet available in some developing countries. Thus, considering the heavy financial expenditure and a relatively small viewing population (few children who live in the urban areas), one cannot help but imagine that a better job could be done if such money were used to purchase books for free distribution to the schools in both rural and urban areas. Proper emphasis on and use of textbooks and supplementary materials will prepare the children for an age of communications technology. At that time, such lines of investment will be assured much greater returns as well as greater efficiency.

Cases of Individual Countries

BRAZIL

Socio-Economic Background

Brazil is a country with a population of about 93.3 million (1970) and growing at an average rate of 2.8% per annum. The literacy rate for the population of those over 10 years of age is about 65%. The primary and secondary school enrollment ratios are 64% and 16%, respectively. Brazil has a Gross Domestic Product of about $300 per capita.

Expenditure on Education

The Federal and State expenditures on education in 1968 were 2.7% of Brazil's GDP. This is expected to continue to increase to a projected level of about 4.5% including Federal, State, municipal and private education expenditures.

As Table 2 shows, the Federal expenditure for education

5. Figures in this section are obtained from the World Bank Ed. Mission Reports and the Unesco Education Yearbooks.

in Brazil is biased towards higher education and upper secondary (colegio) education. About 60% of the Federal education budget goes to high-level education while only about 20-25% goes to primary and secondary levels. This means that the financial support as well as the authority over lower level education rests mainly with the state government and partly on the municipal authorities.

Instructional Materials

Textbooks–The Brazilian Federal Government has recognized that without effective action in the area of textbooks, construction of new buildings and increase in the number of teachers would not raise reasonable achievement and productivity rates. The Ministry of Education and Culture has recently incorporated the agencies carrying out book programs into the National Book Institute. This institute has organized a cooperative program with the private publishing sector. Under this program about 10-million free textbooks were supplied to about 11% of the school children in grades 1-4.[6] The rest of the children were able to purchase books at a saving because the government's guaranteed purchase helped reduce the commercial price. The Institute, in that way, functions as a guaranteed customer to the private publishers. Emphasis is laid on basic books–manuals and how-to brochures. The publishing activities are growing very rapidly. The Federal government has already earmarked about Cr 20 million[7] for 1972, 1973 and 1974 textbook activities.

Educational Television and Radio–Like many other developing countries, Brazil is one of the places in which an educational satellite experiment is underway designed to improve the capabilities of the country's educational system. The Brazilian experiment emphasizes the use of satellites to improve inservice education of teachers and programs for students of the 1st, 2nd, 3rd and 4th grades. Brazil also plans to use satellites for 1) the central development and broadcasting of educational television and radio programs, and 2) upgrading classroom instruction through the improvement of teachers' knowledge of subject matter, teaching methods, and use of technology. The project was developed by the Institute of Space Research of Brazil and it is planned to remain under experimentation for four years beginning in 1972. All radio and TV programs will be supplemented with programmed instruction booklets at the schools. The total cost of the four years experimentation has been estimated at 24 million (U.S.) dollars.[8]

Table 2
Brazil–Federal Education Budget, 1969 and 1970
Current Prices (000 N.Cr.)

	1969 Actual[a]				1970 Estimates[a]			
	Recurrent	Capital	Total	Percent	Recurrent	Capital	Total	Percent
High Level Education	504,010	177,950	981,960	62.1	563,679	177,950	741,629	57.4
Technical Education	51,740	31,290	83,030	7.6	64,084	31,287	95,371	7.4
Commercial Education	6,275	835	7,110	0.6	8,105	833	8,938	0.7
Agricultural Education	21,245	1,925	23,170	2.1	25,259	1,926	27,185	2.1
Primary and Secondary Education	126,950	109,035	235,985	21.5	222,689	109,033	331,722	25.7
Other Education and Training	58,720	7,920	66,640	6.1	80,427	7,918	88,345	6.7
Grand Total	768,940	328,955	1,097,895[b]	100.0	964,243	328,947	1,293,190[c]	100.0
	70%	30%	100%		74.6%	25.4%	100%	

a. Administration costs are included for each level but not separately shown.
b. Equivalent to about $270 million.
c. Equivalent to about $285 million.

Source: International Bank for Reconstruction and Development, International Development Association, Education Project Report March 17, 1971.

6. Smith, Roger H., "Brazil's Book Industry: A Giant Coming of Age," *Publishers Weekly*, August 21, 1972, pp. 38-39.

7. 1972-74 Sector Plan for Education and Culture. General Secretariate Brazilian 1971, p. 245.

8. See Instructional Technology Report. A publication of the Information Center on Instructional Technology Academy for Educational Development, Washington, D.C. August 1972, pp. 3 and 4.

COLOMBIA

Socio-Economic Background

Colombia, with a population of about 20.5 million, has a GDP of about 286 U.S. dollars per capita growing at an annual rate of about 5.8%. About 30.5% and 17.2% (1968) of the country's GNP are earned from the agricultural and manufacturing sectors respectively. It has a reasonably high literacy rate (about 73% of adults). The Government of

Colombia attaches high priority to the development of the educational system. The target by 1975 is universal primary education including five full years of schooling for all rural children.

Table 3 shows how Colombia plans to finance her education scheme.

Table 3
Colombia Ministry of Education Budget, 1967-68 and (IBRD Mission) Projection of Expenditures to 1975 (in millions of current Pesos*)

	Min. of Ed. Budget				
Year	Total	% of National Budget	Recurrent Expenditure	Investment Expenditure	Investment as % of Total Exp.
1967	1,056.9	12.9	928.6	128.3	12.1
1968	1,340.1	12.1	1,150.1	190.0	14.2
(Projection in constant 1968 Pesos)					
1969	1,375.1	12.3	1,242.1	133.0†	9.7
1970	1,539.0	12.7	1,341.5	197.5†	12.8
1971	1,751.4	13.7	1,448.8	302.6†	17.3
1972	1,807.5	13.5	1,564.7	242.8†	13.4
1973	1,988.1	13.7	1,689.9	298.2	15.0
1974	2,147.1	13.8	1,825.1	322.0	15.0
1975	2,318.9	14.1	1,971.1	347.8	15.0

Source: IBRD Mission Report 1968.

*1 Col. Peso = U.S. $0.05.
†Ministry of Education projection.

Note: GDP growth rate assumption is 5% annually, and the national budget is assumed to remain a constant proportion of GDP (11.5% in 1968). Growth rate projection of current expenditures for 1969-75 is at 8% annually in real terms. The average annual growth rate of recurrent expenditures for 1964-68 was 20%, or 8% annual increases in real terms with a 12% rate of inflation. The Mission's projection of investment expenditures at 15% of the Ministry's total budget for 1973-75 is strictly arbitrary.

Instructional Materials[9]

The Government of Colombia has created an organization (the "ICOLPE" or Instituto Colombiano de Pedagogia) whose main function is to organize the promotion, design and production of instructional materials to be used in elementary schools. There is no information yet as to how much money is budgeted for that project.

Existing information shows that there is a great need in all schools. Textbooks are the most common materials used by the teachers, and are more widely available for private than for public schools.

The following table shows the quantity of equipment and materials used in elementary schools in Colombia in 1971.

9. Information in this section is drawn mainly from the report of Fanny Forero Rodriguez on "The Situation of Instructional Materials in Colombia" published in *Problems of the Promotion and Production of Teaching Materials in Developing Countries* by German Foundation for Developing Countries, Oct. 1971.

Table 4
Approximate Quantity of Equipment and Materials Used in Colombia, 1971.

Subject	Items	% of Schools
Language:	A.B.C. Series	41.93
	Loteries	26.45
These are the most commonly used materials all over the country.		
Science:	Aquarium	23.57
	Mineral collection	13.05
	Seedplots	2.95
	Collection of dry plants	4.15
	Fauna charts	29.11
	Flora charts	26.51
There is a complete lack of simple apparatus such as microscopes, and basic elements to experiment with electricity, magnetism, optics, acoustics, etc.		
Mathematics:	Geometric patterns	63.10
	Rulers	23.41
	Compasses	6.16
	Models and measures	7.33
Social Sciences:	Charts of heroes and Historical phases	55.54
	Model and mock-ups	2.14
	Maps	39.66
	Earth globes	2.66
General Equipment:	Radio	1.25
	T.V.	1.80
	Record-players	2.69
	Felt-boards	12.76
	Tape-recorders	0.56
	Projectors	0.19
	Mimeograph	0.82
	Hectograph	0.33

Source: Fanny Forero Rodriguez on "The Situation of Instructional Materials in Colombia" *published in Problems of the Promotion and Production of Teaching Materials in Developing Countries* by German Foundation for Developing Countries, Oct. 1971, pp. 155-156.

ETHIOPIA

Socio-Economic Background

Ethiopia with a population of about 25 million is a middle-sized African country. About 90% of the population still engages in agriculture and pastoral activities mostly outside the money economy. Agriculture accounts for about 60% of the country's GDP. Both the literacy rate and per capita public expenditures on education are very low. (See the Comparative Education Indicator in Table 1.)

Expenditure on Education

Education in Ethiopia is financed by various agencies made up of the Central Government, semi-governmental agencies, churches, local and foreign private institutions. Expenditure for the recurrent costs of primary and secondary education (including vocational, technical and teacher train-

ing) increased by about 20% between 1968-69 and 1969-70. Expenditures per pupil increased also by about 10%.

Table 5
The division of the Ministry of Education recurrent expenditure into teacher and non teacher recurrents.

Expenditure	1970/71
Primary Education	
Salaries	97%
Other Expenditure	3%
Junior & Senior Secondary Education	
Salaries	95%
Other Expenditure	5%
Technical and Vocational Education	
Salaries	80%
Other Expenditure	20%
Teacher Training	
Salaries	71%
Other Expenditure	29%

Source: IBRD, IDA Mission Report, April 4, 1972.

The data in Table 5 shows that almost the entire recurrent expenditure is for staff salaries. The rest is made for materials and supplies which include: uniforms, stationery and office supplies, books, periodicals and films, writing materials, drugs and medical supplies, etc. This is not unique to Ethiopia. In many other developing countries, on the average over 80%-90% of the recurrent expenditures are made for staff salaries, with very little or nothing reserved for learning materials. However, in the Imperial Ethiopian Government Budget for the Fiscal Year 1969/70, some allowance is made for books, periodicals and films.

1969/70
Amt. for books, periodicals & films (In 000 Eth. $)

Primary Schools	830.0
Junior Sec. Schools	234.4
Senior Sec. Schools	692.8
Technical & Voc. Schools	248.7
Teacher Training Institutes for Primary Schools	436.0
Teacher Training Institutes for Junior Sec. Schools	25.0

Table 6
Ethiopia: Ministry of Education—Projection of Recurrent Expenditures (Eth. $ 000), 1975 and 1980

	1968/69 Actual	1975/76 Projected	1979/80 Projected
1. Primary Education	22,998	56,662	88,000
2. Junior Secondary Education	11,231*	8,224	15,719
3. Senior Secondary Education		18,794	25,637
4. Primary Teacher Training	1,487	3,795	5,023
5. Junior Secondary Teacher Training	–	1,107	1,283
6. Academy of Pedagogy	–	859†	1,023†
7. Other**	7,353	12,724	18,068
Total	43,069	102,112	154,753
As a % of recurrent revenue	11	16	18
As a % of recurrent expenditures	11	17	19

* Including payments to Peace Corps and Students in National Service.
** Including overhead, school administration, grants to autonomous institutions, technical and vocational education, contribution to foreign scholarship programs, etc.
† For 1975/76, net of foreign assistance; for 1979/80, at full Ethiopionization.
Source: IBRD, IDA, Mission Report April 4, 1972.

INDONESIA

Socio-Economic Background

The Republic of Indonesia is the fifth largest country in the world with a population of about 121 million (1970). The economy is predominantly rural with agricultural production contributing to over 50% of the GDP. The decade 1960-1970 was a period of great change in the educational system, mainly in the direction of quality improvement. The government has worked hard

1. to improve the quality of primary school level by increasing both the quality and quantity of teaching aids and use of mass media.

2. to diversify the forms in the secondary school level to include technical and vocational schools. The present educational operations are according to the new Five-Year Plan (1969/70-1973/74).

Like other developing countries, Indonesia has a great problem in the lack of textbooks and other teaching materials. The Indonesian government has therefore launched a great program of massive textbook production and distribution on both elementary and secondary school levels. Perhaps this textbook program is the most exciting program in the Five-Year Plan. Four main activities in the program are manuscript preparation, paper provision, book printing and distribution. For the production and distribution of books, the Indonesian government has budgeted the following amounts:

Rp[10] 132,500,000 during 1969/70
275,000,000 during 1970/71
343,000,000 during 1971/72
Rp = 750,500,000[11]

Substantial foreign assistance was used in the implementation of the project.

10. Rp 414 = US $1.00.

11. Soeprapto, M. "Teaching Material in Indonesia" in *Problems of the Promotion and Production of Teaching Materials in Developing Countries*, published by German Foundation for Developing Countries, 1971, pp. 148-152.

Table 7
Indonesia Ministry of Education and Culture Development Budgets 1969/70-1972/73
(Rp. Millions)

	1969/70 Budgeted	1969/70 Realized	1970/71 Budgeted	1970/71 Realized	1971/72 Budgeted	1972/73 Budgeted	Five Yr. Plan Estimated 1969/74
1. Education Sub-sector							
Quality Improvement in Primary Schools	380	272	423	382	423	450	3,348
Increase in Vocational Education in Sec. Schools	309	168	442	285	442	1,400	2,500
Improvement of Technical & Vocational Education	2,495	1,949	2,165	1,636	2,173	2,250	21,373
Improvement in Teachers' Education	345	224	233	206	233	325	2,621
Development of Higher Ed.	1,726	1,537	1,739	1,332	2,539	3,000	15,500
Expansion of Community & Adult Ed.	160	128	156	136	156	200	1,742
Development of Education	–	–	155	133	155	230	6,645
Sub-Total	5,415	4,278	5,312	4,109	6,121	7,855	53,729
2. Culture Sub-Sector							
Development of Art Culture	196	147	206	164	206	300	4,305
Intensification of Sports Activities	99	93	124	113	124	145	966
Sub-Total	295	240	330	277	330	445	5,271
3. General–	–	–	200	162	200	500	–
Total (1+2+3)	5,710	4,518	5,842	4,386	6,651	8,800	59,000

Source: Development Budgets, Ministry of Education and Culture, various years.

Table 8
Indonesia Consolidated Textbook Production Schedule
(in Millions of Books)

	Number of Volumes	1974/ 1975	1975/ 1976	1976/ 1977	1977/ 1978	1978/ 1979	Total
GRADE I							
Mathematics	2	10.05	–	–	–	–	10.05
Bahasa Indonesia	3	–	–	–	–	3.51*	3.51
Sub-Total	–	10.05	–	–	–	3.51	13.56
GRADE II							
Mathematics	2	–	–	1.94*	3.03*	3.16*	8.13
Bahasa Indonesia	3	–	–	–	–	3.11*	3.11
Sub-Total	–	–	–	1.94	3.03	6.27	11.24
GRADE III							
Mathematics	2	–	–	1.72*	2.72*	2.84*	7.28
Bahasa Indonesia	6	23.6	–		–	–	23.60
Social Studies	2	7.9	–	–	4.40**	.38	12.68
Sub-Total	–	31.5	–	1.72	7.12	3.22	43.56
GRADE IV							
Mathematics	2	–	–	–	1.60*	2.52*	4.12
Bahasa Indonesia	4	–	14.34	–	–	–	14.3
Social Studies	2	–	7.09	–	–		7.09
Science	1	–	–	4.05*	–	–	4.05
Sub-Total	–	–	21.43	4.05	1.60	2.52	29.60
GRADE V							
Mathematics	2	–	–	–	1.37*	2.16*	3.53
Bahasa Indonesia	4	–	–	12.48	–	–	12.48
Social Studies	2	–	–	6.28	–	–	6.28
Science	1	–	–	–	3.38*	–	3.38
Sub-Total	–	–	–	18.76	4.75	2.16	25.67
GRADE VI							
Mathematics	2	–	–	–	–	.82*	.82
Bahasa Indonesia	4	–	–		7.65	–	7.65
Social Studies	2	–	–	–	3.85	–	3.85
Science	1	–	–	–	–	1.95†	1.95
Sub-Total	–	–	–	–	11.50	2.77	14.27
GRAND TOTAL	–	41.55	21.43	26.47	28.00	20.45	137.90

* = replacement of worn out books.
† = new edition of previously issued book.
** = atlas.

Notes: Specific-grade teachers' guides are included with the student's book for each grade: general teachers' guides are included with the student's book in the lowest grade in which that subject is taught. Bahasa Indonesia books include both readers and grammars.

Source: Data compiled by A Tsantis: IBRD/IDA Appraisal Report of Third Education Project, Oct. 1972.

MALAYSIA

Socio-Economic Background

Malaysia is a country with 11 million population, with about two-thirds of the population living in rural areas. The economy is traditionally based in the exploitation of natural resources (tin, rubber, timber, and palm oil). GNP, which at present is about US $340 per capita, has grown at the rate of about 6% annually from 1965 to 1970.

Education Development

The Second Malaysian Plan 1971-75 aims at achieving the following major goals:

1. to strengthen the National Unity
2. to meet manpower requirements
3. to provide general education with an adequate component of science and technology.

Significant educational developments have taken place in Malaysia since 1960. Educational expenditure has increased by more than 300%. Enrollment especially at the second level increased by about 300%. Free primary education has been extended up to 9 years.

