Folder Title:	Research - Education 1975 / 1977 Correspondence - Volume 1
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Fonds:	Records of the Office of the Chief Economist
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WORLD BANK / INTERNATIONAL FINANCE CORPORATION Res. Education

OFFICE MEMORANDUM

TO: Arthur S. Melmed DATE: October 20, 1977

FROM: Aklilu Habte

SUBJECT: Terms of Reference

1. On or about December 3, 1977 you should proceed to Tel Aviv for a stay of approximately two weeks where you will assist in preparation of a case study of Everyman's University in Israel. Attached is a draft outline to guide organization of the case study; this outline is common to the other case studies being prepared under this project. Your principal responsibilities would be in preparation of sections 1, 2, 4, and 5 of the attached outline; Mr. Dean Jamison of the Bank's staff will also collaborate on these items.

2. In order to make required field visits to learning centers and Everyman's University headquarters you may find it desirable to rent a car, and expenditure for such rental is authorized.

SF/sg

DRAFT
D. Jamison/bb
October 10, 1977

Outline of a Distance Learning Case Study

1. Context (brief)

   1.1 The Country and its Educational System and Needs

   1.2 The Educational Need for the Project

2. The Project

   2.1 History and Origination (including statistics on enrollments, graduates, etc; accreditation)

   2.2 Operations

   - from point of view of student

   - from point of view of management

   2.3 Geographical Outreach

   etc.

3. Resource Use, Costs, and Finance

   3.1 The Cost Tableau - Year-by-year costs broken down by functional category

   3.2 Costs Functions and Average Costs

   3.3 Comparison with Costs of Alternatives

   3.4 Finance (be sure to include under resource use any volunteer time, donated transmission time, etc., and note that these items were financed by these mechanisms)

4. Effectiveness

   (Using whatever information that is available or can be gathered to present information on effectiveness - pedagogical performance, retention, student attitudes, a satisfied government, etc.)

5. Conclusions

Working Title: THE COST OF DISTANCE LEARNING

Edited by: Hilary Perraton, International Extension College

PART ONE: OVERVIEWS

Chapter 1. Introduction and Summary

By: H. Perraton (and others from IEC?)

Chapter 2. Cost Analysis of Distance Learning Systems: A Review of Methods and Evidence

By: D. Jamison and F. Orivel

Chapter 3. Options for Delivery Media

PART TWO: CASE STUDIES

Chapter 4. Adult Primary and Secondary Equivalency: The Madureza Programs in Brazil

By: F. Orivel and J. Oliveiva

Chapter 5. University Education: Everyman's University in Israel

By: A. S. Melmed, Israeli economist, and D. Jamison

Chapter 6. Technical and Professional Education: Teacher Training in Kenya

By: D. Hawkridge , Peter Kinyanjui, John N. Kinyanji, and Francois Orivel

Chapter 7. Secondary Education: The Air/Correspondence High School in Korea

By: Kye Woo Lee , B. Braithewaite, S. Futagami, I. Sung

Research - Education

FORM NO. 27
(11–75)

WORLD BANK / IFC
OUTGOING MESSAGE FORM
(TELEGRAM/CABLE/TELEX)

☒ IBRD
☐ IDA
☐ IFC
☐ ICSID

TO: BRITISH COUNCIL
LONDON

DATE: SEPTEMBER 22, 1977

ORIGINATOR'S EXT.: 5379

COUNTRY: UNITED KINGDOM

CLASS OF SERVICE: TELEX - 916522

CABLE NO. & TEXT:

~~FOR I D I G I CHISMAN I STOP I I PLAN I TO I ARRIVE I LONDON I SUNDAY I OCTOBER I TWO~~

FOR DG CHISMAN STOP EYE PLAN TO ARRIVE LONDON SUNDAY OCTOBER TWO AND STAY TILL TUESDAY MORNING AT GROSVENOR HOUSE STOP PLEASE LEAVE MESSAGE AT HOTEL WHETHER TEN AM MONDAY IS CONVENIENT TO MEET AND DISCUSS THE DIVERSIFIED CURRICULUM RESEARCH PROJECT REGARDS

HADDAD

INTBAFRAD

NOT TO BE TRANSMITTED

REFERENCE:	AUTHORIZED BY *(Name)*: Mats G. Hultin
DRAFTED BY: W. D. Haddad/rcm	DEPARTMENT: Education
CLEARANCES AND COPY DISTRIBUTION:	SIGNATURE *(Of individual authorized to approve)*:
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Research - Education

FORM NO. 27
(11–75)

WORLD BANK / IFC
OUTGOING MESSAGE FORM
(TELEGRAM/CABLE/TELEX)

☒ IBRD
☐ IDA
☐ IFC
☐ ICSID

TO: MAXWELL
DEPUTY DIRECTOR
INTERUNIV
LONDON W1P ODT

COUNTRY: UNITED KINGDOM

DATE: SEPTEMBER 22, 1977

ORIGINATOR'S EXT.: 5308

CLASS OF SERVICE: L T / TTT

CABLE NO. & TEXT:

WORLD BANK INTERESTED IN FINANCING EVALUATION STUDY OF EFFECTIVENESS OF DIVERSIFIED CURRICULUM AT SECONDARY LEVEL IN LDCS STOP WE WOULD APPRECIATE WADI HADDAD OF WORLD BANK TO MEET WITH YOU AND RICHARD GRIFFITHS TO EXPLORE IUC INTEREST AND POSSIBLE INVOLVEMENT IN THE STUDY STOP HADDAD WILL BE IN LONDON OCTOBER TWO AND THREE HE WILL BE ABLE TO VISIT YOU AFTERNOON OCTOBER THREE STOP WILL CALL YOU FOR DEFINITE APPOINTMENT ON ARRIVAL IN LONDON STOP LOOKING FORWARD TO RICHARDS VISIT TO BANK OCTOBER ELEVEN REGARDS

MULUGETA WODAJO

NOT TO BE TRANSMITTED

REFERENCE:	AUTHORIZED BY *(Name)*: Mats G. Hultin
DRAFTED BY: MW MWodajo/rcm	DEPARTMENT: Education
CLEARANCES AND COPY DISTRIBUTION: cc: Mr. Haddad	SIGNATURE *(Of individual authorized to approve)*:
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Sep 22 5 37 PM 1977

COMMUNICATIONS

Research – Education

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Aklilu

DATE: September 2, 1977

FROM: Mats Hultin

SUBJECT: Discussion of Education Research in the Bank

1. As you know education research in the Bank is conducted in several Departments. We have from time to time conducted meetings to discuss research priorities and research projects.

2. I would suggest that it might be appropriate to conduct such a meeting some time after our own discussion in the Education Department of the work program. You may wish to invite the following people for this meeting; John Simmons, Dean Jamison, M. Selowsky, D. Chernichovsky, K. Werdelin, and the staff from the Education Department.

MH/sg

WORLD BANK / INTERNATIONAL FINANCE CORPORATION Research - Education

OFFICE MEMORANDUM

TO: Mr. Aklilu

DATE: August 31, 1977

FROM: Mats Hultin

SUBJECT: Education Panel.

1. You requested me to nominate candidates for the education panel. I helped Duncan to put together a list on April 8, 1976 and I have also seen John Simmons' list of May 20, 1976. My contribution below does not add much more to those lists.

2. The task to find a chairman is most difficult. Father Hesburgh (USA) with his background and interest in development is my first choice (1). You might also consider someone from the Nordic countries. If politics does not prevent it E. Michanek (Sweden) who is often mentioned as a future head for one of the other UN Agencies, is a possibility.