Expenditure on Education

Government capital expenditure on education during the First Malaysian Plan 1966-70 amounted to M $330 million or 8% of the total public expenditure. High priority was placed in 1) improvement of general secondary education (34% of total) and 2) expansion of technical education (25%). The Second Malaysian Plan still places high priority on the expansion of technical schools (about 297% increase over the first plan). The teacher training share of the budget has instead decreased by about 70% in the Second plan. (See Table 9. Table 10 will show the distribution of educational expenditure between the states and Federal governments.)

Instructional Materials

Textbooks and audio-visual equipment–During the colonial period Malaysian teaching materials were imported from England. But after independence, in 1960, the Malaysian School Curriculum was extensively revised. The government also established agencies to take care of the instructional materials. These agencies are (1) the Textbook Bureau and (2) Audio-Visual Aids Center. These agencies are responsible for promoting what textbooks and instructional materials will be used in the schools.

Educational Radio and Television–The Malaysian 1972 Federal Budget has included the following:

School Broadcasting in 1971, M $100,000 for purchase of radio sets (173 radio sets and microphones were bought) and in 1972 M $20,000 were provided, mainly for schools in Sarawak.

Educational Television M $750,000 was allocated for the beginning of the program in mid-1972. Another M $750,000 was provided for the purchase of furniture and equipment.

Table 9
Malaysia Public Investment on Education and Training, 1966-1975 (M$ million)

	1966-1970 (Actual)	1971-1975 (Planned)	Increase/ Decrease (In %)
Ministry of Education	255.6	448.5	+75
West Malaysia	213.1	370.1	+74
Primary Education	48.5	55.1	+14
Secondary Education	100.7	154.4	+53
Technical Education	10.8	42.9	+297
University	24.4	87.0	+262
Teacher Training	9.7	3.0	−70
Other Programs	19.0	27.7	+46
East Malaysia	42.5	78.4	+85
Sabah	16.5	36.0	+118
Sarawak	26.0	42.4	+63
Other Agencies	73.8	88.8	+20
Ministry of Labor	0.8	3.7	+362
M.A.R.A. Vocational Institutes	64.0	42.2	−34
M.A.R.A. Institute of Technology	9.0	42.9	+376
Total	329.4	537.3	+63

Source: Second Malaysian Plan–November, 1971

Table 10
Distribution of Recurrent Expenditure by Level and Type of Education in Malaysia (in thousand MS)

	1969	%	1970	$
Central and Local Administration	35,000	8.0	41,224	8.7
West Malaysia	–	–	–	–
East Malaysia	–	–	–	–
Primary Education	218,910	50.4	235,975	50.0
West Malaysia	195,000		209,000	
East Malaysia	23,910		26,975	
Secondary Education	99,988	23.0	103,498	21.9
West Malaysia	90,900		98,000	
East Malaysia	9,088		5,498	
Teacher Training	8,261	1.9	2,168	0.6
West Malaysia	6,528		1,424	
East Malaysia	1,733		1,744	
Post Secondary/Higher Education	33,394	7.6	41,872	8.8
West Malaysia	33,394		41,872	
East Malaysia				
Other Services	38,152	8.7	46,103	9.7
West Malaysia	37,724		42,261	
East Malaysia	428		3,842	
Total	433,705		471,840	

Source: The expenditure budget of the Federal Government, 1970.

FEDERAL CAPITAL EXPENDITURE ON EDUCATION
1970-74
(In millions Nigerian Pounds)

Project	1970-71	1971-72	1972-73	1973-74	Total
1. Primary Education:					
(a) Expansion of Primary Education in the States	0.500	1.000	1.000	1.000	3.500
(b) Assistance to the War-affected Areas	0.500	0.500	–	–	1.000
(c) Library Development in Primary Schools	0.100	0.200	0.200	0.200	0.700
(d) Science and Mathematics Teaching for Primary Schools	0.020	0.020	0.020	–	0.060
(e) Assistance to Primary Teacher Training	0.100	0.200	0.200	0.200	0.700
(f) Special Education for Handicapped Children	0.100	0.100	0.100	0.200	0.500
2. Secondary Education:					
(a) Federal Government Colleges at Ward and Sokoto: 2nd Phase	0.100	0.100	0.200	0.200	0.600
(b) King's College: New Site, Land acquisition and Development, new Building Quarters and Equipment	0.100	0.100	0.200	0.200	0.600
(c) Queen's College: Building, Equipment and Expansion	0.100	0.100	0.100	–	0.300
(d) Rehabilitation of the Federal Government College, Ogoja	0.200	0.200	–	–	0.400
(e) Sixth Form Development	0.200	0.200	0.300	0.300	1.000
(f) Expansion of Federal Government Colleges in the States	0.300	0.500	0.600	0.800	2.200
(g) Federal Assistance for Secondary School Expansion in the Northern States	0.300	0.400	0.400	0.400	1.500
(h) Federal Science School Development	0.200	0.200	–	–	0.400
3. Technical Education:					
(a) Expansion of facilities at Yaba College of Technology	0.100	0.100	–	–	0.200
(b) Expansion of facilities at Yaba Trade Centre	–	0.040	0.060	–	0.100
(c) Grants for the Development of Technical Education	0.300	0.400	0.500	0.600	1.800
(d) National Technical Teacher Training College	0.200	0.300	–	–	0.500
(e) National Technical Institute Building and Equipment: Completion of Programme	0.020	0.020	–	–	0.040
4. Emergency Teacher Training Programme for N.C.E., Grade I and Undergraduate	0.600	0.600	0.600	0.200	2.000
5. National Universities Commission	5.000	6.000	7.000	7.500	25.500
6. Federal Government Scholarship and Loan Scheme	0.774	0.775	0.775	0.776	3.100
7. Foreign Aid and Co-operation in Education	–	0.100	0.100	0.100	0.300
8. Postgraduate Studentships Awards and Expanded Scheme	0.300	0.200	0.100	–	0.600
9. Former Eastern Region Government Scholarships taken over from the former Eastern Region	0.100	0.100	–	–	0.200
10. Scholarships taken over from the former Northern Region	0.300	0.200	0.100	–	0.600
11. Centre for Production, Maintenance and Repair of Science Equipment	0.040	0.040	–	–	0.080
12. Nomadic Schools	–	0.040	–	–	0.040
13. Education of Nurses	0.002	–	–	–	0.002
14. Citizenship and Leadership Training Centre	–	0.040	0.040	–	0.080
15. School Broadcasting	0.010	0.010	–	–	0.020
16. Audio-Visual and Modern Resources Centre	–	0.010	0.020	0.020	0.050
17. National Museum: Expansion of Storage Facilities	–	0.050	0.050	0.050	0.150
18. National Theatre: Headquarters building and reconstruction of Annex	–	0.100	0.200	–	0.300
19(a)	10.566	12.945	12.865	12.246	49.122

Source: Federal Republic of Nigeria, Second Development Plan 1970-1974, pp. 240-246.

NIGERIA

Socio-Economic Background

Nigeria is a West African country with about 68 million population growing at the rate of 2.5% per annum. Agriculture is the main economic sector employing over 70% of the labor force and, with mining, contributes the major proportion of Nigerian GNP which presently is estimated to about US $104 per capita.

Expenditure on Education

Throughout the decade 1960 to 1970, Nigeria has maintained a lower level expenditure on education which is estimated at somewhere between 3% to 3.5% of G N P. This is, however, expected to rise to about 7% during the Plan period 1970-74.

The financing and management of primary and secondary education in Nigeria lies mainly with the state governments. The Federal government accounts for only about one-sixth of the total expenditure. The Federal government is almost solely responsible for the financing of higher education.

There is a great need for the educational planners of Nigeria, especially on the Federal level, to try to even up the over-all financial allocations so as to improve the balance of educational opportunities within the country.

Instructional Materials

The 1970-74 capital expenditure plan in education allocates a total of about 70,000 Nigerian pounds to both school broadcasting and audio-visual aids.

There is very little information so far on textbook publication and distribution. The Franklin Book Program has been helping in the training of Nigerian indigenous publishers and, through this program, books of about 30 different titles have been published on Nigerian cultural background. Other than this, the accumulating problems for textbooks as well as other learning materials still remain to be solved along with any other plans for quality education.

THAILAND

Socio-Economic Background

Thailand has a population of about 37.6 million growing at an average rate of 3.1%. Thailand has also a GNP of about US $163 per capita. Total education expenditure, as a percentage of G.D.P., is 4.1% while total education expenditure, as a percentage of total national budget has maintained an average of about 17% from 1960 to 1971. (See Table 11.)

The financial responsibility for education rests primarily with the central government. Primary education is free in public schools. Only a nominal fee of 200 Baht[12] a year is charged for secondary education.

Table 11
Gross Domestic Product of Thailand, National Budget and Total Budget for Education
(Millions US dollars)

Fiscal Year	Gross Domestic Product (GDP)	National Budget (NB)	Budget for Education		
			Amount	As % of GDP	As % of NB
1967	5,334.9	924.0	149.7	2.8	16.2
1968	5,806.5	1,063.1	171.4	2.9	16.1
1969	6,467.1	1,213.4	202.8	3.1	16.7
1970	7,194.1	1,364.9	239.3	3.3	17.5
1971	7,875.3	1,432.3	257.5	3.3	18.0

Source Bulletin of the UNESCO Regional Office for Education in Asia, Vol. VI, Number 2, March 1972, p. 198

One special characteristic of budget allocations to different school levels is that they are determined by the Budget Bureau in the Prime Minister's Office. Thus, fund allocations to different levels of education are primarily the result of direct negotiations between the Budget Bureau and individual departments.

Instructional Materials

As in many other developing countries, the major component of the recurrent expenditure is the teachers' salaries. Not more than 2% of the recurrent expenditure is allocated to teaching materials, thus leaving more than 60% of all primary school teachers and pupils with insufficient teaching aids and textbooks.[13]

However the Thailand Government, with the assistance of foreign grants, e.g., UNESCO, UNICEF, USOM, USIS, and US Peace Corps, has been making significant efforts to solve this problem of the scarcity of learning materials. The use of educational technology (radio and T.V.) has been increasing significantly, with over 7,000 elementary and secondary schools using the broadcast programs in English, Social Studies, and Music. But it is very difficult to get information on how much the Thailand government allocates to books and other learning materials.

12. B 20.8 = US $1.00.

13. See the IBRD/IDA Mission appraisal report on Thailand, Aug. 31, 1972.

Conclusion and Policy Recommendations

One can rightly argue that limited resource availability results in very little investment in education. But it is also true that inefficient over-all planning for economic development can be a substantial contributing factor. It is, therefore, necessary for planners to consider the following:

1. Economic development goals and educational objectives must be integrated for an efficient resource allocation.

2. Serious considerations must be given to the matter of quality and relevance of education to the national needs.

3. Given the pressure of competing claims on limited available resources and the need for qualitative improvement of education, there is a great need for a more broadly based, realistic, and strategic education planning.

This recommended plan is based on both balanced and unbalanced growth investment models of Nurske[14] and Hirschman.[15] It is a plan which does not favor one strategy to the entire neglect of the other. In the case of educational planning, there is a need for a balanced combination of both. In some national plans emphasis is laid first of all on the construction of the economy's infrastructure by investing in such things as transportation and communications, water, power, and public safety. Then upon this can be laid the superstructure of well chosen investment projects, not on an indiscriminate but on a discriminate level, and considering both backward and forward "linkages."[16]

Educational planning can benefit by following the same procedure. Pre-primary and primary school levels are the important structure and foundation of all educational developments. This is the stage at which some tactful teachers discover the varieties of the childrens' talents. Some of these important talents are lost or wasted because the children have not had the opportunity to go to school in the first place. This is why, at this lower level, education must become a national concern and not, as in some cases, left to the parents. Commenting on this issue centuries ago, Adam Smith[17] had this to say:

> The acquistion of such talents, (the acquired and useful abilities of all the inhabitants or members of the society) by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person. Those talents, as they make a part of his fortune, so do they likewise of that of the society to which he belongs.

Pre-primary and post-primary stages can be followed by other stages where there is also great need for selectivity of what forms are needed to give priority consistent with the national growth plans and skill requirements. By previous stages serving as preparatory grounds for the further stages, the advantages of backward and forward linkages are gained

It is of course also true that, in planning, different countries may have different goals and different means of achieving them. But it is important to add the following advice of Mr. Obafemi Awolowos:

> It is of extreme importance to re-emphasize that the sole end for which this edifice is sought to be erected is the Welfare of the entire masses of our people, without a single exception. The practice is all too common for economists and planners to draw a line between so-called economic objectives and non-economic goals and to treat purely social objectives such as education and health as non-economic. This is a gross and enormous misconception. I hold two propositions to be axiomatic, namely: that man is the Alpha and Omega, the only dynamic means and the sole end, of all earthly human activities; and that any development plan is a failure, which falls short of benefiting every member of society in accordance with his deed or need as the case may be.[18]

14. Nurske, Ragner. *Problems of Capital Formation in Underdeveloped Countries*. (Oxford, 1953).

15. Hirschman, Albert. *The Strategy of Economic Development*. (New Haven, 1958).

16. Ibid., pp. 62-63.

17. Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*, Cannan ed. (Random House, Inc. 1937), book II, pp. 265-266.

18. Awolowos, Obafemi. *The Strategy and Tactics of the People's Republic of Nigeria*, (Macmillan and Co., LIS, 1970), p. 82.

STRATEGIC ALTERNATIVES AND SUGGESTIONS FOR ALLOCATIONS FOR EDUCATIONAL MATERIALS

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The use of educational materials in the primary and secondary school programs of the developing countries, generally speaking, is extremely limited. Secondary schools are somewhat better supplied than the primary; yet, primary schools are the only institutions of formal education with which the masses make contact. Formal educational programs in most developing countries have been subject to large expansions of enrollment in the last 20 years. It is everywhere evident that formal education implies the presence of a teacher for each group of 20 to 60 students, and it is likewise generally agreed that formal education takes place in a schoolhouse. Teachers may be unqualified and schoolhouses may be dilapidated, but education occurs only as someone designated "teacher" works with students in something called a "schoolhouse." The only additional absolute requirement is that the schoolhouse have chairs or benches, and some kind of slate or blackboard—a minimum, that is, of furniture and equipment. Once teacher, building, and a bit of furniture are provided, no terribly strong compulsion exists, not at the primary level anyway, to see that teachers and students have educational materials with which to work. And the opening up of educational opportunities to the masses has proceeded for the most part without the benefit of such materials.

Primary and secondary teachers now working in the developing countries received their own formal education under conditions in which good textbooks, workbooks, science materials, etc., were usually not available. Most students and their families do not expect to find the lower schools supplied with any substantial amount of materials. Hence, we probably cannot expect to see an upsurge of popular demand for mass distribution of, say, textbooks or for large-scale expansion of educational television, since it is assumed by the public that these devices are not necessary components of formal education. Improvements in the supply of educational materials, accordingly, probably depend upon governments revising their priorities with respect to this form of educational expenditure.

I shall try to view that question of relative priority from several angles. First, evidence on paucity in present supply of educational materials, using data of the two developing countries with which I am most familiar, Pakistan and Bangladesh, will be reviewed. Second, some arguments on the productivity of educational materials in programs of formal education in the developing countries will be offered. Third, I shall attempt to describe two major projects in the distribution of educational materials: Textbook supply in Indonesia and educational television in Ivory Coast. Fourth, brief observations about the possible uses of educational materials in non-formal education will be made. Last, I shall try to frame some questions about appropriate strategy in the production, distribution, and use of educational materials.

I. Educational Materials in the Schools of Pakistan and Bangladesh

Let us confine our attention to primary education. In both Pakistan and Bangladesh, most primary education is provided in the public sector (in Bangladesh, this statement does *not* apply to schooling above the primary level). In 1968-69, recurring expenditures per student per year in Pakistan in primary schools was Rs. 53, of which Rs. 49 was taken up in personnel costs. At the official rate of exchange, these figures translate into $11.15 and $10.30, leaving $0.85 per student per year for all non-personnel items, including educational materials. Between 1961-62 and 1968-69, expenditures per student on non-personnel costs fell by 22 percent, while personnel expenditures per student rose by 19 percent.[1] (It may be noted that the use of the nonofficial rate of exchange would cut the dollar estimates—not, of course, the estimates of percentage change—approximately in half.)

1. Charles S. Benson, *Finance of Education: Training and Related Services in the Public Sector*, Islamabad, Planning Commission, Government of Pakistan, 1970, pp. 74-77.

For the Province of Punjab, 1970 figures have recently become available. This is a large and progressive area of Pakistan, the public primary institutions in the Province enrolled 1,340,000 students in 1970. Recurring expenditures per student were reported as Rs. 51, which equals approximately $5.00 at the devalued rate of exchange (expenditures per student in non-governmental primary schools was even lower). The 1970 estimates do not reveal the proportion of expenditure laid out for personnel services, but, instead, they give information on school-owned equipment and materials. Thus, for 37,600 teachers in government schools, there were 37,800 blackboards, 26,900 teacher's tables, 17,400 cabinets, and 7,100 clocks. The average value of library books per student was Rs. 0.82 (8 cents) and the average value per student of sport goods, science equipment, and agricultural implements was Rs. 1.58 (16 cents).[2]

In Bangladesh, recurring expenditures per student per year in 1966-67 at the primary level were Rs. 15, of which 82 percent was spent on personnel costs. Non-personnel expenditures in East Bengel, then, were Rs. 1.3 per student as compared with Rs. 4.0 in Pakistan. Assuming one-third to have been devoted to instructional materials, we arrive at an estimate of Rs. 0.4 for such outlay (equal to 8 cents at the official rate of exchange at the time).[3]

By no means are all educational programs in Pakistan and Bangladesh so meagerly financed. University education in 1966-67 in Pakistan was absorbing Rs. 2,900 per student per year in recurring expenditures (not counting foregone income) and in Bangladesh, Rs. 1,400. In other words, costs per student at the apex of the educational pyramid were running some 60 to 100 times greater than at the base.[4] Speaking just of equipment, I have seen Rs. 500,000 worth of air conditioning equipment installed in a polytechnic in Pakistan at a time when the nearest employment for air conditioning technicians was 860 miles distant. Now, these countries cannot afford expensive primary education (they must live with the nineteenth century British slogan that "primary education shall be cheap or efficient"—meaning "effective," in American usage), but one can raise a question about the wisdom of internal allocations leading to such high cost programs in higher education at the time when instructional materials were almost non-existent at the lower.

I do not have what I regard as reliable information about household purchases of instructional materials in Pakistan or Bangladesh, but information is available for India. Since the educational systems of India, Pakistan, and Bangladesh display many similarities, these estimates are worth noting in the present context. We have low estimates and high estimates for 1965-66. For the first three years of schooling (in primary institutions) the low estimate for household expenditures on textbooks is Rs. 0.58 ($0.08) and the high estimate is Rs. 20.97 ($2.77). For stationery, the corresponding figures are Rs. 1.10 ($0.14) and Rs. 11.34 ($1.49). As the *Report* of the Indian Education Commission states, "It will be seen from the above (figures) that parents are required to incur very heavy expenditure ... Consequently, only a small proportion of children have all the books at the beginning of the school year ... not infrequently, a proportion of students have no books at all."[5]

Plainly, in considering expenditures on instructional materials in primary education of South Asia, we are dealing with orders of small magnitude. The most favorable description I can make is this: the modal primary student has one book in total (not one book for each of his subjects), a wooden board to serve as slate, and access to a cupboard, along with his 20-60 classmates, that contains about a dozen school-owned volumes. Some developing countries are better off than this and some are worse.[6]

II. Arguments on the Productivity of Educational Materials in Early Schooling

These arguments must necessarily be provisional. Even in the United States, where it is possible to describe educational programs closely and where it is feasible to conduct elaborate forms of computer-based analyses, it has not been possible yet to determine the relative effectiveness of alternative forms of educational expenditures—whether, for example, it is better to reduce class size or hold class size constant and add a certain number of hours of television instruction in the school curriculum. Furthermore, there is no one single pattern of educational provision in the developing countries. We take, however, the following features as being fairly common. 1) Primary school programs are characterized by high rates of student wastage and repetition. Wastage commonly is in the order of 50 percent over the primary school years, and in the early years of the school program 20 percent of the students are likely to be repeaters.[7] 2) Class size in the early years is likely to be large--50 to 60 students per teacher—while in the higher primary years it is likely to be considerably smaller. 3) Even so, numbers of potential students must wait their turns and enter school at relatively advanced ages. 4) Absenteeism and periods of prolonged absence of students are common, especially in rural areas. The longer stretches of absence frequently are related to crop planting and harvesting. 5) Urban teachers are likely to be more highly trained than teachers in rural schools. 6) Yet, in general, the pattern of teacher training is hierarchical, in that primary teachers do not study beyond middle secondary years, secondary teachers do not study beyond intermediate college, etc.[8] 7) Instruction is ordinarily conducted in such a way that the teacher and all the

2. Namdar Khan, *et al, Elementary Education Facilities in the Punjab: A Status Study*, Lahore, Education Department, Government of the Punjab, 1972, pp. 14, 46-47, 54-55.

3. Benson, Ibid.

4. Ibid.

5. Ministry of Education, Government of India, *Report of the Education Commission, 1964-66*, New Delhi, 1966, p. 113.

6. I do not enter here the question of quality of educational materials, though some of the discussion later bears on the point. However, one survey on the question of quality of instructional materials reported it to be generally low. See Mazhural Haque, *The Education in East Pakistan Research Project*, Dacca, Institute of Education and Research, 1970, pp. 216-219.

7. Louis Emmerij, *Education, Human Respurces and Development in Argentina*, Paris, Organization of Economic Cooperation and Development, 1967, Chapter II.

8. Namdar Khan, op. cit., pp. 23-26.

students are working on the same topic at the same time. A class is not split up into groups of students who are dealing with material at higher and lower levels of difficulty. Rote learning is the standard form of instruction and students are expected to copy down what the teacher says and what is written on the blackboard. 8) Concern is frequently expressed about the quality of instruction, especially in fields of science and mathematics. Sometimes it is said that students develop insufficiently the capacity to engage in intellectual work on their own initiative.

In these circumstances, written materials, i.e., textbooks, workbooks, teachers' manuals, pamphlets, reference books, and the like, would appear to carry the following productivity-increasing possibilities:

First, it should be possible to conduct instruction in primary school grades more easily in smaller groups. That is, since each student would have material with which he could work, either alone or with a small number of his fellow students, the teacher could turn his attention alternately from one group to another. The teacher, thus, would not be the sole focus of instruction; hence, he would not be required to deal with all of the students all of the time. Such instruction would offer the following benefits:

(a) Students could progress through the material more nearly in accordance with their individual capacities. Hence, fast students could complete primary instruction a year or two earlier than they might otherwise do. Acceleration would reduce costs per primary school completer. It might also reduce wastage by decreasing the amount of boredom suffered by bright students when they are confined to whole-class, lock-step instruction. This is especially important when students enter school for the first time at notably different ages—older students need to have the opportunity to progress faster or they will drop out.

(b) Because not all students in a class would any longer be required to work at the same level of proficiency, the need for repeating classes (or years) would be reduced. Automatic promotion, that is, could more easily become a reality. Reduction of number of repeaters would reduce costs of primary school completers. Moreover, by cutting the number of repeaters in the first few years, additional numbers of students could be accommodated and progress toward universal primary education could be achieved without imposing an intolerable burden on the country for construction of new primary schools.

Second, the availability of materials of instruction helps assure that teachers and headmasters have in mind suitable standards of progress for their students—neither too demanding nor too slack. Suitable standards applied in the classroom should help reduce wastage and repetition of grades.

Third, if books are available for home use, they help students to keep up to date in their work even when their pattern of attendance is not as good as one would like it to be. Since it is the students from low-income households who are likely to be most irregular in attendance and since it is only the primary grades of the formal education system that represent an organized search for talent amongst poor youth in developing countries, this contribution of texts could be of importance in improving the operation of the educational system as a screening mechanism.

Fourth, since it has been claimed that teachers in developing countries are loath to depart from patterns of rote teaching and since it may be assumed that one reason for such behavior is the feeling that they are basically unprepared to answer questions of any depth from students, the availability to the teacher of reference materials might so improve the teacher's confidence that he would accept questions from students and, in general, take up a more intellectually challenging mode of instruction. Assuming that creating an atmosphere of inquiry in the classroom is a valid objective, the degree of success, one may surmise, will be strongly affected by the types of texts, reference materials, etc., that are at hand.

Fifth, curriculum revisions can be accomplished cheaply and in gradual steps by issuing pamphlets that serve either to update textbooks or propose appropriate changes in teaching methods.

Sixth, the amount of time spent by students in copying notes could be reduced, at the same time that the student could be presented with an even larger number of exercises to complete than the teacher could dictate to him.

Television would offer some of these same advantages but would fail to offer others, such as allowing group instruction more easily to take place. On the other hand, television more than written materials would open a wider world to students and might serve especially well to stimulate their interests. Television seems particularly useful when language instruction must be conducted in a foreign tongue and when at the same time teachers are themselves not very adept in the foreign language. Television seems to have strong possibilities, moreover, in the training and re-training of teachers.

It is not at all impossible to imagine that having more and better instructional materials available in the developing nations could raise the productivity of teachers, on the average, by 20 to 30 percent. Taking into account the large size of primary and secondary school systems in those nations, this would represent a tremendous gain in real educational efficiency.

Yet, the arguments thus presented stand aside from the main consideration, namely, that when teachers and headmasters and inspectors themselves have not had the benefit, alas, of thorough education, materials of instruction offer the only available means *in the short run* to increase the amount of knowledge laid before students. On the other hand, to accept fatalistically the goal of gradual long run improvement (as being the only attainable possibility) is to turn away from the reality of how far distant the "long run" may be, given the continuing pressures of enrollment on the educational systems of the developing countries, pressures which have their own roots in rates of population increase that are substantially out of control.

III. The Textbook Program in Indonesia

As of 1970, Indonesia had a population of 121 million

persons, of whom 99 million were said to live in rural areas.[9] There were 2,560 school districts in the country, and these districts enrolled 13.4 million primary school students. Primary school enrollment amounted to 77 percent of the 7 to 12 age group (while secondary represented only 13 percent of the 13 to 18 age group and higher, 1.9 percent of the 19 to 24 age group). Publicly financed educational services consumed 20 percent of the revenue receipts of the government. Direct costs per student per year borne by government over all sectors of the educational system are estimated to be $6.75, one of the world's lowest figures. Public sector primary educational expenditures amounted to 1.8 percent of Gross Domestic Product, while parents' contributions in fee support added another 0.8 percent.

Direct public sector expenditures per student per year in the primary schools I estimate to be $5.87; fees paid by parents add another $1.50 to $2.00. Books, supplies, and transport must also be paid by parents. Textbooks sell at $0.25 to $0.40 each. Supplies, books and transport cost the typical family about $1.00 to $1.20, making total direct costs, public and private, amount to somewhere in the range of $8.35 to $9.10 a student, of which a third is borne by parents. In a country where landless laborers earn 7 cents to 13 cents a day where they may be able to find work only half a year, household expenses of primary education are extremely high. School costs appear to represent 10 percent of rural household income for each child in school.

Plans for expansion of the primary education system are impressive. Enrollment in Grade I is to grow at 4.5 percent annually (as against national population growth of 2.5 percent), reaching saturation of the 7 year old cohort by 1979. By 1979, it is estimated that the primary student population will be 19.1 million. In 1970, there were 348,000 primary school teachers of whom only 25 percent were qualified (3 years of schooling beyond junior secondary). Not counting replacement demand, 148,000 new primary teachers will be needed by 1979. Public expenditures on primary education are estimated to rise from approximately Rs. 60 billion, including both recurrent and developmental outlays in 1970-71 to Rs. 145-170 billion in 1978-79, at which level public primary costs would represent 3.1 to 3.6 percent of GDP.

Between 1968 and 1971, $10.7 million in foreign aid for education was received by Indonesia. Four hundred ten thousand dollars was provided by Ford Foundation to support the National Assessment of Education. The project identified priorities in educational development and, in regard to primary education, special concern was voiced about textbook supply and about teacher classroom techniques. As already indicated, most teachers in Indonesia lack qualifications of training. Texts are scarce—on the average, it is estimated that a class of some 40 to 60 students would have, in total, five language books and three to four arithmetic books.

Thus, in 1969, Canada and Unicef began to provide assistance in textbook production and distribution. By the end of 1971, $3.4 million had been made available by these two sources and as of May 1972, 27 million textbook volumes had been produced and distributed. The objectives of the initial program might be listed as follows: To raise the standard of instruction by providing a text for each student in each main subject in all grades, to assist poor children in their school work by making the distribution of textbooks free; to see that geographic areas not served by commercial publishers were provided with books; to achieve low unit cost by mass production; to see that the functions of manuscript development and field evaluation of manuscripts were properly carried out. It is understood that over 20 times more resources are now spent on primary text production and distribution than are spent on university books.

It is now estimated that an additional 174 million books are needed. Canada and Unicef will provide paper for 36 million during 1972 to 1974. World Bank will finance the supply of 138 million during 1974-1979. This sum is broken down as follows: New texts, 98 million; revisions, 9.4 million, replacement, 30.5 million. Indonesian language texts are to be made available for each student grade 1-6, as are the math texts. Social studies are to be prepared for each student, grades 3-6 and science, grades 4-6.[10]

Costs of production per text is estimated at 11 cents, on the average. Estimated life of texts is set at six years. Books are to be used by students only in school ("during class time"). Since many Indonesian schools operate on double shifts, the books would be used twice in a given day. Therefore, costs per student per year are low and appear to be considerably less than the former level of costs of books in the country.

One serious problem is that many teachers in Indonesia are not familiar, apparently, with the use of textbooks. Hence, the World Bank is placing major emphasis on the training of teachers in such use. It is intended to provide training for 350,000 teachers over a six year period. Didactic material will be prepared, related to texts coming into use. Teachers are expected to make fortnightly visits to a centrally located primary school in each of the 2,560 school districts. These meetings will feature discussions on preparing lesson plans; further, teachers will be encouraged to construct simple teaching aids. Moreover, there are to be two to three day training sessions three times a year in each school district, conducted by 105 mobile training units. Lastly, each teacher is to be provided a "teacher aid kit," at a value of $88, of which 25 percent represents paper, cloth, and glue that will require replacement annually.

Much of the success of the textbook venture may hinge on the effectiveness of the teacher training program. Members of the mobile training units are to receive monthly salaries of Rp. 20,000 to 25,000 a month, which is some four to five times as much as the ordinary primary school teachers earn. Hence, it should be possible to attract qualified persons to the teacher training programs. Estimated cost of teacher training per trainee is $65.

Distribution of costs for textbook production under the World Bank program (138 million volumes), and for costs of

9. I am indebted to Mr. Mats Hultin and his colleagues at the International Bank for Reconstruction and Development for assistance in this and the following section of the paper. They are in no way responsible for any statements of fact or interpretation, however.

10. Manzoor Ahmed, *Mobile Trade Training Schools of Thailand*, Essex, Connecticut, International Council for Educational Development, 1972.

curriculum development and teacher training are as shown in Table 1.

Table 1
Cost of Primary School Textbook Production and Related Activities, Indonesia (millions of U.S. $)

	Local	Foreign	Total
Curricular Development	.3	–	.3
Textbook Production	5.5	10.4	15.9
Textbook Paper	.5	9.1	9.6
Teacher Training	16.1	1.8	17.9
Project Evaluation	.1	.3	.4
Technical Assistance	.1	.4	.5
Contingencies	5.8	4.1	9.9
Total	27.9	17.0	44.9

Continuing annual costs from 1978-79 onward are estimated as follows: $3.3 million for textbook production and teacher training ($4.5 million when major revisions are under way); $1.5 million recurrent costs on teacher aid kits: a total of, say, $4.8 million in ordinary years. Rounded, this is Rp. 2 billion, or 1.3 percent of estimated public expenditures on primary education in 1978-79. This is mainly new public expenditure, in that prior to the textbook program the government did not much concern itself with materials of instruction in the lower grades. Hence, this 1.3 percent of the budget could be said to represent a 13.0 percent increase in nonsalary costs of education. On the other hand, 1.3 percent of the public primary school budget is less than the 1.8 percent increase in costs if teachers' pay over the whole six to seven year period went up by only 2 percent more than anticipated.

IV. Instructional Television in Ivory Coast

On November 27, 1970, the World Bank made a loan of $11.0 million for instructional television in Ivory Coast and associated endeavors in a project at total cost of $19.2 million. The loan covers a period from late 1970 to June 30, 1974. The instructional television component of the project is now in partial operation. Fifty staff members are engaged in producing programs: eighteen in French language; four in mathematics; seven in science and others in assorted fields. Four hundred and seventy classrooms have been equipped with two television sets and two sets of batteries (batteries are supplied even where electric power is available because of frequent power break-downs). Six maintenance teams are at work, with the intent that one team visit each television school once a month.

The above estimates, as well as those that follow, are drawn from information made available in April 1972. As of that time, it appeared that 21,000 students were receiving television instruction, and that some 70,000 were to be so covered in the current academic year. The instructional television operation was begun in grade 1. It is gradually to be extended upward through the primary years. It is expected that 215 hours of programs a year will be broadcast, including 50 hours of teacher training. Originally, "pedagogical spectaculars" were to be shown on various topics of instruction in various years of the school program; to the present, however, much of the programming for teacher training (but not for primary education itself) has been of the "chalk and talk" style. Television programs are broadcast in ten minute spots, distributed throughout the school day, with the teacher working from the television content in the intervening spaces of the school day. For example, under the 1971-72 arrangements, there was ITV language from 8:40 to 8:50 in the morning, ITV basic education from 9:10 to 9:20, ITV language again from 9:30 to 9:40, ITV mathematics from 10:20 to 10:30, etc.

This very modern, technological approach to primary education exists in a country that displays, *inter alia*, the following characteristics. Per capita income as reported in 1969 was $250. Educational expenditures were $10 per capita, representing approximately 4.0 percent of Gross Domestic Product. Public educational expenditures absorbed 18 percent of governmental revenues. Literacy rate was 9 percent. The age group 6 to 11 numbered 925,000 in 1967, of whom 44 percent were reported to be in primary schools. The age group 12 to 18 numbered 665,000 of whom 16 percent were reported to be in primary schools and 6 percent in secondary. The target for 1975 is for 70 percent of the 6 to 11 age group to be in primary school. Only 20 percent of technical, supervisory, and professional positions are held by Ivorians, and the country now seeks to replace foreigners in such high level posts with nationals. Total population is 4.6 million and growth in population is 3.3 percent per annum. Growth in GDP is about 8 percent. Seventy-five percent of the active population works in agriculture.

Primary education is afflicted with a high rate of repetition—41 percent of sixth grade enrollment in recent years has been repeaters. Forty three percent drop out during the course of the primary sequence. Some 60 percent of primary school teachers are unqualified. Instruction throughout the primary grades is in French. Recurrent costs are relatively high, as compared with other developing nations—$54 a student in the primary grades. Recurrent expenditures on primary education in 1967 were Franc CFA 5.6 billion out of a Ministry of Education total of Franc CFA 8.8 billion. Recurrent expenditures on education grew at an average annual rate of 11.5 percent between 1961 and 1967. Capital expenditures between 1961 and 1967 amounted to Franc CFA 6.8 billion, of which 20 percent, or Franc CFA 1.36 billion, was spent on primary schools.