3. My proposals for other panel members include:

(2) M. Kinunda Tanzania (General Educator, Education Planner)

(3) Paulo Dutra, Brazil (Head for Training at Volkswagenwerke, formerly in the Ministry of Education, etc.)

(4) Torsten Husén or Neville Postlethwaite (Professor of Education, Hamburg) I have some preference for Postlethwaite which I can explain. Both are up-to-date Education Researchers.

(5) Luis Emmerij or R. Jolly. I prefer Emmerij; the Head of ILO employment program and a good Economist.

(6) Adishesia, India or Setyadi, Indonesia, with preference to Adishesia

4. Other possible names or substitutes to the above candidates are:

(1) Erik Williams, Hans Lowbeer
(2) Y.K. Lule, Ki Zerbo
(3) -
(4) Seth Spaulding, Philip Foster, W. Platt
(5) M. Debeauvais, Lord Vaizey, Martin Carnoy.
(6) -

MH/sg

Research - Education

Mr. S. Heyneman August 9, 1977

Mats Hultin

The Influence of Books on Learning

1. I have finally read your research proposal of July 77. I support the proposal and notice that the research would not require field work but use available data at ECIEL, IEA, and others.

2. I would however suggest that the final research proposal be divided into more clearly defined phases particularly underlining to the Research Committee that the project would be extended over two or I assume possibly three fiscal years. This is important as it is, according to my experience easier for the Research Committee to approve of a $75,000 project extended over several years as the project under such circumstances would only tax the annual budget of the Committee with some $30 - $40,000.

MH/sg

Research - Education

Those listed below

April 22, 1977

Orville F. Grimes, Jr., VPD

Panel to Review Research Proposal

1. A panel consisting of Messrs. B. Balassa (Chairman), H. Goris, F. Lethem, M. Wilson, and M. You has been established to review the attached research proposal on Thursday, May 5 at 3 p.m. in Room N231.

Proposal	Staff Responsible
The Economics of Educational Radio	S. Futagami/ D. Jamison

2. As is customary, the panel should seek answers to questions like (a) Are the issued raised by the proposed research of interest to the Bank? and (b) Is the study so designed as to deal meaningfully with these issues? To aid in considering these questions, some informal guidelines for review panels, together with more recent guidelines for preparation and submission of research proposals, are attached.

3. The recommendations of the panel should be sent to me by Tuesday, May 10.

Attachments

Distribution: Messrs. Balassa, Lethem, M. Wilson, You, Miss Goris

cc: Messrs. B. B. King, Hultin, Futagami, Jamison

OFGrimes:gm

Research Education

Mr. V. Dubey, EMN

April 22, 1977

Benjamin B. King, VPD Signed B. B. King

Research Proposal on Educational Construction Standards

It seems, at first glance, that a number of the issues that arise in this proposal are similar in principle to those in two other projects of long standing: labor-capital substitution (670-26) and highway design (670-27). Since Clell Harral manages one and is well acquainted with the other, you might wish to discuss this with him. You are, of course, free to invite him to panel meetings. I have sent him a copy of the proposal.

cc: Messrs. Harral (with proposal)
Hubert
Naimie
Patel
Rees

BBKing:gm

Research - Education

Those listed below

April 22, 1977

Orville F. Grimes, Jr., VPD

Panel to Review Research Proposal

1. A panel consisting of Messrs. E. Lerdau (Chairman), D. Dowsett, G. Pfeffermann, M. Selowsky, and M. Wilson has been established to review the attached research proposal on Friday, April 29 at 3 p.m. in Room B906.

Proposal	Staff Responsible
International Study of Retention of Literacy/Numeracy Skills Among School Leavers	I. Serageldin/ M. Wodajo

2. As is customary, the panel should seek answers to questions like (a) Are the issues raised by the proposed research of interest to the Bank? and (b) Is the study so designed as to deal meaningfully with these issues? To aid in considering these questions, some informal guidelines for review panels, together with more recent guidelines for preparation and submission of research proposals, are attached.

3. An earlier version of this proposal was reviewed in January by a panel whose members included Ms. Dowsett and Mr. Wilson. You will find attached a memorandum (B. de Vries to B. B. King, January 6, 1977) on the outcome of these discussions.

4. The recommendations of the panel should be sent to me by Thursday, May 5.

Attachments

Distribution: Messrs. Lerdau, Pfeffermann, Selowsky, M. Wilson, Ms. Dowsett

cc: Messrs. B. B. King, Hultin, W. Armstrong, Serageldin, Wodajo

OFGrimes:gm

Research - Education

Those listed below

April 21, 1977

Orville F. Grimes, Jr., VPD

Panel to Review Research Proposal

1. A panel consisting of Messrs. V. Dubey (Chairman)*, B. Hubert, A. Naimie, P. Patel, and W. Rees has been established to review the attached research proposal on Tuesday, May 3 at 3 p.m. in Room E725.

Proposal	Staff Responsible
Construction Standards and Methods Appropriate for Simple Basic Education and Adult Training Facilities	D. Lewis

2. As is customary, the panel should seek answers to questions like (a) Are the issues raised by the proposed research of interest to the Bank? and (b) Is the study so designed as to deal meaningfully with these issues? To aid in considering these questions, some informal guidelines for review panels, together with more recent guidelines for the preparation and submission of research proposals, are included. Appended to the proposal you will also find a c.v. of the principal consultant proposed for execution of the study, with a paper of his entitled "Life Cycle Costing."

3. The recommendations of the panel should be sent to me by Monday, May 9.

*To be confirmed April 29.

Attachments

Distribution: Messrs. Dubey, B. Hubert, Naimie, Patel, Rees

cc: Messrs. B. B. King, Hultin, D. Lewis

OFGrimes:gm

Research - Education

Files

April 15, 1977

M. Wodajo MW

Research Proposal on International Studies on Retention of Literacy/Numeracy Skills Among School Leavers

1. A meeting was held on April 11 to consider the concerns expressed by DPS regarding the above research proposal. The meeting was attended by Messrs. Hultin (for part of the meeting), Jallade, Jamison, Werdelin and myself.

2. Participation of adults: Mr. Jamison elaborated on the main concerns expressed in his memorandum of April to Mr. King. He reiterated the importance of including adults in the sample. Mr. Werdelin explained that he agreed in principle that the study would have additional scientific value if adults were included in the sample. He foresaw two difficulties, one "practical" and the other methodological. Regarding the practical use of such a study, he stated that if data were found for adults who left school some years ago and who attended school under different circumstances, the study would have limited influence on educational policy-makers. On the other hand, the study would have greater impact in changing or modifying policy if it focused on recent school leavers. On the methodological side, he explained in certain countries it would be difficult to locate adults who have not had further training after they had dropped out of school.

3. In the subsequent discussion in which Mr. Jamison and others reiterated the importance of including adults in the sample, consensus was reached that even though the major effort will have to be devoted to adolescents, adults form an essential group. If the work during Stage I shows that this is feasible, adult samples will be included in the research design.

4. Availability of qualified consultants: The meeting took note of the importance of identifying qualified consultants as early as possible. It was explained that certain consultants are already being considered although no final selection has been made.

5. Other points: The meeting discussed the other points raised by Mr. Jamison's memorandum. As these were considered relatively "minor" by Mr. Jamison himself, no changes were suggested in the research proposal.