By 1980, it is anticipated that 710,000 primary school students will be served by instructional television. This would be 51.0 percent of the age group 6 to 11 in that year. Recurring cost in 1980 is estimated as $3.3 million, excluding replacement of receivers (which are to be replaced every five years). This would be $4.65 a student, and the figure is 6.5 percent of estimated recurring cost per student in 1980—$71. Capital costs over a 10 year period are estimated at $15 million, roughly half of the capital budget for all Ivorian education from 1961 to 1967. These cost figures appear to be relatively high. How can they be justified?

In documents supporting a World Bank loan for ITV in Ivory Coast, the costs are justified on the basis that ITV will

reduce average time per primary school completer from 12.5 years to 5.5 years and that 5.5 years (average) of schooling will have a content equivalent of 8.5 years. The average cost of a primary school completer under the stated assumptions would fall from $890 to $390. If 710,000 students are served, it is then estimated that the rate of return on investment in ITV would be in the order of 35 percent.

A secondary justification is in respect to teacher training. It is assumed that three years of instruction of teachers by television is equivalent to one year of full-time training. Because pay of teachers is relatively high—$1,900 a year—the direct and indirect cost of conventional teacher training is quite large—it is estimated to be $3,140 a teacher trained. I have not been able to isolate the teacher training component of ITV but ITV clearly saves $1,900 per-teacher-trained in indirect costs. If the program, moreover, can be justified in the first instance by its return in the education of primary students, then the system is bound to offer net savings in the training of teachers.

As in the case of the textbook program in Indonesia, there is thus a link between ITV in Ivory Coast and teacher training. An effort will be made to raise the percentage of qualified teachers to 80 percent by sometime in the second half of the decade. Moreover, expansion of physical facilities for pre-service training of teachers is integrated with the building of ITV studios and the program development center. Partly, the new facilities are to supply the country with newly-trained teachers (much of teacher-training-through-television is for upgrading of teachers already employed, most of whom are unqualified in the formal sense); however, 210 teachers are to be trained in a three-year program which will emphasize instruction through television. Presumably, these persons will serve in a newly-staffed inspectorate.

There are more fundamental arguments in support of the Ivory Coast approach, though they are, in my opinion, highly speculative. 1) Technology carries values, but, assuming it is important to preserve and strengthen *local* values, the more effective means may be the concentration of instruction in the acts, verbal and otherwise, of indigenous teachers. ITV allows for continuity and order in verbal instruction in a situation where the turnover of regular teachers is itself very high. 2) Assuming it is important that primary education serves the function of development of the local community, at the expense, somewhat, of the development of the individual. Then, collective work by students in school may be more important as a pedagogical process than individualized instruction (as the term is understood in western societies) would be. The freedom to experiment with small group learning that the availability of textbooks implies could be dysfunctional, that is, in a country where students need to be brought together from their diverse linguistic and cultural backgrounds, in order that they be able to engage in collective activity as adults.

Two problems have appeared in the program. First, costs are proving to be higher than initially stated. Between November 1969 and June 1971, for example, cost estimates of ITV and related teacher training appear to have risen by 17 percent. It is possible that cost overruns may be a temporary phenomenon. There is some reason to suspect that some of the physical equipment was put to non-instructional use in the early days of the project. Moreover, introduction of ITV was accompanied by a kind of "paper blizzard" of supporting pedagogical materials, not all of which may have been necessary for the success of the venture. Secondly, since this program is a relatively high cost endeavor, its justification requires evidence of positive effects on productivity in the primary schools. As of now, no system of pedagogical evaluation has been established.

V. Instructional Materials and Non-Formal Education

There is increasing interest in developed and developing countries alike about the potential of non-formal education. We mention here only the case of developing nations. In Mali, there is underway a program to help farmers become literate in matters of immediate concern: how to measure the size of one's fields and the change therein when erosion occurs; how to compute cash yield of a given amount of crop priced at a certain market rate (illiterate farmers often feel they are being cheated and, indeed, sometimes they are); how to calculate the proper time to plant different crops in accordance with the given year's weather cycle; how to measure appropriate amounts of fertilizer, water and pesticides for new seed varieties; how to calculate the amount of interest one must pay for cash advanced on crops, etc. The benefits are clear and fairly immediate. In contrast, it will be a long time before the primary education system of Mali itself produces cohorts of literate farmers.

This kind of program can be more successful if farmers are able to see and find their way through easy exercises in a workbook and they are able to examine a workbook in their homes at their leisure. Cost of production of such workbooks, as well as costs of production of a newsletter about agricultural conditions written in the simplest possible language, would be very small.

In Thailand, there is an interesting experiment in Mobile Trade Training Schools. These institutions are not actually on wheels. Instead, they use "found space" in towns and villages to set up programs of instruction in simple vocational skills. Students (mostly adults) attend on a part-time basis. On such a part-time basis, most courses run for a period of five months. Once an institution has exhausted demand in its area for vocational instruction, staff moves itself along with its equipment to another town and begins courses anew. Graduation rates run from 50 to 80 percent. Any course, e.g., electrical wiring, tailoring, welding, etc., is offered in two shifts of three hours each, with one shift generally being given at night. Supplies and materials represent nearly a third of recurring costs (not including durable equipment), and are equal to the sums budgeted for salaries of regular staff in the program. Preliminary indications are that the program is efficiently run. It has shown strong emphasis on allocations for instructional materials from its beginning.[11]

11. Manzoor Ahmed, Mobile Trade Training Schools in Thailand, Essex, Connecticut, International Council for Educational Development, 1972.

VI. Strategy Questions with Respect to Utilization of Instructional Supplies

Lacking reliable information precisely to guide allocations of educational resources, I would like to try to suggest a series of questions that governments might ask themselves in the further development of their educational systems. As before, I direct my comments mainly toward primary education.

1. Public Allocations toward Instructional Supplies. As I noted at the beginning of this paper, governments in developing countries tend to overlook public support for instructional materials in the primary grades. The results are predictable: few textbooks, etc., in the classroom, poor families sorely pressed to pay for school costs, increased pressures toward repetition of grades and toward student wastage. Yet, we have seen in the case of Indonesia that multiple textbooks for each child, teacher aid kits, and a modest amount of teacher training in the use of materials can all be provided at approximately one tenth of one percent of GDP. This suggests strongly to me that all developing countries could well undertake to make public provision of instructional supplies in the primary grades. This implies earmarking of public expenditures for the specific purpose of the creation, distribution and use of instructional materials.

2. The Question of Teacher Receptivity toward Use of Instructional Materials. It would, however, be a waste of resources for government to supply materials that teachers would not cause students to make use of. Unless teachers are interested in seeing the materials become a part of daily instruction, students cannot be expected to use texts efficiently on their own. This requirement may demand a certain basic level of competence in the teacher. Where that competence does not exist, one may need to employ what appears to be (superficially) a more expensive type of instructional material, namely, ITV. ITV can be used as a substitute for teacher competence. This may be especially important in those cases where instruction in the primary grades must be carried on in a foreign language. However, it is likely that ITV will be more productively used when it serves to complement the work of the teacher rather than to replace the teacher's contribution.

In the ordinary case of the developing nations, it would seem likely that regular teachers can be properly instructed to use textbooks, reference books and workbooks. What is unknown is the amount of training necessary for this purpose. The Indonesian policy assumes that a very small amount of training will suffice. An alternative approach would have been to introduce the publicly supplied textbooks in certain regions of the country on a kind of pilot basis and to offer more thorough, intensive training to teachers in new methods of instruction. Areas might be chosen on the basis of those most susceptible to growth in social services, for example, agricultural development programs, rural electrification services, etc. This approach could have been accommodated within the same size of budgetary allocation as the textbook program; it would simply mean spreading initial resources less thinly.

3. The Place of Advanced Educational Technology. The Ivory Coast example shows that it is possible to employ electronic transmission of instructional programs throughout the school day of the primary student. Even on a large-scale plan, however, the program is expensive, as measured in dollars of recurring costs of students per year. It is possible that these high expenditures are cost-effective. What is lacking is a system of data collection to answer questions about cost-effectiveness.

4. Opportunities for Independent Study of Students. I suggested that one of the reasons why wider availability of textbooks might be beneficial was that students would be able to study on their own outside of school hours. Given patterns of irregular attendance, such opportunity might reduce wastage that is attributable to a student's falling behind his class because of interrupted schooling. The other side of the coin is that independent study allows bright or hard-working students to move along more rapidly, with the result that they maintain better their interest in studies at the same time that they save the state money by finishing up more quickly. This latter possibility assumes a flexibility, of course, in school programs and examination schedules that may not always be present. Yet, in the Indonesian case, I noted that publicly supplied textbooks are available for use during school hours only. This rules out the possibilities I have pointed out just above. It would seem clear that the government of Indonesia is concerned about loss of textbooks, mutilation, resale, etc. These concerns are likely to be high when textbooks are provided free of charge. On the other hand, unless textbooks are provided free of charge to poor households, the possible advantages of reducing wastage among low-income students and of making the educational system function more effectively in its screening or sorting processes are aborted.

In the case of Ivory Coast, introduction of instructional materials in the form of ITV serves to make the school day more rigid and uniform for all students, rather than less. It would seem that Ivory Coast achieves the stereotype of the Napoleonic ideal of instruction, namely, that each student in each grade be studying precisely the same topic at any given second in the school day all over the nation, though some measure of individual work can, of course, still be arranged if teachers desire.

5. Information for Revision of Instructional Material. Taking account of the pedagogical significance of instructional materials, it is astounding that so little information is obtained to guide their revision. As the developing nations take action to provide instructional materials for the first time in their primary schools, it is entirely appropriate that they overcome this deficiency in their own setting. Nothing esoteric is implied. It would be a fairly simple matter for teachers to report (briefly) on a daily or weekly basis which passages of which books were being successfully used and which passages were unclear and were giving difficulty.

I close with a few sentences on instructional materials for secondary schools. I think that quality and variety of materials become more important as one moves up the grades. Whereas all materials for primary schools might best be produced in the given country and whereas most secondary texts might likewise be indigenous, it might be a good thing to make some use of adaptations of foreign texts. On the other hand, major shifts in type of instruction in, say, mathematics or science should surely be avoided, as should fadism in the selection of foreign texts generally. Lastly, I would think that

requirements for teacher training in the use of any new instructional materials should be dealt with more intensively at the secondary level than the primary, at least in our present stage of pedagogical knowledge.

BOOK PROMOTION THROUGH LIBRARIES

by
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In Africa, in Ga language of the Accra area in Ghana, it is customary to say of a child finishing school "Edze wolo mli," which means "the book is closed." This equation of education with books in such absolute terms is both heartening and frightening.

Heartening because it shows unconsciously that the book is the backbone of the educational system, whatever this system may be. In the recent UNESCO report on the crisis in education, published under the title "Learning To Be," all traditional methods used by schools of various grades are being questioned. Actually the very phrase "schools without walls" indicates pretty well the trend expressed in this report and the most positive translation of this phrase is "education through libraries." UNESCO's report does not explicitly refer to libraries and later I shall try to explain why.

On the other hand, the expression "the book is closed" is frightening because it proves, unconsciously again, that the book has not yet entered the daily life of the people who are using this expression, that education remains an oasis surrounded by a barren desert. It is tempting to say that you can classify the countries as developed or developing ones according to the place given to books in daily life. You live in a different type of society whether a telephone directory is available or not.

It will be my assumption in the following comments that India is in a privileged position between developed and developing countries, able to understand both points of view, to help to bridge the gap between them.

Book Production

Before coming to the main theme of my paper—the influence of libraries on book promotion—I would like to spend a few minutes on the other two components of the life of a book: Its production and its use. Unavoidably, I shall do this as a librarian, but—at least I hope—with due regard to publishing.

Normally the problems related to book production fall outside the boundaries of libraries. The relationship between an author and a publisher is not the librarian's business. On the surface this statement is as true today as it has been of old. But actually this relationship is no longer as simple as it used to be. To indicate my way of looking at it, I would rather bluntly say: In former times libraries were set up because books existed; today books are produced because libraries exist. Provided that this is not too much of an exaggeration, how does it affect the position of the author?

The author, as an artist, no longer commands the same eminence in the book world. Actually the part of fiction, poetry and essay in national book production is inversely proportional to its health. A simple and convincing example is provided by a comparison between book statistics from France and Germany (West). In France, the "literary" proportion of national book production tended to be higher than 25% of the number of new books published annually and has only doubled during the last twenty years (1950-1970), while in Germany, where this proportion has always been lower than 25%, the production has trebled during the same period.

This means that the trend is towards commissioned books: Textbooks, scientific manuals, general non-fiction, art books in co-edition, etc. The manuscripts required by a thriving publishing industry are less and less those which an artist writes to release the tensions and contradictions of his creative talent.

Here I would like to open a parenthesis which will allow me to refer directly to libraries. In Western Europe "public lending rights" are collected in some countries and other countries are considering the adoption of this form of tax on reading, among them the United Kingdom. In the public discussion regarding this problem the Library Association has used, as one of its arguments to oppose the pending bill, the fact that 80% of the copies of a first novel (which means written by a new author) are bought by public libraries; in

other words, that without these libraries the book would not have been published.

It cannot be my purpose here to go into the details of the public lending right, but to close this parenthesis I would like to make three brief remarks: 1) though I personally am strongly opposing this tax, not all librarians do; 2) creative writing should be rewarded, but not through library budgets, 3) the whole idea of the public lending rights came into existence because libraries have become a strong economic component of the whole book world, a fact which librarians themselves are not yet enough aware. Actually, this third and last assumption is and will constantly be in the background of my present paper.

Commissioned books *versus* spontaneous books is only part of the picture. Another part, the importance of which is steadily growing, is represented by what I shall call, for lack of better wording, "books-without-authors." A large array of choice is indeed available. A first group is represented by a relatively small number of huge publishing enterprises with scores of unknown compilators. Two striking examples, both produced by the same British firm of Mansell, are the catalogue of printed books of the British Museum Library, in 263 folio volumes (1959-1966), and the American union catalogue of pre-1956 imprints to be completed in 610 volumes. It is needless to add that all copies are bought by libraries. Mansell has a growing list of similar publications, though their size may not be so ambitious. Hall Publishing Company has already issued in multi-volume bookform a large number of special libraries' catalogues, which previously were only locally available in the library in card form. As in the case of Mansell, or any other firm, these publications are expensive and could not exist without the library market.

The step from these rather specific examples to the larger field of reprint publishing is so small that I cannot resist the temptation of taking it. How many copies of the 1,000 volume reprint of the British Parliamentary Papers, published by the Irish University Press, would escape library purchasing? I am losing the thread of my argument, because I actually quoted this last example as another instance of an important book-without-an-author. In the case of reprints the authors are dead, long enough to escape the payment of royalties, either as individuals of specific books or as collective bodies of learned societies responsible for old runs of scholarly journals. The words royalties or copyright may tempt me to another digression, but I am going to resist it, at least for the time being.

The reprint business was born, not so long ago, outside of the regular publishing industry. Dealers in rare books discovered through their trade what books and—somewhat later—what journals were still in demand and the technical progress in photo-offset reproduction gave the obvious answer. The development of reprint firms has been so phenomenal that it could not be healthy in all its aspects. Today a sharp crisis in reprint marketing, shared by general publishing with which it has become integrated most notably in the Western world, may lead to the beginning of a satisfactory balance both regarding publishing in general and regarding pricing of reprints. Here again these books-without-authors are aimed at the library market. Some critic described the reprint business as follows: "you borrow one copy of a (rare) book from a library, you sell fifty copies to fifty other libraries; actually, forty nine because you offer one copy to the original owner whose binding you have spoiled anyhow; to do so you mail uselessly one hundred thousand folders and you uselessly keep in stock another fifty copies." An oversimplification which may, however, not be useless for the oversophistication of the traditional publishing industry.

One question I would like to raise here concerns the place of reprints in the developing countries. It has been reported that most of the reprints went to new university libraries which had to build up collections in a few years, while older universities have been doing so for a century or more. The most comprehensive survey of "Scholarly Reprint Publishing" was written by Carol A. Nemeyer in 1972 (published by R.R. Bowker Co.), but is purposely limited to the United States. She does not refer to the developing countries either as consumers or as producers of reprints.

In the preceding discussion of the authors' position in the present day book world, as seen from the production end, I have referred often to the publisher and probably too often to the librarian. I should however have taken up the problem of the lack of authors in developing countries. This is a steady complaint at international meetings and it is one to which developed countries feel completely powerless to offer any assistance. Since I guess that there is no lack of qualified authors, as artist and as commissioned writers, in India I wonder if this is not a specific field where the experience and wisdom of this country could not be made more widely available to those developing areas of the world where English is a *lingua franca*.

This rather capacious commentary on book production can, however, not ignore completely another growing phenomenon which I would call, again for lack of better wording, books-without-publishers. These are basically government documents (including publications by international inter-governmental organizations) and journals published by learned societies. In both cases someone, who generally is not a member of the professional organization of publishers, assumes the role of a publisher and in a tiny minority of cases he has the professional competence as well. In the United States the Government Printing Office is the largest publisher of the country, though nearly 37,000 books are published annually through the regular trade. In many developing countries the main bulk of new publications are government documents. Here again India may use its privileged position to assist developing countries in finding ways and means to establish a healthy balance between private and public publications, to build up—through government channels—the technical know-how of book productions, etc. Can India's position be used in fostering in developing countries the publication of scholarly journals? I think so. In the West, these journals—though adapted to modern needs—are generally based on old traditions, on old institutional patterns, on old social strata, even when the journals are young, while this background is quite different in developing countries. A learned society is like an individual writer. You cannot create it artifically with technical assistance from abroad. Such assistance can bear on surrounding conditions and the influence will be most positive when the understanding of these conditions is deep and genuine.

A last word as a librarian in this connection. Both government publications and journals published by learned societies form the major part of material available through international exchange. This exchange is regulated by two international conventions signed by a number of countries: Convention concerning the international exchange of publications (1958) and Convention concerning the international exchange of official publications and governmental documents between states (1958). Quite a lot of additional exchange is also carried out through bilateral agreements. Developing countries can and should make more extensive use of these agreements which can prove to become a major factor in the collection building of new libraries. Time is gone when developed countries used this channel to get rid of cumbersome duplicates. Since no profit making is involved in this form of library material, most countries are willing to comply with reasonable requests. This non-commercial flow of publications between countries has also a beneficial influence on the commerical one. It needs a satisfactory library machinery to deal with non-commercial publications, chiefly at the receiving end, and the same machinery is required to handle commercial publications. In other words, it has to exist or to be set up or to be improved for both types of material.

Book promotion

According to the introductory paragraph, I now should comment on the use of books before talking about their promotion. But I have already spent so much time on production that I had better postpone the use, which is the most important of all book aspects, to the end, if there is some time left, because book promotion is the topic which can be considered as the most specific contribution made by the librarian to book development.

The specificity of this contribution does not exclude the practical difficulty to separate it from book promotion in general, because this is a field, as we all know, where cooperation between authors, publishers, book dealers and librarians is required. If International Book Year has no other result, it will have been invaluable if it has established for the future a closer cooperation among the various book professions. There is no doubt that today, thanks to national book programs and international consultations sponsored by International Book Year, the solidarity between the various branches has grown significantly and each one better understands the point of view of the other and realizes more fully that the success or the failure of one is the others' positive or negative influence. The obvious example is the reciprocal impact of libraries on bookshops or *vice versa*. They build each other's readership. The same readers buy and borrow books. The same non-readers avoid both bookshops and libraries. Cities with good bookshops have good libraries and the contrary is also true. Since libraries are generally public-service and bookshops profitmaking enterprises, it is normal that in developing countries libraries come into existence before bookshops; but it is the experience of the West that a satisfactory library development requires a sound and healthy book trade. When libraries serve rural areas, which they should by all means do—even the most primitive areas—they reach the potential buyer of books when he goes to town. So the simple existence of libraries—apparently 798,217 spread over the world—is a major factor in book promotion. But that is not my point.

Before reaching it I would like to quote an American example, and an international one, of cooperation among the different members of the profession. In the United States, publishers and librarians have, for many years past, jointly and successfully organized Library Weeks, and in moments of political danger they cooperated in the "Freedom to Read"-manifesto, too. International Book Year, if I may quote it a second time—and I actually consider this paper as a sequel to the Year—has been able to materialize an old dream of the publisher's world by issuing a "Charter of Book" in which six international non-governmental organizations of the book world have written about their faith in the future of the book. This Charter has been widely adopted, circulated, translated and discussed.

After due consideration of the paramount importance of cooperation in book promotion, I would now like to try to isolate the part libraries share in this collective venture. Parenthetically I might add, because I am afraid nobody else will, that the librarians, among all the professionals of the book, have no direct or personal benefit in this promotion. Publishers and book dealers, even authors and readers, may derive material gains from the promotion of books and they generally do, while librarians, as public servants, are simply middlemen who naturally promote books if they carry out their job in a decent way. It has been recognized outside library circles that the major contributions to International Book Year came from their corner.

The unique share of libraries in book promotion is the improvement of the accessibility to books through an adequate bibliographic coverage. Quick, accurate and exhaustive information on books is the librarian's main objective. This is not as easy to achieve as to write it down in a simple phrase. To avoid any confusion I would like to add immediately that quite a number of trade catalogues, or even national bibliographies, are published commercially, but for our convenience I would consider these important contributions to book promotion as library work even when carried on outside libraries. And when one looks at this major problem of bibliographic control from a point of view which is not that of a few highly advanced countries, it becomes evident that only librarians can carry this burden. It is a burden and they should carry it. It is much more glamorous to write, to publish and to sell "Jonathan Livingston Seagull" than to apply to it an internationally accepted standard bibliographic description.

To apply to it an internationally accepted standard bibliographic description. That is the question.

The International Federation of Library Associations (IFLA) has decided to meet the challenge and has launched an ambitious program, called "Universal Bibliographic Control" (UBC), with which it will make a major contribution to book promotion in the years to come. I am afraid that I have to go into some details, but it remains a fact that in all human endeavors progress depends more and more on specific technical improvements.

In IFLA, different groups are working at different levels on UBC; the strength of the UBC project is that is purposely wants to be a pragmatic approach to the whole problem. Once again this problem is easier to define than to solve: To get, as

quickly as possible, all new books and to describe them in such a way that these descriptions can be used everywhere with a minimum of adaptations, either manually or mechanically. This means, also, that a new book should be catalogued only once—in its country of origin—and that all the libraries in the world which have acquired this book should use the available bibliographic information. It is not difficult to realize that the starting points for the enterprise are very different from one country to another.

The basis for this work is of course book production. At one end are the super-producers, such as the U.S.S.R., the U.S.A., Japan, Germany, United Kingdom, France, etc. Statistics are published annually in UNESCO's Handbook. Though the international comparability of the figures has improved through joint efforts, it is still certain that an absolute equivalence is still far away. But for our purpose, the statistics are reliable enough to show that large and highly industrialized countries take care of the largest part of the world's book output. Small, industrialized countries can reach proportionally the same average or even a higher one. The Netherlands is an example at hand. The position of India is extremely interesting from this quantitative point of view. Though the publishing industry has to cope with several languages, India has become the third English language publisher in the world. The explanation seems to be obvious: it is a large and an industrialized country. In countries where book production has reached a satisfactory level of maturity, conditions exist for an adequate bibliographic control. In developing countries, where book publishing is still in its infancy, these conditions do not exist and here a series of problems arise.

Several efforts have been made by national governments and by international organizations to promote bibliographical coverage in countries with low book production. Experts from abroad can teach the required skills to local people and help to produce the first issues of national bibliographies, while providing the basis for a permanent publication after the foreign expertise is no longer available. This happened in Ceylon and in other countries. Such enterprises have met with various degrees of success. The American "National Program for Acquisitions and Cataloging" has, in some developing countries, procurement centers which publish Accession Lists at regular intervals. These lists are useful substitutes for national bibliographies and their preparation attracts very often the most qualified local cataloguers. It would be extremely useful to analyze scientifically the conditions which are necessary to provide for the regular publication of a national bibliography. Even the obvious prerequisite that books be published in the country under consideration needs careful attention. Books issued by printers (as opposed to publishers) or government departments when no regular book trade exists or even when it does exist, may be difficult to obtain. This is only one example.

National bibliographies should announce new books as quickly as possible after their publication and they should be [illegible] in highly developed countries. The time lag between publication and announcement tends to be too long. There, it is not so much the lack of qualified cataloguers as the shortage of staff and the increasing number of new publications. In my own country it was in the middle of the year—with the July issue of the monthly national bibliography—that the number of imprints of the current year exceeds that of the preceding year. This is not a satisfactory situation. When the body responsible for the publication of a national bibliography has some private incentive, like the United Kingdom, the best results can be achieved. But in most countries, and certainly in developing countries, the publication of a national bibliography will always be a government affair and with governments quick and effective action is difficult. Another explanation of the slowness of national bibliographies is the lack of interest of public authorities for this kind of publication. This is as true in developed as in developing countries. Publishers, booksellers and librarians are convinced of the importance of speed in the announcement of new publications, but they have difficulty in carrying the message outside their own circles. It has been my personal experience that the argument of national prestige has some value, that a good national bibliography belongs intrinsically to a healthy publishing industry, that it is the indispensable basis for reliable statistics.

Speed is one aspect of a good national bibliography. Comprehensiveness is another one, which certainly is not easier to achieve. There exists, in professional circles, general agreement that the best way to achieve this objective is a legal deposit law. Much that has been said above regarding speed remains true when it comes to exhaustiveness and many of the arguments in favor of a national bibliography can be used for passing a legal deposit law. The time has gone by when, in some conservative publishing circles, such a law was considered to be a special tax levied on one particular group of citizens. Nowadays all publishers agree that the books which they deposit to comply with the law are put to good use which, in the first place, means the issuance of a satisfactory national bibliography. At the other end, the old idea of censorship, which was associated in former centuries with laws regarding books, has disappeared forever. Also the American praxis, which links deposit to copyright does not tend to be followed elsewhere. The general trend is to give to modern legal deposit laws a purely bibliographic character, to make it an effective tool for the promotion of the national book industry.

The third and last important aspect of a good national bibliography is the quality of the bibliographic descriptions of the new books. Most of the book-producing countries have developed, often since the nineteenth century, national cataloguing codes which have naturally established national traditions. Some of these traditions are still strong today and cataloguers tend to be the most conservative librarians, the guardians of the professional dignity. Before World War II some countries, like Germany, considered a catalogue almost a national monument and with the venerable *Preussische Instruktionen* cataloguing had become a purpose in itself. So much so that the strictest of rules needed, nevertheless, an elaborate interpretation and catalogues differed from library to library in one country, as well as within the same library. Those days are gone now. That is to say, all the differences from the past are still with us, but they will gradually dwindle away through the new approach of those who are responsible for the profession today.

The landmark was the meeting on International Cataloguing Principles in Paris in 1961, convened by IFLA, financed by the

Council on Library Resources and sponsored by UNESCO. Librarians from all parts of the world tried for the first time to look for common principles with universal validity. Coming from such widely differing horizons it is a miracle that agreement could be reached. The results are, of course, limited and principles could certainly not be mixed up with instructions. These Paris Principles, however, influenced seriously, in various countries, the revisions of the national sets of rules. A good example is given by the Anglo-American Cataloguing Code of 1967 which is widely used and which is the basis of much automated cataloguing work now in progress. The German rules of 1965 were, until now, the closest to the Paris Principles. In 1969, in Copenhagen, a sequel to the Paris meeting had been organized and the results of this new international confrontation materialized in *An Annoted Edition of the Paris Statement of Principles*, of which the main editor is Eva Verona from Zagreb, Yugoslavia. There is no doubt that the international aspect of cataloguing procedure will grow in the future.

From the same corner, the International Cataloguing Secretariat of IFLA, comes another basic component of quality cataloguing: The International Standard Bibliographical Description (ISBD). After extensive international consultation, this standard of IFLA has been taken over for a renewed checking by ISO, the International Standards Organization, which everyone recognizes as the only regular organization responsible for generally accepted standards. ISBD gives in a fixed order all the elements of a bibliographic description of monographic publications, and can be used manually as well as mechanically. If we want to achieve the main objective of UBC—that is to say that each new book should only be catalogued once and well in its country of origin—then the adoption of ISBD is a fundamental prerequisite. Only through a generalized use of ISBD will it be possible to use abroad bibliographical descriptions of national origin without damaging the quality of a local catalogue. IFLA is now working on an International Standard Bibliographical Description for Serials (ISBDS) which will be ready this year. Speaking about serials, I can mention here the International Serials Data System which is developing into, at the Bibliothèque Nationale in Paris, the central register of all relevant elements in serials identification, including the International Standard Serial Number (ISSN). ISDS is not an IFLA initiative, but is established within the framework of Unisist about which I will say a few words.

With Unisist, a World System for Scientific Information which has been approved by the last General Conference of UNESCO, we are actually at the outer limit of our subject which is focussed on books. It would, however, be a mistake to ignore Unisist were it only for the fact that UBC wants to be to the book world what Unisist purports to be to scientific information. Throughout a number of years, Unisist has been clearly planned in the framework of close cooperation between an international governmental organization, UNESCO, and an international non-governmental organization, the International Council of Scientific Unions (ICSU). It has brought and should bring even more scientists and librarians closer to one another, the librarians as middlemen between the producers and the consumers of scientific information. The cooperation has not been without difficulties, as is always the case when people with different backgrounds have to work together. Unisist remains, however, a good example of the cooperation which has to exist between publishers and librarians if UBC wants to become a successful operation. Unisist is, presently at least, limited to pure and applied sciences and the whole philosophy behind this ambitious enterprise is that of highly industrialized societies. UBC has no limitations, except a formal one: It will include only monographs, at least in its initial concept. It wants to be exhaustive and is, as such, as valuable for developed as for developing countries, though problems of implementation will differ according to the level of development. At the lowest level of development, the UBC experts may go so far as to promote textbook programs, while at the highest level they will work on sophisticated communication formats for computers. A wide range indeed.

Coming back to the enumeration of international improvements in bibliographic control I still have to mention some new tools. I already made an incidental reference to the International Standard Serial Number (ISSN), which is based on the same principles as the older International Standard Book Number (ISBN). The latter, initiated by the publishing industry, has been taken over eagerly by the librarians though they are now in the process of evaluating the system from their specific point of view. It may be noted, by the way, that both international numbering agencies, for books and for serials, are located in libraries, the Staatsbibliothek Preussischer Kulturbesitz in West-Berlin and the Bibliothèque Nationale in Paris. It has been my experience, over and over again—and more particularly during International Book Year—that librarians, as the most unselfish members of the book community, are always prepared to serve the other members, mainly the publishers. I am not noting this in order to claim some special merit, but to state a mere fact and to regret that in some countries this is not explicitly recognized by the publishers.

Another improvement of the accessibility to books is the renewed effort, in the United States of America, of cataloguing at source which is now called "cataloguing in publication." The great promoter of this form of cataloguing has been Verner Clapp who contributed so much to the development of the library profession in- and outside his home country. He died last year, a few days before another giant of the profession passed away, S.R. Ranganathan, National Research Professor in Library Science at Bangalore; Ranganathan himself had called Clapp's idea "prenatal cataloguing." It wanted to solve an old problem in centralized cataloguing: The simultaneous availability of a book and its bibliographic description. The United States, like the Soviet Union, has a long tradition in centralized cataloguing. The Library of Congress catalogue cards are well known throughout the world, but the recognition of the many difficulties in assuring the simultaneous availability of both book and card was also a result of this long standing experience. Actually the idea of printing a bibliographic description in the book has grown independently in the two large countries noted above. It is too early to assess the results of these national enterprises, but it would be extremely useful if other countries could follow it closely. With a multiplicity of languages and alphabets, cataloguing in publication should be an even more obvious

service from the publishers to the librarians. I should rather say from publishers to libraries, because the librarians should put their bibliographic skills at the disposal of the publishers to perform the cataloguing in publication.

A last and important point in this list of the tools to improve internationally the accessibility of books is the compatability of the computerized communications formats of bibliographical descriptions. The first automated national bibliography was the German *Deutsche Bibliographie* in 1966. The computer program was clearly designed to produce a national bibliography and, as such, it certainly has been successful. Before automation it took the national bibliography eighteen months to publish a description; now this time has been reduced to six weeks. Pioneering work has been done by the Library of Congress in establishing its Marc (Machine readable catalogue) format. Here again the sponsoring agency was the Council on Library Resources and one should never fail to recognize the debt of gratitude the book world owes to this American institution. It is also useful when describing achievements to give some attention to the means which made these achievements possible. Today Marc produces weekly tapes with one thousand automated descriptions of new books in English. The idea behind Marc is to enable the libraries which use the tapes to produce their own cataloguing cards. Marc has been used from the very beginning in the United Kingdom, which introduced more flexibility in its Marc-BNB tapes (BNB = British National Bibliography). The use of Marc-type-tape is now spreading over Western Europe and the trend is towards still more flexibility. Instead of thinking exclusively in terms of national bibliographies or catalogue cards, one seeks to produce strings of bibliographic data. The danger of this trend is, of course, a reduced degree of compatibility of the various systems and those who are responsible for international communication should be aware of this danger and should build up channels to preserve the maximum of compatibility. It is saddening to report that an intergovernmental organization has already supported a format which ignores Marc. International intergovernmental organizations which command large financial means should be aware of the fact that they can defeat their own purpose which is international cooperation.

Looking back at this second part of my paper, I guess you will agree that the library profession has developed in recent years a series of tools which have improved the accessibility to books and, through this accessibility, their promotion. Universal Bibliographic Control is an ongoing process and needs the active cooperation of all countries, whatever their degree of development. It builds on national strength with due regard for international compatibility.

Book use

It is impossible to talk about books, about their promotion and their production, without having constantly in mind their use. These concluding remarks will be devoted to their use and they will, of necessity, be the most difficult part of my paper. Everyone will agree that only reading gives sense to the book and that a book which is not used has no existence or, rather, has no reason to exist.

In the first Sital Primlani Memorial Lecture, Malcolm S. Adiseshiah, noted that in India books are sacred, as sacred as a cow: "On one day in the year, Saraswathi Pooja, we clean the book and colour its pages with saffron. But that is all." The popular belief which is expressed through this ritual exists outside India also. It is linked to the sacred origin of the book: The book of the law, the Koran, the Talmud, the Bible. Superhuman power is linked to the very idea of the book. That tiny little minority which could read in former days derived its earthly power from this skill. Readers were rulers. They still are. M.S. Adiseshiah was, of course, right to state that the use of a book, which is tied to its sacred origin, opposes in fact the International Book Year slogan "Books for all." No doubt, a widespread use of books implies a certain amount of desacralization of the book.