6. It was agreed that Mr. Wodajo would incorporate the changes referred to in paragraph 3, and resubmit the proposal to DPS for their endorsement prior to the April 15 deadline set by the Research Committee. He will also expand the relevant paragraphs that explain Stage I so that pre-testing and pilot study (funds permitting) will be included as expected outputs for the first stage.

Cleared and cc: Messrs. Jallade, Jamison and Werdelin
cc: Messrs. Cole, de Capitani, King, Scearce, Hultin and Serageldin (o/r)

MWodajo/am

Research - Education

April 4, 1977

Mr. Ladislav Cerych
Director
European Cultural Foundation
Institute of Education
c/o Universite de Paris
IX-Dauphine
Place du Marechal de Lattre
de Tassigny
75116 Paris, France

Dear Mr. Cerych:

Further to my letter of March 14, Mr. Wodajo has now had a chance to review your research proposal on staffing standards and staff utilization in selected institutions of higher education in Europe. Mr. Wodajo has advised me that he found the conceptual and technical framework of the proposed study to be useful and well thought out. However, inasmuch as the Bank's lending operation is directed to the developing countries, such a study would have been far more useful in our efforts to develop operational guidelines for Bank lending in this sub-sector if institutions to be studied were selected from the developing countries. Also the proposed budget of $51,400 is well above what we can reasonably allocate in the coming fiscal year to a study in higher education.

In view of the foregoing, I regret to advise you that we will not be in a position to request your Institute to undertake the proposed study. However, if you are positively disposed to accommodate these two questions - choice of institutions and a substantial reduction in the budget - we will certainly be interested to hear from you.

Mr. Wodajo joins me in thanking you and your colleages at the Institute for the interest and initiative you have taken in this matter.

Yours sincerely,

Mats Hultin
Acting Director
Education Department

MW/am

Research - Education

Mr. Mats Hultin

March 28, 1977

Wadi' D. Haddad

Study on the Place and Educational Effects of Experimentation in Science Education.

1. Please find attached a draft of a proposal for a study of the relationship between modes of experimentation in science education and cognitive and noncognitive educational outputs. It is conceivable that this project will be executed within this fiscal year and its results will serve as a background for the study under discussion with the British Council.

2. In addition to my input as a principal investigator, there is a need for a senior consultant in the field of science education. I am enclosing the C.V. of Prof. George Za'rour who is presently Distinguished Visiting Professor at Florida State University, and whom I think is ideal and available for this kind of work.

WHADDAD/sg

Research - Education

Mr. Mats Hultin

March 25, 1977

Jean-Pierre Jallade

Research Program or FY 77 - 78

Research Project Underway

1. Teacher Training and Academic Performance

- Status. Report of first phase will be ready by the end of FY 77.
- Staff Member Responsible. Mr. Hultin
- Main Contractor: University of Stockholm
- Further Work: Second phase planned during FY 78.

2. Basic Education in the Sahalian Countries

- Status. Final report ready by May 1976.
- Staff Member Responsible. Mr. Gilpin
- Main Contractor. Unesco Institute of Education (Hamburg
- Further Work. Second phase contemplated during FY 78

3. Radio for Education and Development

- Status: First report including 14 case-studies available in April 1976 (Final Form).
  Second report on "Radio for Education and Development" available in April 1976 (Draft).
- Staff Member Responsible. Messrs. Hultin, Futagami and Jamison
- Main Contractor. Individual consultants
- Further Work. A second phase is envisaged for FY 78. A research proposal on the "Economics of Education Radio" will be submitted by the Education Department to the Research Committee in May 1976.

Research Projects Contemplated for FY 78 - 79

4. Educational Effects of Class Size and Automatic Promotion

- Status. Draft paper on "The Educational Effects of Class Size" is available.
- Staff Member Responsible. Mr. Haddad
- Main Contractor. No outside contractor.
- Further Work. The study will be completed in FY 77.

5. Staffing Standards in Higher Education

- Status. The proposal is ready. The study could be completed by December 1977.
- Staff Member Responsible. Mr. Wodajo
- Main Contractor. European Institute of Education
- Further Work. The study could be completed by December 1977.

6. Curriculum Development

Status: To be started
Staff Member Responsible. Mr. Haddad
Main Contractor. Undecided
Further Work. The study may possibly start during FY 77 or is expected to be carried out during FY 78.

7. Construction Standards and Methods for Simple Basic Education Facilities

Status: A research proposal is being prepared for the Research Committee
Staff Member Responsible. Mr. Lewis
Main Contractor. Undecided
Further Work. The study is expected to be carried out during FY 78 and part of FY 79.

8. Retention of Literacy Study

Status: A research proposal to be submitted to the Research Committee has been proposed by Mr. Serageldin (TAS Division, EMENA).
Staff Member Responsible. Messrs. Hultin and Serageldin
Main Contractor. Undecided
Further Work. The first stage of the study is expected to last six months followed by a second stage of 12 months.

9. Manpower/Employment Study

Status. Work has not started as yet. Financing will be sought from the Research Committee.
Staff Member Responsible. Mr. Zymelman
Main Contractor. Undecided
Further Work. The study will be carried out during FY 78

JPJ/nm

cc: Messrs. T. King, D. Jamison
DS Ballantine, R. Gomez

Research - Education

Messrs. Mats Hultin and Timothy King March 11, 1977

Dean T. Jamison DTJ and Shigenari Futagami

Proposed Research Committee Submission for Study of
"Nontraditional Educational Delivery Systems"

1. In memos of October 4 and December 13, 1976, we outlined a potential study of the economics of distance learning systems. In light of comments we received on those memos, and subsequent conversations between ourselves, we propose to modify the proposal to the Research Committee in two significant ways. First, we propose to distinguish more clearly between longer-term basic research oriented aspects of the study and shorter-term policy oriented research. (Though we should stress that even the more basic research would, when completed, have important policy implications.) Second, we propose to include a study of the effectiveness of in-school instructional radio in Nicaragua; hence the broadening of the title to "Nontraditional Educational Delivery Systems". This broadening of scope makes the proposed study a very natural sequel to the Education Department Funded Study of radio for education; the proposed study will simply be examining in much more detail the most attractive of the uses for radio identified in the earlier effort.

2. The study distance learning component of the study would have three parts - the first two of a short-term character, the third longer-term. As one of the most critical missing items of information about distance learning projects concerns their costs, the first part of the study would consist of cost analyses of three or four projects; possible projects for study are in Botswana, Kenya, Mauritius, Israel, Korea, and the Dominican Republic. The second part of the study would consist of descriptive case studies of the history, administration, operations, and available effectiveness information of the projects. The first would be Everyman University in Israel, which is of interest because of the extreme cost-effectiveness consciousness with which it has been designed. The second would be of uses of educational technology in the People's Republic of China, about which little information is now available in the West. The third part of the distance learning component of the study would be a long-term, careful evaluation of Kenya's distance learning system for teacher education. The Kenyan project director has agreed to such a study, assuming Kenyan involvement in it.

3. The part of the study dealing with in-school use of radio would focus on the AID-funded Radio Mathematics Project in Nicaragua. This project has resulted in dramatic achievement gains in mathematics for first grade children, and preliminary analyses by Jamison suggest that the project reduces repetition rates. The focus of our research on the project would be to undertake a detailed statistical examination of the extent to which the project does, in fact, affect repetition and dropout rates. The results would be highly policy relevant since inclusion of projects of this sort within Bank education loans is feasible and has indeed, already been discussed with respect to the Philippines.