Every serious consideration of the book leads to a paradox. Reading should become a most natural companion of daily life to all men, but the pre-eminence of the book among the other mass-media remains in some way or other linked to the superiority of its origin. In Japan, television sets and books increase in the same proportion, but the calligrapher has not completely lost his priestly reverence. Books have been a powerful weapon to fight against hunger in large parts of the world, but the word "bookish" retains a pejorative meaning. The paradox is everywhere and makes the book so human.

The world still counts 900 million illiterates and this figure is increasing. These 900 million people cannot reach the bare minimum of human dignity. Hundreds of millions are new literates and have no books. A large proportion of them will relapse into illiteracy. These are the hard facts of the world in which we live today and against which we who know have to fight. M.S. Adiseshiah has indicated measures and figures to improve the situation in India. Among them he has flatly stated: "The library system of the country is the life stream of the book trade." No doubt, in India and elsewhere, the librarian is the artisan of the reading habit. Has he been as able an artisan as he should have been? I do not think so.

His main failure has been that he has not been able to disassociate the book from formal education. Except for the Anglo-Saxon world the school library—or as it is called now the educational media or resource center—has not reached elsewhere a satisfactory level of performance. In Continental Europe librarians tended to look down upon teachers as amateur librarians. Even if they were, this was a mistake. It is high time that the American and the British experience be used in other parts of the world. Now that formal education has come to be questioned at its very roots the books are pushed, so to speak, into the arms of the children. And since education is a lifelong process, books are not pushed into the arms of children alone. Librarians should however avoid the mistake that books take the place of school walls. On the contrary, books should be part of that real life to which new education wants to expose children. In general "school" libraries are not well prepared to assume such an important role in the educational revolution. For this reason alone "school libraries without walls" should be an integrated part of the infrastructure of any library system. Books, among other media, have to be evaluated as a major component of lifelong education. Because librarians have been too egocentric in the past, reformers of education, such as those who have prepared the UNESCO report "Learning To Be," forgot about libraries, while their way of thinking should have brought a

deformalized use of books to the heart of their preoccupations. In London an employee who looks up information in a directory does not realize that he uses a book. The same employee in the capital of a developing country should become just as unconscious about the use of a book and this will require the availability of an outstanding library service. When the reader is a child, he should not be aware of the presence of a librarian. This will require an even more outstanding librarian. At national and international levels more and more librarians begin to accept the rightful place of books and other media in new education and the forthcoming intergovernmental conference on planning library services, to be held at UNESCO House in 1974, should devote a large part of its attention to this problem.

To end this paper I would like to draw your attention to the increasing proportion of books in the book production total which are bought by libraries. In most Western countries up to 90 percent of hard-bound children's books are purchased by libraries. In the United States half of the books which are sold are bought by public money. If this is the case in the Mecca of capitalism, what would it be in the socialist countries? This year one hundred titles will be printed in five hundred thousand copies for the sole use of libraries in the Soviet Union. I noted somewhere that in India 90 percent of all copies go to libraries. Though it would be extremely useful to have reliable statistical material for this growing book consumption by libraries, the indications are sufficient to determine the powerful position of libraries in the book world. A power which is directly expressed in economic terms. For this reason publishers should cooperate with librarians in all possible ways and when conflicts of interest arise there should be open discussion. Such a possible conflict of interest might be the "public lending right," to which I referred at the beginning. Another one could be, or is, the possible violation of the copyright laws by the reprographic services of libraries. To finish with this paper I ask your permission to give my opinion about this violation.

No one likes to violate the law and so the law has to be changed. Copying by a library is just a new form of reading which did not exist when the present laws were passed. This form of reading does not violate copyright if the copying is fairly used. Fair use means one copy, for private use, of part of a book or of an issue of a journal. In this sense copying by libraries is a protection of copyright. Schools and industries who do not apply a fair use are the real violators. Libraries have more arguments in their favor. Ninety percent of the copying is done from journals, often highly specialized journals, and here again it is a guess that many of these journals do exist because libraries are their main subscribers. Often subscription rates are so high that a royalty for unlawful copying must have been included. Many journals are also subsidized from public funds. It can further be stated that the copying of an article also creates an additional interest in it. At another level, we find the same relation in the case of the bookseller and the librarian who build upon their reciprocal readership. A last question. Could the violated article have been written if the quoted and unquoted footnotes did not refer to articles which had been copied for the benefit of the author? Scientific progress, spreading knowledge, improvement of both authorship and readership being a common goal of publishers and librarians, fundamental conflicts of interests cannot be permitted to exist.

I apologize that in this lengthy paper I have not found space to deal with one of the major problems with which both the publisher and the librarian are faced today: The place of books among the other media. For the librarians I can say that they have had a tendency to isolate the book too much from the other media. This isolation tended to be a value judgement: Culture with books, subculture with television. This is understandable for historical reasons, but the growing concern of librarians with the other media shows that they have accepted the challenge of our time. It would be contrary to the whole philosophy of the inescapable solidarity in the book world if the publishers had not adopted the same attitude. This does not, however, preclude the fact that a serious piece of research has still to be carried out to evaluate correctly the various media in their influence on education, on the quality of our daily life, our own life and that in the wide world which surrounds us.

PRACTICAL CONSIDERATIONS, INCLUDING FINANCIAL, IN THE CREATION, PRODUCTION AND DISTRIBUTION OF BOOKS AND OTHER EDUCATIONAL MATERIALS

by
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I. General Considerations

A modern technology requires a very extensive use of printed materials. It is not by accident that in western Europe and the United States the rise of large-scale steam-powered manufacturing and transportation coincided in time with drives toward universal education and mass literacy and with the rise of a modern book, magazine, and newspaper publishing industry utilizing power-driven presses, cheaply produced woodpulp paper, and the mass distribution of books, magazines, and newspapers through the mails, through bookstores and newsstands, and through schools and libraries.

The Soviet Union went through a similar development when it undertook to modernize the Russian economy following the Revolution of 1917. So did Japan in her relentless thrust to modernization in the 19th Century. The developing countries of our era face a comparable situation. Without effective means for the abundant production and the widespread dissemination of printed materials it is impossible to create a contemporary manufacturing industry, to sustain widespread commerce, to modernize agriculture, to carry on an efficient government, or to meet minimum educational needs. Broadcast and audio-visual materials are also very important to economic and educational development, but to the extent that they differ from the print medium, they are beyond the scope of this paper.

The developing countries differ very widely with regard to their capacity to produce and use print. At one extreme are countries like Mexico, Argentina, and India with sophisticated publishing industries and well established bookstores, where the absence of an adequate market is the principal limitation, rather than the absence of productive capacity or competence. At the other extreme are some of the recently independent microstates of Africa that do not have even the barest rudiments of a publishing capacity and that do not have a large enough literate population to provide any hope of a market adequate to sustain a publishing industry. In between are countries like Nigeria, Pakistan, Columbia, or Peru, with important groundwork laid but with as yet largely unrealized potential. Still none of the developing countries, even the most advanced, now produces or distributes anything like the quantity of printed material that is characteristic of the advanced countries or that is necessary to sustain a modern technology-based economy.

To close these gaps may seem to impose impossible burdens on even the most advanced of the developing countries. To maintain the flow of books in the United States, for example, requires the annual expenditure of approximately $17.50 per capita. The total investment in physical plant, printing machinery, and working capital is more than $25 per capita. These figures would be somewhat more than doubled if journals and newspapers were included. Though lower, they would not be greatly different for other highly developed countries.

Even to approximate this level of expenditure is clearly beyond any conceivable outlay in the developing countries. But the vastness of the job to be done is not a reason for discouragement. It is not necessary to the early and intermediate stages of even rapid economic development that there be a flow of printed material comparable to that in the most advanced countries. Publishing can grow with the economy of which it is a part. As one of the change-inducing factors in an economy, publishing at every stage should be maintained at a level somewhat in advance of what might be considered normal to that economic stage, so that it does not merely sustain the level the economy has reached but provides a stimulus for further growth. This is the problem before us: To foster publishing enterprises far enough beyond what the economy can easily sustain to serve as an effective pace-setter and growth-stimulus. This is by definition a difficult task; but

it is not an impossible one, and it is most unfortunate when those concerned with the problem are awed by its magnitude into defeatism or apathy.

II. Goals, Limitations And Priorities

In the balancing of needs and resources that must be undertaken, it should be understood that the limitations on the capacity of a developing country to produce books are of two kinds. One is physical and relates primarily to printing and binding machinery, the available supply of paper, and the sufficiency of competent printing and binding workers. The second limitation relates to intellectual resources for creating books: The availability of competent authors, translators, and editors and the ability to pay for their services. The latter group of limitations governs the number and kinds of books that can be put into production; the former governs the number of copies that can be produced.

Particularly among the newly independent countries of Asia and Africa, nationalistic considerations that are quite understandable in terms of national pride and political goals may nevertheless cause the setting of educational and hence of publishing priorities that are unrealistic or that lead to an inefficient dispersal of scarce resources. Three of these may be mentioned: The creation and disproportionate support of universities, especially if patterned on those of the former governing power with heavy emphasis on liberal arts, law, and pure science; a premature drive for nearly universal literacy; and an insistence that educational material be in indigenous languages.

Each is understandable; each has some virtue to recommend it. With regard to the first, there is certainly a need in all developing countries for a substantial increase in post-secondary education in the skills and professions required in economic development. However, only the larger and more advanced of these countries have the resources to support or the need for comprehensive universities. And in many of them there already exists a substantial body of unemployed or marginally employed persons with university training in traditional academic fields unrelated to the actual development needs of the country.

Moreover, in no country, even the most advanced, can the needs for materials for higher education be met entirely by books published within the country. In fact, it is a general rule that the more advanced a country, the larger its per capita importation of advanced books. In a developing country, the need for imports of college textbooks and other materials for higher learning is even greater. The market, in terms of students enrolled in colleges and universities, is large enough in only a very few of the developing countries to support the economic domestic development of materials beyond those for a few basic courses.

At the other extreme is the goal of the swift achievement of nearly universal literacy, one shared by almost all developing countries. It is a goal deeply identified not only with the thrust toward development but with the thrust toward equality. In particular, in the former colonial countries an elite educational system that gave advanced training to a few while neglecting the general population is an odious reminder of alien rule. And for the more fully advanced countries, for example Mexico, in which the great majority of the adult population are already literate and 80% or more of children under 15 are enrolled in school, the reduction of illiteracy to less than 10%—even to 5%—of the population within a generation is an entirely reasonable goal.

But for the least developed countries, in which 80% to 90% of the population are non-literate and are engaged in traditional rural agricultural, hunting, or herding economies, no swift achievement of literacy is possible. There simply do not exist, and cannot quickly be acquired, the schools or the teachers or the materials for such a gigantic task. Moreover, so long as the traditional patterns of such societies persist, reading is not a daily and functional activity. In such circumstances, hard-won literacy quickly atrophies and is lost through disuse. It is neither necessary nor possible within the present generation to eliminate non-literacy within such traditional economies. The achievement of broad literacy will become necessary and will also become possible as the transformation of those economies into more modern patterns is achieved.

The creation and provision of materials for elementary education is an indispensable part of any development program, and their dissemination should be widened as rapidly as they can be put to effective use and as resources will permit. But it must be recognized that the production of elementary school texts sufficient for the entire population of elementary school age is not a practical immediate goal for the less developed countries. On the one hand the schools can be opened and the teachers trained and employed to put them to effective use only gradually and over a rather long period of time. On the other hand, crash programs aimed at this goal and overriding all other publishing efforts can preempt resources of paper and press time more urgently needed for other purposes.

Finally, it should be noted that a high proportion of the publishing resources of all countries, developed and developing, is devoted to materials of little if any relevance to education or economic growth: Comic books, cheap romances, foto-novelas, pamphlets on astrology and divination, pornography, etc. These may indeed do a good deal to stimulate and maintain an interest in reading; and there is little reason to think them harmful except, by preempting paper, press time, and other scarce resources, they may prevent the publication of more useful materials. Priorities in import licenses for paper and in the allocation of other scarce resources, rather than censorship, would appear to be the best means of redirecting effort in this area.

A rational tailoring of goals to resources in these areas of less immediate and urgent need will help to make it possible in all but the most totally deprived economies to achieve the creation, printing, and dissemination of the materials most critically needed in educational, economic and social development.

These will be the books, not readily available by import, that are most essential to the dissemination of the new ideas and new technologies that the society in question is now ready to use or to use more widely in its development. What particular kinds of books meet this definition and the quantity required will vary from country to country and must be determined by each country for itself. One country may need and be ready to use a wide range of elementary school texts

for substantially all its school-age population; another may be ready to use effectively only basal readers. One may have no need for locally produced college texts: another may have university enrollments making locally produced textbooks essential for many disciplines. One may require large editions of materials for both students and working adults relating to elementary metal working or electrical technologies; another may need only the most simple pamphlets on sanitation or new agricultural methods. One may have a complex literary culture that demands embodiment and dissemination in books; another may not. In one the entire population or at least those with secondary education may speak a world language, like English, French, or Spanish. In such a country many book needs may be met by imports or local reprints of works published abroad in that world language. In a country in which few use a world language, in contrast, almost all book needs will have to be met by books written or translated and published within the country.

Often writers and planners seem to assume that priority in book needs in a developing country will be confined to educational materials. Such materials are obviously of the highest importance and they will indeed usually enjoy a first priority. But they can never make up the whole of any country's important book needs. The whole purpose of a book-using education is to equip those who receive it to function in a print-using economy and society. If the technical books and journals that will keep them abreast of developments in their new occupations, publications that discuss public affairs, books that embody world culture and the culture of their particular country are unavailable to those who have completed their formal education, the purpose of that education will have been largely frustrated. Any at least partly developed economy requires an extensive use of printed materials not only for education but for the daily functioning of the economy itself.

III. Choice of Means

Once a country has decided on its priority needs for printed materials, it will next consider the way it intends to meet them. Then there will be the task of determining the limitations and impediments that lie in the way of meeting those needs and undertaking measures to overcome or circumvent them.

A. Imports or Local Publication?

Book needs can be met in a variety of ways: By importing books from other and usually more advanced countries; by reproducing foreign books by offset within the country; by translating foreign works; by adapting foreign works and publishing them locally, whether in the original language or in translation; or by locally written and produced material.

Insofar as locally published materials are concerned, there will need to be a further decision as to whether materials (as, for example, basic elementary schoolbooks) will be published and distributed by a government agency, or whether they will be published entirely by private firms without government intervention, or by private firms with government assistance. Such assistance, for example, could take the form of supporting authors, consultants, and editors of educational materials, paying for the rights to translate or reproduce foreign works, or sustaining a market by buying books for school or library use.

It is rare that a single answer is right for any of their questions. In every country some books will need to be imported, some produced locally; some will need to be translated, others adapted, others reproduced in their original language and form; both public and private productions will have advantages in certain circumstances. The answers will vary from country to country and within each country from one level or type of book to another. They must be determined by the country itself, but some guidelines may be offered.

Generally speaking, books should not be produced locally unless one can anticipate an immediate market of some 3,000 or more copies and a continuing sale thereafter. For smaller markets the importation of foreign works is to be preferred, the more especially if inexpensive editions are available. Though the imported edition will draw on possibly scarce hard currency, it will usually be cheaper at this level of market. In particular, when editorial skills and typesetting, printing and binding capacity are scarce, they should be conserved for materials that cannot be imported.

In practice this means that advanced college and university texts and reference materials will generally be imported except in the most advanced of the developing countries. This may occasion some problems when the normal language of the country is not a world language. In general, however, students in advanced subjects can use one of the world languages, and it is in their interest to encourage their use of such a language, since without it they will be unable to get access to the principal sources of expert knowledge in their fields.

In the case of mathematics, science, engineering, medicine and similar technical subjects, it is generally wiser to rely on imports to provide the principal supply even of basic introductory textbooks.

Most American publishers produce in Asia inexpensive paperbound reprints of basic introductory texts in their areas. These usually sell at about 30% to 35% of the American price. There are often similar French and British editions. It is possible for textbooks of this kind to be published at these prices only because a single edition serves all the developing countries, no one of which uses more than 10% or at the most 15% of any textbook. If each country attempted to supply its own needs by local editions, only a few dozen texts could be published in such editions and those only in a few of the largest and most advanced of the developing countries, in contrast with the hundreds of texts in inexpensive editions now available throughout Asia, Africa, and Latin America.

Import is, of course, much less feasible as a means of meeting the need for college and university materials in the humanities and social sciences. These give more specific recognition to local needs and conditions and local cultural traditions. Only in the more general and theoretical aspects of such subjects will imports be adequate.

At the other extreme, in elementary school materials, imports will rarely be useful except as examples or for experimental use. The quantities involved are too large for

import to be financially possible. And even if it were, no country will want to rely upon outside sources for the basic educational materials for its children. Not only will local manufacture usually be necessary; rarely will it be possible to use materials from other countries reproduced or translated and published locally. Almost always introductory readers and similar materials will need to be extensively adapted if not written *de novo* for use in the elementary schools of developing countries. Elementary school materials from developed countries may be useful as examples for study by educators and textbook writers and editors of the developing countries, but rarely for wide dissemination in their original form.

In between these extremes of the elementary schoolbook and the advanced university text there is a wide range of materials that will need to be partly imported and part locally produced. These include among others high school texts, technical manuals for vocational schools and on-the-job training, and books for the general public. Here it is only a matter of practical judgment. If the material is needed in large enough quantities to make local publication more practical, or if it is not available elsewhere, then obviously local production is indicated. If useful material can be imported, and the quantities needed are not sufficient to justify separate local editions, import is obviously preferable.

B. Government or Private Publishing?

Government versus private publication is another kind of question, not always answerable on rational or pragmatic grounds. In countries making an ambitious effort to supply introductory readers and similar elementary school materials to all or most of their children, and compelled to do so at the lowest possible cost, there are obvious advantages in having such materials printed and published by the national government and supplied to children free or at nominal cost through the schools. The government can assure the quality and content of the material, and the less developed countries can hardly afford the luxury of two or more competing competently prepared series to offer teachers a choice. The costs of risks in adoption, of marketing, and of distribution—all substantial—can be avoided. And the government can assure itself that all children within the scope of its program do in fact receive the material they need, which will rarely be the case if poor parents must buy privately published materials for their children.

There are, however, serious costs in such an approach, which may not be so readily apparent. One has already been referred to: depriving teachers and students of the opportunity to choose among a variety of competing materials devised and produced by firms or agencies outside the government. This is no doubt an illusory difference in those countries in very early stages of development, in which there may be neither the editorial nor the financial or physical (i.e. printing equipment and paper) resources to produce more than a single series of elementary and educational materials. But countries that have reached the stage of development of, for example, Argentina, Brazil, Chile, India, the Lebanon, or Mexico are likely to benefit greatly from the existence of competitive, privately produced, alternative series of elementary level learning materials. (The private publication of school books of course by no means precludes active government participation in defining curriculum, specifying desired coverage and scope of textbooks, preparing guidelines, producing model units, and reviewing and determining the acceptability of commercially produced material. Such government activity is considered essential even in those countries with the most advanced educational publishing industries.)

A further disadvantage of government monopoly or predominance in the publishing of elementary school materials is that in most countries, even quite fully developed countries, this is the largest, or very nearly the largest, segment of publishing. It may represent half or more of the total book output of developing countries. It will often represent the essential basis of a commercial publishing industry. Without access to this largest and most dependable sector of its potential market, it may be nearly impossible for a private publishing industry to develop. If it is barred from producing elementary school books, commercial publishing may not be able to command and organize the resources to produce intermediate and college level materials or to publish books for adult education or for the general public—to the marked deprivation of the society generally.

This applies with equal force to the distribution of books. Supplying elementary school books is the esential core of the business of thousands of book shops in developing countries. Denied this, they may not be available to distribute any books.

This analysis suggests that government publication of elementary school materials may have decisive advantages in early stages of development; that; however, it should be limited to those few basic materials that must reach all children at the lowest possible cost; that as rapidly as practical, the competition of commercially published materials should be invited and encouraged; that even governmentally published material should, wherever practical, be printed under contract in the plants of commercial book printers; and that governmental publication is not practical as a principal means of supplying intermediate and upper level material and books for the general public.

The foregoing analysis of the relative advantages of government and commercial publishing of educational materials is based on the assumption that one of the developing country's goals is the fostering of a strong private publishing industry. In states that, as a matter of policy, prefer that all publishing be in the hands of, or under the control of the government, the question is, of course, answered by this policy decision. Even in such states, however, the question will arise whether elementary school materials will be produced and distributed by the ministry of education, or by one of the state-owned general publishing houses. And just as in the case of private-owned publishing houses, the state-owned general publishing houses will find it hard to sustain themselves or realize economies of scale without access to the school market.

IV. Limitations and Needs

Having decided on its goals in terms of the kinds and quantities of books needed and on the methods by which they will be provided (imports, translations, local editions, adapta-

tions, new books–published by government agencies or by private enterprise), the developing country needs to concern itself with the factors and conditions limiting its capacity to attain those goals.

A. Equipment

One thinks first of physical equipment: of typesetting, printing, and binding machinery. Yet in fact most developing countries are at least minimally equipped to meet their basic needs in this regard. Any substantial expansion in most countries would of course require corresponding additional equipment. But the characteristic situation is that existing presses are idle much of the time because of breakdowns, poor maintenance, lack of spare parts, or insufficient demand or scarcity of skilled employees to maintain multiple shifts. There is, however, often a special need for modern offset equipment to enable new editions to be made without resetting of type and to provide an easier use of illustration and color.

Composing machines are likely to be in shorter supply, and type is not infrequently set by hand in developing countries, particularly in those using idiographs or non-Roman alphabets. Low wages offset inefficient equipment, but the introduction of adequate composing, preferably photo-composing, equipment would be a relatively inexpensive method of improving efficiency.

The worst equipment problem is in binding. With some exceptions, modern binding equipment is found in only the most advanced of the developing countries. Much, perhaps most, binding is sewn on hand-operated sewing machines and laid out for adhesives to dry. Casings are made by hand and are weak, as are the adhesives with which the books are set into the casings by hand. Elaborate sewing and casing machines are a second-priority need, as good adhesive paperback binding will meet most urgent needs. But equipment for this latter simple type of binding should receive a very high priority.

In general the provision of adequate equipment is the simplest of the problems that must be confronted in strengthening the publishing capacities of developing countries. A very wide range of efficient composing, printing, and binding equipment is available, from the simplest to the most complex. Expert objective advice on needs can readily be provided. Relatively long-term credit is available from many producers of such machinery or from their national export banks. The increase in productivity from the use of modern equipment can repay loans.

It should be noted however that only the very largest and most advanced of the developing countries can afford the very expensive presses necessary for the most efficient high-speed long-run production, especially in four-color printing by web offset, or have large enough markets to provide for its efficient full-time use. Facilities of this sort exist at a number of points in the developing countries–for example in Hong Kong, Taipei, Singapore, Buenos Aires, Santiago, and Mexico City. Publishers and government agencies in other developing countries that have need for long runs of material requiring four-color printing (such as many elementary school texts) can often achieve very important economies by contracting their printing to such centers, without any loss of control over design, content, or marketing.

B. Paper

Another serious problem is presented by paper. Reserve capacity in printing equipment can be put to use by better maintenance and double shifts. A one-time installation of new equipment can provide increased printing capacity for years to come. But there is no way paper can be stretched. It has to be provided, year by year and week by week, directly as publication expands. And in most countries it is not readily possible to obtain an adequate supply of domestic book papers by any practicable investment in papermaking equipment.

All but the smallest countries in early states of development have some papermaking capacity. But it is usually high-cost, inefficient and capable of producing only limited quantities of paper of relatively poor quality. Two factors limit expansion. One is the shortage of suitable sources of pulp in many developing countries. Some sources of course exist, but the enormous forests of long-fibered conifers that make Canada and Finland, e.g., such efficient sources of high-quality, low-cost pulp are often absent. Most developing countries are in tropical areas where the forests are usually not good pulp sources.

The other limitation is that efficient, low-cost paper production requires very large units of investment. Smaller countries do not consume a sufficient quantity of book-grade papers of reasonable quality to support the investment required for efficient production.

The situation is complicated in many developing nations by public policy on imports. The growth of a domestic paper manufacturing industry is a goal of most such countries, and it is sought by stiff tariffs on imported papers, by restrictions on the allotment of hard currency for paper imports, and by other import controls. Too often these regulations make no distinction of kinds and grades of paper. Small domestic paper industries rarely produce any good book papers, and their resources are more than fully occupied in producing newsprint and commercial grades of paper. The result is that publishers too often must import book papers at exorbitant cost because of duties exacted to protect non-existent production of bookgrade papers.

C. Printing Trades Craftsmen

A further limitation on the manufacture of books within the developing countries is a shortage of skilled workmen: compositors, printers, and binders. This situation varies. In the larger and more advanced developing countries, the supply of skilled workmen and the facilities for training them may be reasonably adequate; in the less advanced countries the problem may be critical. On the whole it is one capable of straightforward solution. Adequate, even excellent workmen can be trained in the well established crafts of the industry without undue expense. The problem arises only when the need for training is neglected or not foreseen.

D. Authors and Editors

A much more complicated problem than those of the physical manufacture of books is the existence of competent authors and editors. This is especially acute at the level of elementary educational materials. Almost by definition, in all but the most primitive societies, writers exist who embody and can express the cultural traditions of their societies. And for

scientific and technical books and materials for intermediate and higher education, much of the need can be met by the use, in their original forms or adaptations or translations, of books written elsewhere. But it is generally essential that elementary educational materials be prepared in the country in which they are to be used, and by persons who combine professional training and competence in the field of educational materials with an "insider's" knowledge of their own culture. This involves not only the competence to write individual books for elementary school use but also the editorial competence to conceive and plan whole series and systems of educational materials.

These are not easily acquired professional competencies, especially in societies, like those of most developing countries, in which educational materials have played a relatively minor role in instruction. Training in these areas is likely to be a long, complex, difficult, and sensitive job, complicated by the inapplicability of many concepts and methods used in the more advanced of the developing countries—an inapplicability of which educational advisers from the advanced countries seem too often to be incompletely aware.

E. Distribution

In every country, developing and advanced, perhaps the most difficult single problem of publishing is that of bringing the finished book to the users who need it—the problem of distribution. This has three major components:

1. The demand for books, as distinguished from the need.
2. The actual channels of distribution—wholesalers, bookstores, other vendors, schools, and libraries—through which books reach users.
3. The means for conveying information about books—review media, bibliographic tools, etc.

Of these, the first receives the least attention; but is by far the most important and presents the most critical issues of public policy. The *need* for books in the developing countries is obvious and indeed almost desperate. But such a need cannot sustain a publishing industry until it is expressed in the market place as an effective *demand*. The social need for books will not be filled unless there are persons and institutions that can make informed decisions about the books required to meet that need and that have the means to pay for them. This problem is especially acute in a society in which educational limitations and poverty combine to leave needs inchoate and unexpressed, not functioning as effective demands.

What is not generally realized is the extent to which, even in the wealthiest and most advanced countries, it is the government that transforms need into demand. In the United States, for example, well over half the money expended for books comes from public funds. It is the government (Federal, state, or local) that enters the market place on behalf of school children and buys the textbooks and library books they need. It is the government that acts for the general reader in setting up public libraries and buying books for them. It is usually the government that, recognizing the need for scholarly and research materials, sets up college, university and research libraries equipped with ample purchasing funds. Without this public conversion of need to demand, sustaining the market for books in the United States, the American book publishing industry would shrivel to less than half its present size, and the books it was no longer able to publish would disappear from bookstores as well as from schools, colleges, and libraries. To a large degree, the same situation exists in other highly developed countries.

It is precisely in the less affluent developing countries, where this sort of government intervention to transform need into demand is most urgently required, that the government role is typically least. The very poverty that requires the government to act on behalf of those who need books denies to governments the means to do so.

Yet this is the fundamental problem that must be faced. All sorts of facilitative interventions by foundations, aid organizations of developed countries, and such international organizations as UNESCO and the World Bank can help to equip the publishing industries to provide critically needed books. But this sort of one-time effort to create the potential for an adequate book supply will be unproductive unless there is a continuing, adequately financed demand to sustain the annual output.

This will require two things. Insofar as possible public funds should be used (1) to provide textbooks for the most critical stages of education and (2) to buy books for libraries. This may appear a difficult, indeed an impossible, undertaking for a developing country with very limited total national income and a severely restricted public budget. Yet if the society can afford educational investment at all, expenditures for these purposes will be among the most cost-effective and will produce the least strain on the total national economy.

This is true for two reasons. One is that when educational materials are inadequately supplied, educational output per unit of expenditure can be increased much more rapidly by marginal investment in materials than by marginal investment in teaching staff or buildings. This in turn is due to two factors. One is the inherently inexpensive character of educational materials. In the United States, for example, in spite of the extraordinarily liberal supply of textbooks, school library holdings, and auxiliary materials, the expenditure for such items is far less than 2% of the total educational budget. Reliable statistics are not readily available for most developing countries, but the ratio is probably about the same or lower. Hence, the supply of educational materials in a developing country could be doubled or tripled with dramatic consequences for an expenditure that would increase the number of school buildings or teachers by only one or two percent. It is precisely the hardest pressed governments, anxious to achieve some widely visible impact on educational problems with very limited means, that will find investment in school and library books most rewarding.

The second factor that makes investment in materials unusually cost-effective is that it greatly, and inexpensively, enhances the return from much larger prior investments in buildings and teaching staff. In precisely the same way that an expensive machine can be rendered useless by the failure to make comparatively trifling expenditures in lubricating oil or spare parts, a substantial investment in teachers and school buildings can be very unproductive in the absence of essential books and other teaching materials. Moreover, when it is necessary to employ teachers with limited professional training, textbooks can multiply their effectiveness by giving a

framework and basic content for the course and guidance for the teacher. Equally, when the number of teachers is insufficient, and classes are necessarily quite large, an adequate supply of textbooks, especially if they are designed for independent use, can extend the teacher's work to reach otherwise neglected members of the class. In point of fact, even when children are unable to receive formal schooling, with properly designed learning materials and with informal assistance from parents, clergy, or friends, much can be accomplished.

Not only are books and other educational materials highly cost-effective, they can be supplied at least cost to the economy through government purchase and provision, rather than through individual purchase by parents. Both purchasing and distribution would be more efficient for school books. And library purchase would, of course, multiply the availability of books resulting from any given expenditure.

Using library book purchases as a means of distributing books to students and to the general public and as a means of providing a market for books need not involve a commitment to heavy expenditures for staff, buildings, and equipment. In the United States only about one dollar in seven of current library operating budgets goes for the purchase of books and journals. If every dollar spent for books to be circulated through libraries in the developing countries required the expenditure of six more dollars for staff, buildings, and operating expense, the effective use of libraries as a means of book distribution would be prohibitively expensive. But this is not necessary if ingenuity is used. Though professionally staffed and adequately housed and equipped libraries are a goal toward which efforts should be directed and are essential for central research and bibliographic efforts within a country, very simple and inexpensive expedients are possible in reaching small-town, village and rural populations—small collections in shops, post-offices, temples, government offices, etc., supervised by volunteers can accomplish a great deal.

It is quite unrealistic to expect that in any developing economy private purchase of books will by itself result in a wide dissemination of material. Even in the most advanced economies the broad availability of books in general, other than best sellers, to the public in general would be impossible if reliance had to be placed solely on the private purchase of books to achieve this goal. It is precisely in the economies with most limited means that public funding of the market for books is most essential.

However, private purchases of books will need maximum encouragement as well. In particular books for the general public and informational books on agricultural, sanitation, health, simple technology, and other self-help purposes need to be available for easy purchase.

To create effective channels for marketing books is difficult in even the most advanced economies. In developing economies, the marketing of books cannot be developed more rapidly than the general pattern of wholesale and retail selling. Except in larger cities, books will need to be sold in general stores or shops, and book wholesaling will probably have to be a part of the pattern of marketing textiles, drugs, tobacco, or other widely sold commodities. Publishers can encourage and stimulate this process. But in general, retail and wholesale bookselling will be aided by the measures taken by the developing country to improve retail and wholesale distribution generally.

One of the limitations on book distribution generally encountered is the lack of available channels for informing the public or the persons concerned of the publication of new books or of the backlist books available. An early priority should be the initiation, if one does not exist, of a periodical—analagous to though simpler than the *Bookseller* in Great Britain, the *Boersenblatt* in Germany, or *Publishers Weekly* in the United States—as a means of announcing new books to libraries, educators, and booksellers. As a necessarily later step, an annually issued indexed guide to available books in print would be very helpful.

In promoting books to the general public, an extensive use of radio and, where available, television. Publishers will rarely be in a position to produce such programs, but they should be offered by government stations as an educational service.

E. Publishing Management

The most crucial problems in creating an adequate publishing industry in any developing country are in the areas of management and finance.

Developing countries have gifted authors. Many have competent educators. Adequate technical knowledge of printing is widely held or can be acquired relatively easily. Routine editing competencies in such areas as copyediting, proof-reading, and indexing are no great problem.

The crucial need is for management skill that can put these resources together and supplement them to produce a competent over-all publishing program. This includes the ability to discern public needs and interests and to visualize the books needed to serve them; the ability to find authors and guide them; to plan the physical form of books in ways that will make inexpensive but attractive publication possible. Since printing and publishing operations are usually combined in developing countries, it will include also the ability to determine the equipment most efficient for the publisher's particular program, to maintain it properly, and to use it effectively and economically. It will include also the ability to promote, advertise and market books, often devising new methods of bringing them to the attention of purchasers suited to the particular conditions in his country. It will include the ability to work in close professional cooperation with educators, scholars, government agencies, newspapers, and journalists—as well as with authors, printers, and booksellers. And perhaps especially it will include the ability to plan and manage the financial aspects of publishing in order to achieve the most efficient use of limited resources.

This combination of skills, coupled with over-all planning and coordinating ability, is not easy to find for the management of publishing anywhere. Its lack presents a special problem in the smaller developing countries, since there is little or no opportunity for on-the-job training in publishing management in existing well-run publishing enterprises and since the society itself may offer few models or value-structures that would provide paradigms for successful management.

Opportunities for practical learning through observation and actual experience in a functioning and well administered

publishing operation is almost the only way publishing management can be learned. Some training can be given by intensive institutes within the developing country, and these are an important necessity. But, with the exception of countries like Argentina, Brazil, Mexico, and India, in which well-developed publishing industries already exist, training will usually require that some young managers be sent to other countries for on-the-job experience. For obvious reasons it will generally be preferable to have this training take place in a country in which the cultural and economic conditions do not differ too widely from those in the country to which the trainee will return. An aspiring young Honduran publisher might better train in Mexico than in the United States, one from Ceylon better in India than in Great Britain; one from Libya in Egypt rather than Italy or France.