4. As recent developments in information storage and retrieval technology (e.g. video disc and video tape recorders) have had marked effect on the cost of providing decentralized instruction, one component of our proposed study would be an effort to identify the potential impact of technical change on appropriate choice of delivery systems for distance learning and in-school instruction.

5. We would plan to undertake the above research in informal collaboration with a UNESCO/USAID effort to study economics of educational technology. During the coming year that effort will be producing a number of technical monographs and manuals for managers; in June, 1978, UNESCO plans to present the results at a major international conference in Dijon. Both UNESCO and USAID would welcome our involvement, and we would benefit from their related ongoing studies. A small amount of travel money would be required to allow our attendance at steering committee meetings.

6. We expect the distance learning studies would cost about $35,000; the radio mathematics study about $10,000; and involvement with UNESCO/USAID about $3,000. That total is $48,000 plus five or six months of staff time.

7. If preparation of a proposal along the above lines, to be submitted by the Education Department, meets your approval we will have a draft available for review by May 1.

cc: Messrs. Ballantine, Jallade, Zymelman, Chittleburgh, Gilpin, Haddad, Stoutjesdijk, Simmons.

JAMISON.FUTAGAMI/sg.

Yellow Research Education

OFFICE MEMORANDUM

TO: Mr. Bela Balassa

DATE: March 4, 1977

FROM: Jean-Pierre Jallade

SUBJECT: The Measurement of the Social Returns to Education Under Minimum Wage Legislation and Labor Market Segmentation - Comments

1. I apologize for replying so late to your request for comments on Mr. Pinera's paper but I was away on mission when your memo reached my desk.

2. I must say that I am slightly confused by the first six pages of the paper which provides the rationale for the remaining parts. In my view, the use of rates of return to assess the economic value of education has always been faced with two distinctive problems. The first one has to do with the extent to which education is responsible for observed earning differentials. This is what the so-called Alpha co-efficient is about. The second problem is whether or not wage differentials ascribed to education reflect the true contribution of education to the economy. I do not think that the paper is clear enough on this distinction.

3. As far as the question of exact value of Alpha, Mr. Psacharopoulos' conclusion about the overall value equal to 0.77 is, in my view, the beginning but not the end of the story. The problem with this conclusion is that it is an average for the whole economy and that the only interesting thing from the policy point of view is the various values that Alpha takes for different population groups such as, for instance, low achievers versus high achievers, men versus women, farmers versus urban settlers, etc. It seems to me that a fruitful avenue for research is precisely to go beyond the overall average and figure out what is happening for different socio-economic groups.

4. As far as the question of labor market segmentation, I feel that Mr. Pinera's definition of segmentation is perhaps too broad. According to him, a labor market gets segmented whenever it does not operate according to traditional neo-classical theory - for instance, because of the presence of minimum wage legislation. This is, of course, true but this is hardly enough for policy purposes. As many labor economists put it now, segmentation means more than that. Among other things, it means lack of mobility (all kinds of mobility - especially occupational) between various segments of society. If that hypothesis is true, then the next question is to figure out the various contributions of education to the economy for each group rather than speculating about overall, aggregate value of such contributions. This approach fits nicely with what I have argued for in the case of the Alpha co-efficient to the extent that if focuses the attention on the disaggregate analysis and provide a first step towards an assessment of the impact of education on income distribution.

5. In an earlier version of this paper, which was discussed during a seminar at the Development Research Center, Mr. Pinera had included some empirical data about Chile to illustrate sections 3 to 5. I very much miss this empirical analysis in the present version of the paper as it would certainly help the average reader to understand the equations.

6. I am afraid that the conclusions set out in section 6 do not match the expectations raised during the reading of the paper. They left me wondering whether all these sophisticated equations were not some kind of academic "window-dressing". But I am ready to change my mind on this, once the empirical data mentioned above is provided with.

JPJ/nm

cc: Messrs. Hultin
Zymelman

Research - Education

Research Committee Members

January 12, 1977

Orville F. Grimes, Jr., VPD

Proposal for "International Study of Retention of Literacy/Numeracy Skills among School Leavers"

After the meeting on January 3 to review this proposal, it was decided that revisions along the lines suggested by the panel would be made as soon as possible after Mr. Serageldin's return from mission about February 1. The Committee would be asked to consider a revised proposal very shortly after that. Whatever reactions Committee members might have in the meantime, oral or written, should be communicated to Mr. Mats Hultin.

Distribution

Messrs. Chenery, Avramovic, Balassa, de Vries, Dubey, Jaycox, B. King, Kuczynski, Lerdau, Little, Picciotto, van der Tak, Vergin
Hultin, Serageldin o/r

OFGrimes:gm

Research Education

Those listed below

December 22, 1976

Orville F. Grimes, Jr., VPD

Panel to Review Research Proposal

1. A panel consisting of Messrs. B. de Vries (Chairman), D. Mazumdar, J. Simmons, M. Wilson, and Ms. D. Dowsett has been established to review the attached research proposal on Monday, January 3, 1977 at 3 p.m. in Room C910.

Proposal	Staff Responsible
International Study of Retention of Literacy/Numeracy Skills among School Leavers	M. Hultin/ I. Serageldin

2. As is customary, the panel should seek answers to questions like (a) Are the issues raised by the proposed research of interest to the Bank? and (b) Is the study so designed as to deal meaningfully with these issues? To aid in considering these questions, some informal guidelines for review panels are attached.

3. The recommendations of the panel should be sent to me by Thursday, January 6, 1977.

Attachments

Distribution : Messrs. de Vries, Mazumdar, Simmons, M. Wilson, Ms. Dowsett
Messrs. Hultin, Serageldin, B. King
cc (w/o att.): Messrs. Ballantine, Knox, W. Armstrong, T. King

OFGrimes:gm

WORLD BANK RESEARCH PROGRAM

Project Proposal

Date of Submission: December 15, 1976

SECTION A

PART I. PROJECT IDENTIFICATION

1. Title: International Study of Retention of Literacy/Numeracy Skills among School Leavers.

2. Department Responsible: (Joint Respon	3. Staff Member Responsible:
Education CPS	---------- Mr. Mats Hultin
EMENA Projects (TASS Division	---------- Mr. Ismail Serageldin
4. Total Cost (U.S. $):	5. Total Staff Time (manmonths)
$ 275,000.-	Stage I 2 / Stage II 7 / Professional: 9 / Special Services: Stage I 1 / Stage II 10 / 11

PART II. COORDINATION AND APPROVAL

1. Interdepartmental Coordination:

Department	Name & Signature	Support Project	Do not Support Project-Comments Submitted
a. DPS, Population & Human Resources Div.	Mr. T. King	✓	
b.			
c.			
d.			

2. Approval:

W. J. Armstrong, TASS Division
Division Chief

D. S. Ballantine, Director, Education CPS

A. D. Knox, Director, EMENA Projects Department
Department Director

NOTE: Please consult instructions issued August 1973 for completion of this Form and preparation of project narrative.

Do not fill

Date received:

Review Panel:

PART III. IMPLEMENTATION

1. Date Work to Start:
   Stage I ---------- 02/01/77
   Stage II ---------- 05/01/78

2. Date First Draft Expected:
   Stage I ---------- 04/01/77
   Stage II ---------- 05/01/78

3. Final Report Due: Stage I 05/01/77
   Stage II 09/01/78

4. Implementation Method:

		Names: Stage I	Stage II
a. Bank Staff	X	M. Hultin	I. Serageldin
b. Individual Consultants	X	t.b.i. 1/	t.b.i.
c. LDC Contractor/Institute	X		t.b.i.
d. Developed Country Contractor/Institute			
e. Seminar			

1/ t.b.i. = to be identified.

5. Reports Expected in the First Year:

Stage I: 1. Review of the literature (03/15/77).
2. Proposed Case Study Format (04/15/77)

Stage II: 1. Testing Instrument (09/15/77).
2. Analysis of Sample (3/15/78)
3. Preliminary Findings (7/15/78).

PART IV. FINANCIAL AND STAFF DATA

1. Dollar Costs (Estimated Disbursements by Fiscal Year):

(In thousands of Dollars)	FY 77	FY 78	FY 79	After FY	Totals	Other	Total
a. Contractual	14	125.3	25	--	164.3		
b. Travel	3	33	6	--	42		
c. Data Processing	-	14	3	--	17		
Total	17	172.3	34	--	223.3	51.7	275.0

1/ Detailed Budget in Descriptive part gives costs not fitted in these categories such as contingencies and printing costs which would be primary in FY78 and Fy79.

2. Staff Requirements (manmonths):
[excludes contractual staff].

	FY 77	FY 78	FY 79	FY --	Total
a. Professional	3	4	2	--	9
b. Special Services	-	-	-	--	-
Total	3	4	2	--	9

Section B: Project Description

Summary Statement

I. Objectives and Strategy

1. The purpose of this study is to test a hypothesis that has governed much of the present educational thinking in LDC's, namely that: (i) There exists a basic threshold level, beyond which school leavers will retain their basic Literacy skills almost unimpaired; and (ii) that this threshold is at the completion of fourth grade of primary education.

2. Exploring this subject with respect to various cultural, socio-economic and pedagogical variables would add substantially to our knowledge of the obstacles to achieving literacy in LDC's and would have major policy implications in many areas, including: (i) the structure and format of basic education; (ii) the design of primary education curricula; (iii) the application/administration of automatic promotion policy; (iv) the desirable length of compulsory education; (v) the design of Adult education/training programs; and (vi) the design of programs that affect socio-economic variables that have a bearing on the retention of skills among school leavers.

3. To our knowledge, no such study exists, nor is one being undertaken at present. Nevertheless, it is proposed to devote the first stage of this study to a review of the literature and to the elaboration of a detailed study outline.

II. Organizational Aspects:

4. The study should comprise three stages: [Diagram 1]

(i) Stage I: Review of the literature and elaboration of a suitable format for each case study (Approximately 4 - 6 months);

(ii) Stage II: A series of in-depth country studies, appropriately selected from various regions of the world, each following the detailed format worked out in Stage I (Approximately 12 - 18 months for each case study); and

(iii) Stage III: An international comparative analysis drawing upon the results of Stage II and, hopefully, arriving at some meaningful, generally applicable conclusions and/or observations (About 8 months).

5. The scale of the proposed study is such that only an international cooperative effort could undertake its execution. But the study format lends itself to the individualization of the bulk of the work (Stage II) thus minimizing, if not completely avoiding, the major delays usually experienced in international cooperative ventures where many parties are involved. The first step, therefore, would be to obtain expressions of interest from various funding and executing agencies[1/]. A small coordinating group could then be assembled to oversee the execution of Stage I. A plenary meeting of interested parties could review (amend if necessary) and ratify the proposed case study format. The work of Stage II could then be individually executed with minimal coordination. To execute Stage III, a small coordinating group could be assembled, possibly the same group which executed Stage I.

1/ Already, informal contacts with some funding institutions indicate a possibility of an excellent response to a Bank initiative.

6. The Bank should take the lead in this study. This can be ensured by executing Stage I and the first case study of Stage II. This proposal covers Stage I and one case study of Stage II.

7. The proposed case study is Egypt. There will be no difficulty in obtaining the full cooperation of the Egyptian authorities. It is proposed to have the bulk of the work executed by Egyptians taken from various institutions in the country.

8. The Education Department (CPS) and the TASS Division of the EMENA Projects Department would be jointly responsible for the execution of this study. The former would have primary responsibility for Stage I under the general direction of Mr. M. Hultin. The latter would have primary responsibility for Stage II under the general supervision of Mr. I. Serageldin.

III. Technical Aspects:

9. Briefly, the case study will utilize a cross-sectional design.[1/] It would start by developing an adequate testing instrument that could span the expected performance of school leavers from grades three to seven. This instrument should enable researchers to assess performance in each type of skill (reading, vocabulary, spelling, arithmetic skills, etc.). An appropriate sample of school leavers would then be selected, tested, and also interviewed to obtain suitable biographical data to enable the analysis to include/control important socio-economic variables. If an appropriate (i.e. non-culturally-biased) intelligence test is available, it should also be administered to the selected student.

10. By identifying school leavers by length of time out of school as well as highest level of educational attainment (grade completed) and controlling for selected socio-economic and environmental variables, the results of the analysis could be graphed in a pattern of curves as shown in the attached diagram 2. These could be executed for specific skills as well as for an aggregate index of performance. The selection of one or more "acceptable level of Literacy" would also show different policy implications.

1/ However, this does not preclude pursuing the tested persons over time to obtain an adequate longitudonal Study over the next few years.