The importance of this sort of training cannot be exaggerated. It is at the center of the problem of foundation and government grants. World Bank loans and local appropriations alike can accomplish little to enlarge and improve publishing if their proceeds are not competently managed.

F. Finance and Working Capital

The remaining major limitations to be discussed are financial—not in terms of funds to buy books or meet operating expenses, but in terms of working capital.

Book-publishing is a capital-hungry industry in all countries. Funds must be laid out months or years ahead to pay advances to authors and meet editorial expenses involved in developing books. Paper must be bought and compositors, printers and binders paid—all before the book is published. Stocks of books must be maintained for months and sometimes for years before they are sold. Even after they are sold by the publisher, weeks and often months may elapse before payment is made. If the publishing enterprise, as will often be the case, has its own printing plant, that equipment too must be financed.

This need for working capital presents a critical problem even in the largest and most economically advanced country, in which a publisher generally speaking needs capital about equal to his total annual revenue, even apart from any investment in printing equipment The problem is more acute in developing countries. As a reflection of general capital shortage, publishing enterprises, like others, are usually undercapitalized to begin with. Collections from retail and wholesale customers are likely to be slower. Particularly is this true when the publisher must depend on exports for a large part of his business, as do Mexican or Argentine publishers selling to other Spanish-American countries or Egyptian or Lebanese publishers selling to other Arab countries.

Further the publisher does not have easy recourse to sources for seasonal or temporary financing. Bank loans are hard to get and are usually at very high interest rates. Meanwhile the inflation typically encountered in developing countries daily diminishes the value of the long accounts receivable the publisher is holding. Critical, continued shortage of working capital is the endemic condition of publishers in developing countries.

This shortage in turn forces many uneconomic publishing practices. Almost no publisher in a developing country, for example, could even consider the investment required to plan and develop a carefully prepared educational series, or to pay advances that would enable an educator to take time from his regular job to write a textbook. Because he cannot finance large printings or adequate inventories, the publisher is usually compelled to make very short-run printings and keep the smallest possible inventories. This substantially raises the unit cost of books, and it means that needed books are often out of stock and may go too quickly out of print when short first printings are exhausted and second printings cannot be afforded.

Finally, it means that the publisher can rarely afford to advertise or promote a book effectively or to maintain a large enough stock to benefit from extensive promotion if he could afford it.

Access to adequate long-term and short-term capital at reasonable interest rates is absolutely essential to efficient publishing or to any expansion of publishing in the developing countries.

G. Copyright

One last limitation or problem for developing-country publishing should be mentioned because it is frequently brought forward, though in practice it does not seem to present difficulties comparable with those already described: That is copyright.

Most developing countries belong to the Berne Union or the Universal Copyright Convention or both. In the case of those achieving their independence since World War II, this represents a continuation of the international arrangements inherited from their former metropolitan countries. Generally speaking, these treaties require that a book can be published, either in the original language or in translation, only with the permission of the original copyright proprietor—either the author or a publisher to whom the author has assigned rights.

Spokesmen for developing countries have sometimes vigorously protested that this permission is often difficult if not impossible to get, and that royalties demanded are often so high as to be prohibitive or at best unduly burdensome. These protests have often been coupled with demands for the revision of the international copyright treaties or for the renunciation of those treaties by the developing countries.

Undoubtedly there have been inconveniences, but the importance of the problem would seem to be much less than the emotion surrounding it would suggest. Much of the difficulty has come from the inexperience of publishers in developing countries and those in developed countries in dealing with each other. Publishers in developing countries have not always understood the usual terms of contracts for translations and overseas editions and have not known to whom to write for permissions. Publishers and authors' agents in developed countries have not known new publishers in developing countries, and their reputation and credit rating may not yet have been established. Sometimes there are language difficulties. All of these factors have undoubtedly resulted in unanswered letters, frustrating delays, and unrealistic royalty proposals.

Difficulties due to inexperience have been considerably alleviated, however. Publishers in both worlds have come to know each other better. Government offices in the developing countries assist publishers seeking rights. In most major

developed countries, publishers' associations or public agencies have established offices to help resolve problems or difficulties in rights negotiations, and UNESCO has established a similar office on a worldwide basis. Applications for rights are now generally handled routinely and reasonably promptly. Rights to translate a work into languages peculiar to the developing countries are usually granted for a token sum, typically about $100 or its equivalent in other currencies.

The situation, of course, is somewhat different in the case of requests for permission to reproduce a work in, or translate it into, one of the world languages, such as English, French, or Spanish. A Peruvian publisher, for example, may request the right to translate into Spanish and publish an American book for which the Spanish-language rights already have been or may be conveyed to a Spanish or Mexican publisher for a significant sum. Or an Indian publisher may seek to bring out an inexpensive local edition of a British or American book that has already been or may be published in an inexpensive paperback or international students' edition available in India.

In such cases the rights simply may not be available, or if they are will obviously command a higher price commensurate with the larger market available to an edition in a world language. But clearly it is in no one's interest for a developing country to expend its limited resources in retranslation or bringing out local editions of the same work. This simply increases the cost to everyone. The interest of the developing country as well as of the developed will be served by importing translated and inexpensive editions when available and using the developing country's limited resources to publish books otherwise unavailable to its citizens in appropriate language or format.

The one situation in which a real problem, though rarely an important one, may arise relates to the practice of assigning British Commonwealth rights as a unit. This may result, for example, in a situation in which a British publisher holds exclusive English-language rights to an American book throughout the British Commonwealth. If the American publisher of the work brings out an inexpensive paperbound edition, and the British publisher does not, India, for example, might find itself unable either to import the American inexpensive edition or to gain permission to publish one of its own. In such a situation, however, ways can almost always be found to accommodate the developing country's needs.

To guarantee that developing countries would not be barred from access to materials they may need, however, revisions of both the Berne Union and the Universal Copyright Convention were agreed on in 1971 and are now in process of ratification. While requiring the payment of royalties at normal rates, the treaty revision would permit the governments of developing countries to issue compulsory licenses to permit the local publication of works not made available in that country after a reasonable number of years in the local language or in an inexpensive edition.

Total payments for translation and publication rights are a tiny part of the cost of publication and represent no significant financial or foreign exchange problem comparable, for example, to that of securing paper.

V. POLICY RECOMMENDATIONS

The foregoing analysis of goals, obstacles, and resources is necessarily brief and necessarily qualitative rather than quantitative. How many books, how much paper, how big a training program, how much working capital are all determinations that must be made country by country, in the light of each nation's goals, resources, and needs, its demographic and educational facts, and the level and pace of its economic development.

Nevertheless, the analysis may perhaps serve as the basis for suggesting some policy guidelines for consideration by developing countries, by such sources of funding as the aid programs of developed countries and of such international organizations as the World Bank and UNESCO, and by the publishing industries of developed countries.

A. Basic Considerations

1. Grants or assistance programs in the field of publishing offered by foundations, international organizations, or national agencies like AID ought to be comprehensive in character, based on an understanding of the range of the host country's needs for published materials and a clear plan for meeting them. Though expensive surveys to reestablish reasonably well-known data are generally wasteful, an overview does need to exist in the minds of planners; and each grant or assistance measure should have a place in the pattern. It may be useless, for example, to make loans or grants for the purchase of printing equipment if they are not accompanied by training programs for printers and editors. Funding the purchase of paper for an elementary school textbook program will need to be tied to careful planning with educational authorities as to the content of the series to be produced. Examples could be multiplied indefinitely—the point is that developing a publishing capacity is a complex, interrelated undertaking; an activity at one point in this complex may be unrewarding unless planned in the light of the whole.

2. Almost no assistance grant or activity is likely to be successful unless the host country can rely on its uninterrupted continuance over a period of years. One-shot grants (to buy printing equipment) are by themselves likely to be useful only to an already reasonably well established and continuing publishing enterprise. The object of any assistance program in this area is to nourish on-going, self-sustaining activities. This takes time. To plan, create, and publish one elementary school series may take three to five years. To train a staff and habituate them to working together may take as long. Stop-and-go thrusts may be worse than useless.

3. Even a comprehensive and continuing assistance program will be unrewarding unless it is based on the full cooperation and determined effort of the host government. Assistance activities should not be dissipated among developing nations generally, but concentrated in those relatively few nations in which the host government's commitment offers hope of success. Some of the things a host government needs to do are pointed out in guidelines 4-10 below.

B. Guidelines for Developing Countries

4. The first need for the host or recipient government is

to form a clear idea of the priorities and quantities of its needs for published materials, the relative emphases of varying levels of education and of technical training and of books for general use, and the approximate qualities and anticipated sources. These figures need not and should not be based on further time-consuming surveys. They can be rough and approximate; but they should provide a realistic challenge in terms of available resources, and the publishing goals they represent should be closely coordinated with the nation's educational and economic development goals.

5. Tariffs and import and foreign exchange controls should be used carefully to encourage domestic book production where that is the planned goal, and not to discourage the import of markets whose importation is desirable. For example, the tariff may be usefully employed on a pinpointed means of giving protection to a local paper industry against the import of paper competitive with that actually produced in the country. But a *general* tariff on paper may sharply increase the cost of book papers and hence of books, even though no or very little book paper may be produced within the country. This simply forces up the price of school books to poor parents without meaningful protection to local paper producers. Similarly, restrictions or duties on the importation of printing equipment increase costs without protecting a local industry.

Imported books are never really competitive with locally produced books in developing countries in the sense of driving the local industry from the market. The local need will always exceed the combined capacity of local production and imports. Imports simply help to meet the total need, freeing local resources to meet needs that cannot be met by imports. A developing country acutely short of foreign exchange may have to bar or limit imports, including imports of books, that do not contribute to its development. But it is counterproductive to use a tariff to make more costly the import of books that contribute to its development. Duties should certainly be removed from educational, technical, medical, scientific, and cultural books. Incidentally, the total hard-currency drainage will be relatively small, and the cost much less than the local production of advanced and of many intermediate books.

6. Taxation should avoid levies specifically burdensome to books. An example is the heavy tax, up to 50%, on royalty payments transmitted abroad, levied in some developing countries. Since foreign authors and publishers are interested only in net receipts, this doubles the burden of copyright payments contributed by developing countries.

7. Tax and investment regulations should encourage foreign entry into publishing and subsidiary or joint-venture companies. Local publishers will not suffer: there is work enough for all. And besides producing and distributing needed materials, the new companies can serve as examples for training.

8. Ministries of education need to commit themselves to the development and selection of educational materials relevant to their national needs, examining foreign models and engaging in research and testing activities. The resulting criteria, specifications, and model texts should be made available to interested publishers.

9. Teacher training programs should emphasize the effective use of educational material. This is especially important where traditional methods of instruction have been oral and have not involved the use of books. Minimum requirements for educational materials should be written into national regulations.

10. For reasons specified earlier, the real test of national commitment is the allocation of public funds to the purchase of school books and books for simple libraries. This, more than any other factor, will determine success or failure. The arguments previously set forth need not be repeated, but this will be the cheapest and most cost-effective means simultaneously to improve the quality of education and to provide a base market that will sustain the development of a publishing capacity. Coupled with this should be a willingness to provide limited space for the housing of simple local library collections in schools, post-offices, police stations, or other public facilities when no better arrangements are possible.

C. Guidelines for Assisting Agencies

11. If the tests of comprehensiveness, continuance, and full local cooperation are met, the best *form* of outside assistance will be the maintenance of a local Publishing Development Center in the developing country. Such a Center might be sponsored by UNESCO or a national agency like AID, or a foundation. It should be able to call on foreign experts, but insofar as possible it should be staffed by citizens of the host country. It should be independent of local political control, but should have an advisory committee through which it can maintain a close association with the nation's educational system and leaders, its scholarly community, its economic development officials, and with the publishing industry. It should be a continuing organization, whose program is planned to stretch over an indefinite number of years. The Franklin Book Program's offices provide a partial model.

The functions of such a Center would, of course, vary with the needs and resources of the country in which it operates. But one important part of its job should be to have ready to offer or procure from abroad technical and professional advice. This will range from advising a printer on maintenance and repair of a press up to working with the ministry of education, bringing in foreign advisers as required, in planning the materials to support a new elementary school program in science.

A second major function will be planning and conducting training programs. Again this may range from simple courses in printing skills, through seminars in the editing of educational materials, up to the administration of scholarships for foreign study and training in the publishing field, and inviting foreign experts to conduct special lectures and programs.

A third function would be to help devise and carry out programs of publicity to encourage literacy and the use of books.

A fourth would be to negotiate for and procure rights for the adaptation, translation and reproduction of books on behalf of local publishers and to assist and advise local publishers in conducting such negotiations.

Whenever it can be funded, a fifth and *most important* function would be to administer a revolving fund for low-cost

short-term, working capital loans to local publishers. This would require a one-time loan from the World Bank or a similar agency, but if the fund be prudently administered, even a very low interest rate by local standards should more than cover bad-debt losses and leave the fund intact or growing. Few measures would do more to liberate local publishers seeking to improve their equipment, enlarge their lists, increase the size of their printings, encourage their bookstore customers with reasonable credit, and increase their advertising and promotion efforts. Such an infusion of low-cost short-term capital would be like a gentle rain producing a remarkable flowering.

It would be doubly effective since it would also give the Center a powerful lever to use in encouraging good publishing practices. Efficient planning, equipment maintenance, editing and marketing practices, and concentration on materials of developmental value could be conditions of loans.

Just as funding of the purchase of school and library books is the most important single contribution the developing country can make to strengthening a publishing capacity, such a revolving working-capital fund is the most important contribution an assisting agency can make.

12. A very special role exists for international agencies and especially UNESCO. Such agencies will, of course, play a major role in working with individual developing countries, but, in addition, they have a special responsibility for the very important regional and multinational aspects of publishing development. There are several such aspects that require attention.

a. The educational problems of countries of the same language and similar cultures at about the same level of economic development are so similar that joint development of educational materials will be rewarding—for example in Anglophone and Francophone sub-Saharan Africa or in Central America.

b. Only the largest of the developing countries provide a big enough market for the most efficient employment of modern very high-speed large-capacity web fed offset presses which provide the lowest production cost. The development of such centers can help to serve a whole region.

c. An offset reproduction of a book can hardly be efficiently published in an edition of fewer than 2,500 copies, a translated edition, requiring new composition as well as translation, can hardly be done efficiently in fewer than 5,000 copies. Smaller developing countries can provide markets of this size only for elementary materials. Even the largest developing countries cannot do so for higher level college and university materials. Needs of the developing countries, as previously pointed out, can be efficiently served only if single editions of higher level materials can serve a broad multinational market. To fragment the Spanish-language market for books in medicine or engineering or advanced calculus by separate editions of the same book in two or more Latin American countries would doom the service to the entire region—similarly with the Asian and African market for English-language scientific and technical materials, or the North African and Middle Eastern market for works in Arabic. To preserve the unity of these regional markets is of crucial importance.

d. To preserve the unity of regional or even world-wide language markets, UNESCO and other international organizations can help by encouraging regional cooperation in planning the curricula and material needs of higher education.

e. An important function will also be to maintain adequate standards of international copyright so that, among other purposes, a developing country like Mexico or India can be protected in producing higher level materials in editions large enough to serve other countries in their regions.

f. A special need in developing regional programs is facilitating low-cost international transportation. There are already preferential book postal rates; but the possibility of further reductions for educational materials going to developing countries should be explored. Among a number of developing countries where rail and sea transportation is impractical or inadequate (as between Argentina and Chile, or among many of the African republics) air transportation is the only practical mode of shipment. Yet normal air freight rates are prohibitive. Exploration of low "when space available" rates or charter rates for air shipments of educational materials to or among developing countries would be important.

D. Guidelines for Publishing Industries in Advanced Countries

13. Finally, we can turn to the possibilities for the publishing industries of developed countries, particularly of those, like France, Great Britain, Spain, and the United States, whose languages are widely used in the developing countries. There are several ways in which they can be helpful in meeting the needs of developing countries:

a. By promptly and on generous terms granting permissions to developing countries to translate or reproduce works under copyright, except where such permissions would fragment the market for an edition, to the injury of the developing countries themselves.

b. By publishing, preferably in one of the developing countries, inexpensive international editions of basic college texts and scientific and medical works and marketing them vigorously throughout the developing world.

c. When practical, by providing experts on request for technical assistance.

d. By establishing subsidiary companies in the developing countries and through them investing funds in local publishing. It is important, however, that such subsidiaries be staffed by local nationals, be fully integrated into the local publishing industry, and become part of the host country's resources for meeting its need for published materials. It is also desirable that there be local participation in ownership as well as staffing and management.

The publishing industries of developed countries need not fear that such assistance will deprive them of markets. On the contrary, the more rapidly the publishing industries of the developing countries mature, with good bookstores, libraries, and school textbook systems, the better markets those

countries will be for books from the developed countries.

VI. Summary

The provision of an adequate flow of printed materials is one essential to the achievement of a modern society and economy. Though to achieve the quantitative output of print characteristic of highly developed countries will be well beyond the present means of most developing countries, any such country by determination, careful planning and application of resources, and effective use of foreign assistance can maintain its output and dissemination of print at a steadily rising level high enough at all times to stimulate rather than inhibit the development of its economy.

To achieve this goal will require that the developing countries carefully determine goals and priorities, adapt tax and import policies to the needs of book production, enlist and maintain the support of educators, and provide realistic funding. It will require that aid agencies provide continuing and comprehensive technical assistance and especially working capital. It will require regional as well as national planning. And it will require a generous and cooperative attitude on the part of the publishing industries of highly developed countries.

These demands are great, but not impossible. To fail to meet them is simply to close the door to economic and social development. To succeed will be to release a fructifying flow of information and ideas that can permeate and help to transform a whole society.

National Book
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