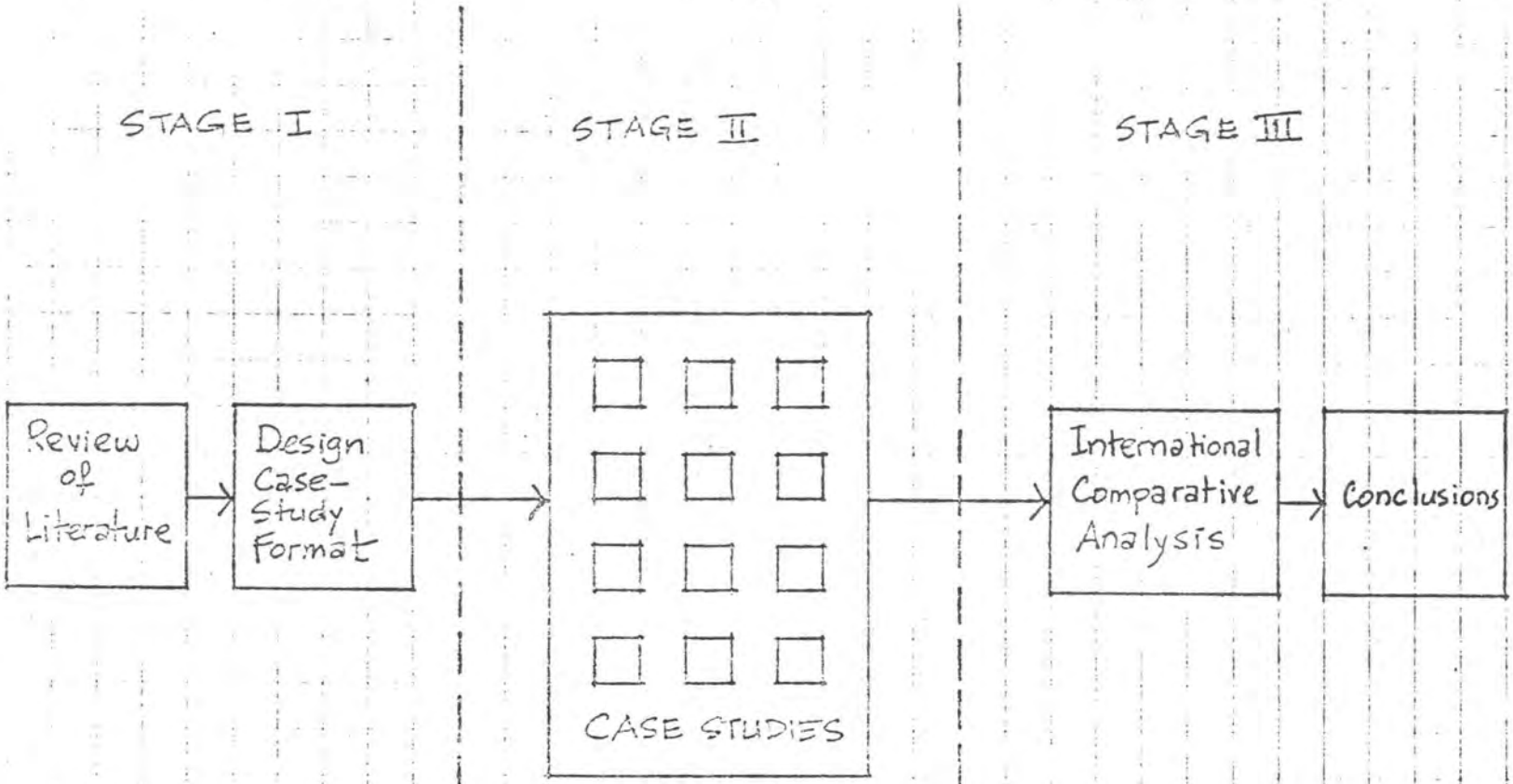

DIAGRAM 1 : PROPOSED FORMAT OF STUDY

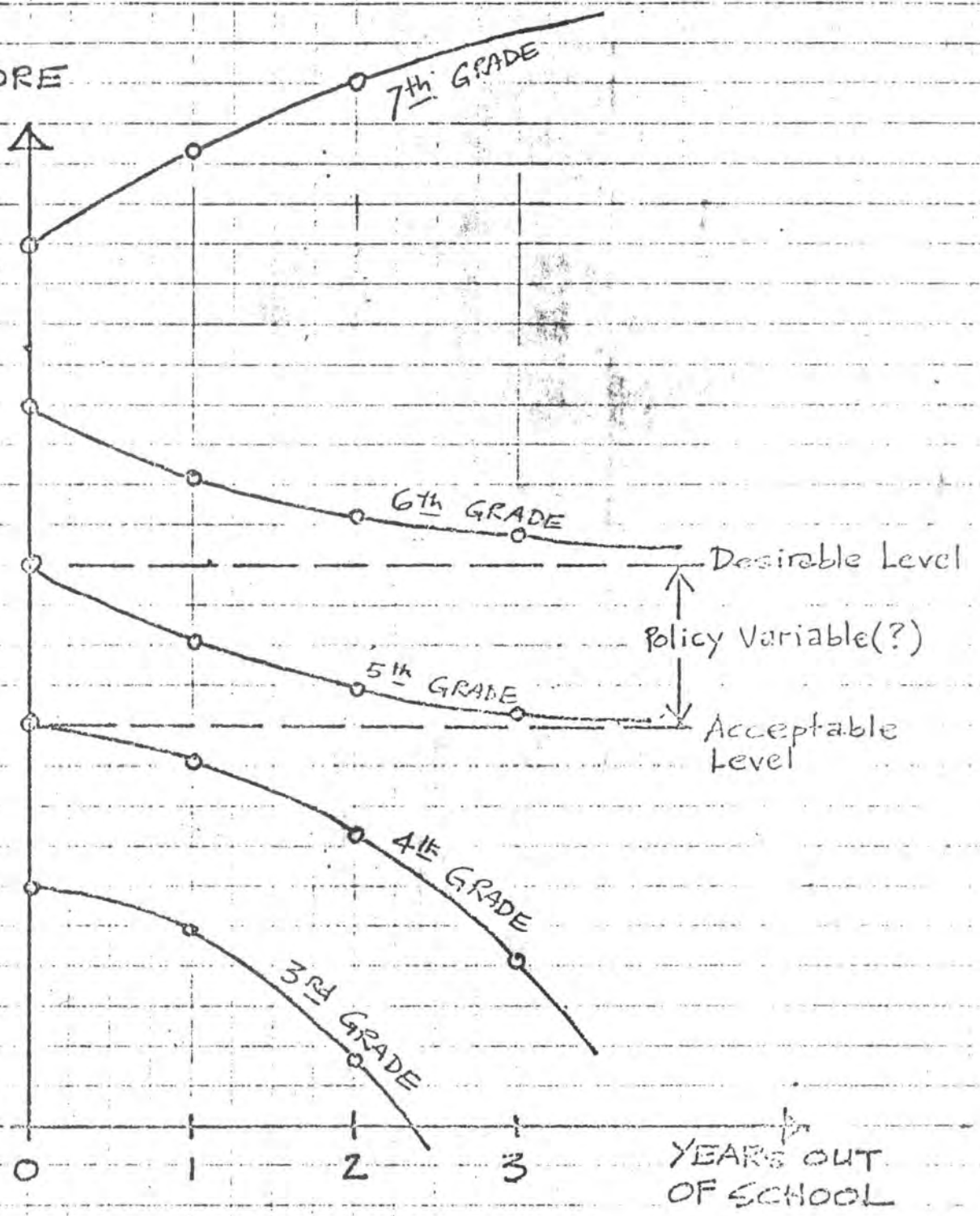

DIAGRAM 2 – HYPOTHETICAL CURVES PLOTTING TEST RESULTS AGAINST YEARS OUT OF SCHOOL.

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Duncan S. Ballantine, Director, Education CPS DATE: December 15, 1976
(through Mr. W.J. Armstrong, Chief, TASS Division, EMENA Projects)
FROM: Ismail Serageldin, TASS Division, EMENA Projects

SUBJECT: A Proposal for an International Study of Retention of Basic Literacy/Numeracy Skills Among School Leavers

I. GENERAL OBJECTIVES

1. Background: The genesis of the idea for this Study was the Bank's work on Literacy in Saudi Arabia, where we tried, unsuccessfully, to locate school leavers in sufficient numbers to test for retention of Literacy[1/] skills. We could not develop a statistically significant sample, and we then realized that it would still be eminently desirable to execute such a study elsewhere. Further discussions highlighted the absence of any significant work in this area in any less developed country and underscored the importance of an international study of the subject.

2. The Problem: Much of the present educational thinking in the less developed countries is governed by an accepted, though untested, hypothesis that:

(i) There exists a basic threshold level, beyond which school leavers will retain their basic Literacy skills almost unimpaired; and

(ii) that this threshold is at the completion of fourth grade of primary education.

3. There is partial evidence at present[2/] that at least raises serious doubts as to the accuracy of this dual hypothesis, but to our knowledge, there does not exist, at present any major study that settles the issue.

1/ Henceforth, references to Literacy will intend numeracy as well.

2/ In his paper "Retention of Cognitive Skills Acquired in Primary Education" (Comparative Education Review, 20:1, Feb. 76), Simmons identifies six studies as the basic literature on retention:

1- A.L. Tibawi, Arab Education in Mandatory Palestine: A Study of Three Decades of British Administration (London: Luzac and Company Ltd., 1956).
2- D.R. Gadgil, "Report of Investigation into the Problem of Lapse into Illiteracy in the Satara District," in Primary Education in Satara District Reports of Two Investigations (Poona: Gokhale Institute of Politics and Economics, 1955).
3- Greenleigh Associates, Inc., Participants in the Field Test of Four Adult Basic Education Systems: Follow-up Study (New York: Mimeco, Jan. '68).
4- G.A. Smith, "A Micro-Study of Rural Illiteracy in the Tribal Trust Lands of Rhodesia, Evaluation of Chiduku Literacy Project" (Salisbury University College of Rhodesia, Institute of Adult Education, July, 1970).
5- J. M. Kapoor and Prodipto Roy, Retention of Literacy (New Delhi: Council for social Development, 1970).
6- John Simmons and James Allman, "Education des adultes et niveau d'alphabetisation dans un village Tunisien" Revue Tunisienne de Sciences Sociales, Mai, 1973.

4. The Benefits: A serious effort to test this hypothesis would have major policy implications in many areas including:

(i) the length, structure and format of basic education;

(ii) the design of primary education curricula;

(iii) the application/administration of automatic promotion policy;

(iv) the desirable length of compulsory education;

(v) the design of Adult education/training programs; and

(vi) the design of programs that affect socio-economic variables that have a bearing on the retention of skills among school leavers.

5. To our knowledge, no such study exists, nor is one being undertaken at present. Nevertheless, it is proposed to devote the first stage of this study to a review of the literature and to the elaboration of a detailed study outline.

II. ORGANIZATIONAL ASPECTS

6. The study should comprise three stages [Diagram 1]

(i) Stage I: Review of the literature and elaboration of a suitable format for each case study (Approximately 4-6 months);

(ii) Stage II: A series of in-depth country studies, appropriately selected from various regions of the world, each following the detailed format worked out in Stage I (Approximately 12-18 months for each case study); and

(iii) Stage III: An international comparative analysis drawing upon the results of Stage II and, hopefully, arriving at some meaningful, generally applicable conclusions and/or observations (About 8 months).

7. The scale of the proposed study is such that only an international cooperative effort could undertake its execution. But the study format lends

itself to the individualization of the bulk of the work (Stage II) thus minimizing, if not completely avoiding, the major delays usually experienced in international cooperative ventures where many parties are involved. The first step, therefore, would be to obtain expressions of interest from various funding and executing agencies.1/ A small coordinatory group could then be assembled to oversee the execution of Stage I. A plenary meeting of interested parties could review (amend if necessary) and ratify the proposed case study format. The work of Stage II could then be individually executed with minimal coordination. To execute Stage III, a small coordinatory group could then be assembled, possibly the same group which executed Stage I.

8. The Bank should take the lead in this study. This can be ensured by executing Stage I and the first case study of Stage II. This proposal covers Stage I and one case study of Stage II (Egypt).

9. The Education Department (CPS) and the TASS Division of the EMENA Projects Department would be jointly responsible for the execution of this study. The former would have primary responsibility for Stage I under the general direction of Mr. M. Hultin. The latter would have primary responsibility for Stage II under the general supervision of Mr. I. Serageldin. The following is a brief description of what each Stage involves.

Stage I: Review and Format:

10. A general review of the literature, as well as a review of research work presently underway would serve to eliminate duplication and to start this study on a clearly defined, efficient framework. Conceptual and theoretical considerations, tempered with practicality and realism, would define the proposed common format to be used in the Stage II country case studies.

Stage II: The Case Studies

11. The country case studies should be selected on the basis of cultural, social and economic factors, to allow as broad-based an international comparison as possible in Stage III. Also, as far as possible, each country study could be used to generalize to one or more countries sharing with it some major common denominators such as language, culture, socio-economic structure, etc.

12. Each case study could be viewed as an independent, self-contained study. Therefore there is no reason to assume that all case studies should be executed simultaneously. Some time differentials would certainly be possible without necessarily impeding the overall study's execution.

1/ Already, informal contacts with some funding institutions indicates a possibility of an excellent response to a Bank initiative.

13. The proposed case study is Egypt. It would enable the Bank to relate this to its efforts in other Arab countries. Also, Egypt is the best possible place in the Arab world to execute this study because:

(i) Egypt is the only Arab country that has sufficiently large numbers of school leavers of every type to make the accumulation of a sample of this size feasible;

(ii) Rural Egyptians tend to be immobile, and finding school leavers after two or three years will not be as difficult as it could be elsewhere;

(iii) School attendance records are usually meticulously kept in Egypt (because of certain governmental regulations);

(iv) The recruitment of large numbers of qualified testers, relatively inexpensively, is easier in Egypt than anywhere else in the Arab world; and

(v) Egypt has the oldest Arab education system and one which still influences that of many other Arab countries.

14. There will be no difficulty in obtaining the full cooperation of the Egyptian authorities. It is proposed to have the bulk of the work executed by Egyptians taken from various institutions in the country contracted either individually or institutionally.

15. The technical aspects of executing such a case study in Egypt are given in paras. 17 - 25 below.

Stage III: International Comparisons and Conclusions:

16. Drawing upon the results of the various case studies, it is hoped that a tight well-reasoned international comparative analysis could be executed. It is obviously premature to discuss this stage of the work now. Nevertheless, the objective would be to address the issues raised in paras 2 - 4 above on a global scale, with the full realization that no single answer is likely to apply everywhere.

III. TECHNICAL ASPECTS

17. Proposed Format of Case Study: Although a final, detailed case study format must await the results of Stage I, some general thoughts as to the structure and format of the case studies is still possible. The following represents our present thinking, as derived from the Bank's work on the large-scale Saudi Arabia Literacy Study.

18. In the absence of operating tracer systems, the selection of a cross-sectional vs. longitudonal format for the Study is prompted by time consideration alone. It should be noted, however, that this does not preclude pursuing the tested persons over time to obtain an adequate longitudonal Study over the next few years.

19. The Study would start by developing an adequate testing instrument that could span the expected performance of school leavers from grade four through grade six, (preferably from grade three to grade seven). This testing instrument should enable researchers to assess performance in each type of skill (oral and written comprehension and expression, oral and silent reading, vocabulary, spelling, arithmetic skills, etc.).

20. An appropriate sample of school leavers would then be selected and tested. This sample would also be interviewed in order to obtain suitable biographical data to enable the analysis to include/control important socio-economic variables. If an appropriate (i.e. non-culturally-biased) intelligence test is available, it should also be administered to the selected student.

21. The Analysis: By identifying school leavers by length of time out of school as well as highest level of educational attainment (grade completed) and controlling for selected socio-economic and environmental variables, the results of the analysis could be graphed in a pattern of curves as shown in the attached diagram 2. These could be executed for specific skills as well as for an aggregate index of performance. The selection of one or more "acceptable level of literacy" would also show different policy implications, if, for example we found that fourth grade school leavers tend to retain sufficient skills to read and write in an elementary way but that only Sixth grade school leavers were able to read newspapers after having remained out of school for more than two years. It would also be of interest to note which skills were retained longest (or were least impaired) and what the impact of environmental socio-economic or other factors of reinforcement were. If suitable intelligence tests were also undertaken, some interesting correlations could also be obtained.

22. The Sample: For the Study to be statistically meaningful, each point on diagram 2 should be the mean of a sample that approximates the true mean of that population. A rough approximation is that a minimum of 64 (preferably 107) would be required for each point in order to ensure that probable error remained within $\pm \frac{\sigma}{4}$ at 95% (99%). This gives a minimum sample size of about 1200 to 1500 cases.

23. Another possibility worth exploring is the possible use of matched samples. For ease of presentation, let's limit the discussion to three grades (grades 4, 5 and 6) and three years after school, plus the three terminal points (i.e., right at school leaving) for each grade. This structure would be as shown below, yielding 12 samples (one for each cell). Each sample is identified by its coordinates on this matrix.

Grade	Years out of School			
	0	1	2	3
6	6.0	6.1	6.2	6.3
5	5.0	5.1	5.2	5.3
4	4.0	4.1	4.2	4.3

24. Assuming only two matching criteria are selected: (i) performance on the intelligence test; and (ii) socio-economic background as measured by some composite index. Then, in order to be able to carry out the comparisons the intelligence test(s) used should be standardized for different age levels, and the literacy skill tests should be standardized for different grade levels. The different samples should have comparable age distributions. If the sampling of students is correct all 12 groups should have the same age - specific characteristics on the intelligence test and the same characteristics on the socio-economic background scale. At the time of dropping out the different grade groups (the three samples 4.0, 5.0 and 6.0) should have the same characteristics on the literacy skill tests used.

25. Both of the approaches mentioned above would control for key variables: the former implicitly (by randomized selection of large enough samples), the latter explicitly by selecting key variables and matching samples along these. In many ways, however, the latter matching proposal is superior, because it controls for an important sample bias: the causes of early (or late) school leaving, i.e. Since "dropping-out" is associated with factors like intelligence and social background, it is likely that the intellectually and socially poorest children drop out first. Such children are obviously handicapped also when having to maintain their literacy skills. Therefore checks must be made that the samples studied are comparable in all relevant aspects. Note, however, that this important check should cover the comparability between grades as well as the comparability between groups studies "X" years after they left school.

IV. BUDGET

26. Excluding Bank staff time[1/], the costs of the project are estimated as follows:

	Stage I		Stage II		TOTAL	
	Man Month	$ (000)	Man Month	$ (000)	Man Month	$ (000)
Senior Investigaters (HQ)[2/]	2	6.0	20	60.0	22	66.0
Research Assistants (HQ)[3/]	1	1.0	10	10.0	11	11.0
Senior Investigators (Egypt)[4/]	-	-	30	39.0	30	39.0
Junior Investigators (Egypt)[5/]	-	-	40	26.0	40	26.0
Clerical/Support (HQ)[6/]	2	1.6	18	14.4	20	16.0
" / " (Egypt)[7/]	-	-	18	6.3	18	6.3
Computer Costs	-	-	--	17.0	--	17.0
Printing Costs	-	-	--	15.0	--	15.0
Travel	-	-	--	32.0	--	32.0
Subsistence	-	-	--	10.0	--	10.0
Sub-Total		8.6		229.7		238.3
Contingencies (approx. 15%)		1.4		35.3		36.7
TOTAL (rounded)		10.0		265.0		275.0

1/ Tentatively estimated at 2 man-months for Stage I and 7 man-months for Stage II.
2/ Estimated at $3000/man-month
3/ " " $1000/man-month
4/ " " $1300/man-month
5/ " " $ 650/man-month
6/ " " $ 800/man-month
7/ " " $ 350/man-month

27. Bank staff time in man-months is estimated as follows:

	Stage I	Stage II	Total
Education CPS	1	2	3
EMENA TASS	1	5	6
TOTAL	2	7	9

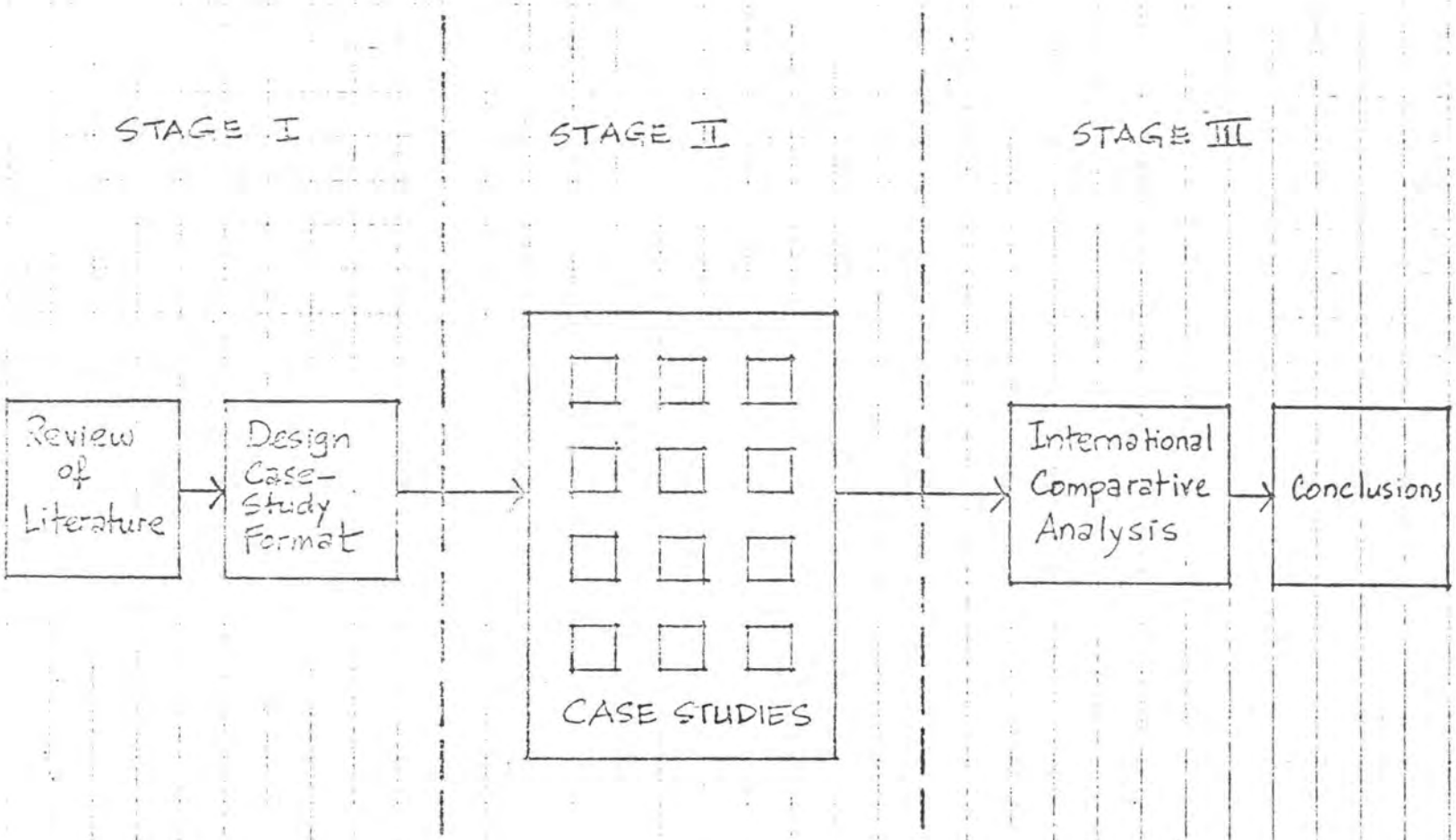

DIAGRAM 1 : PROPOSED FORMAT OF STUDY

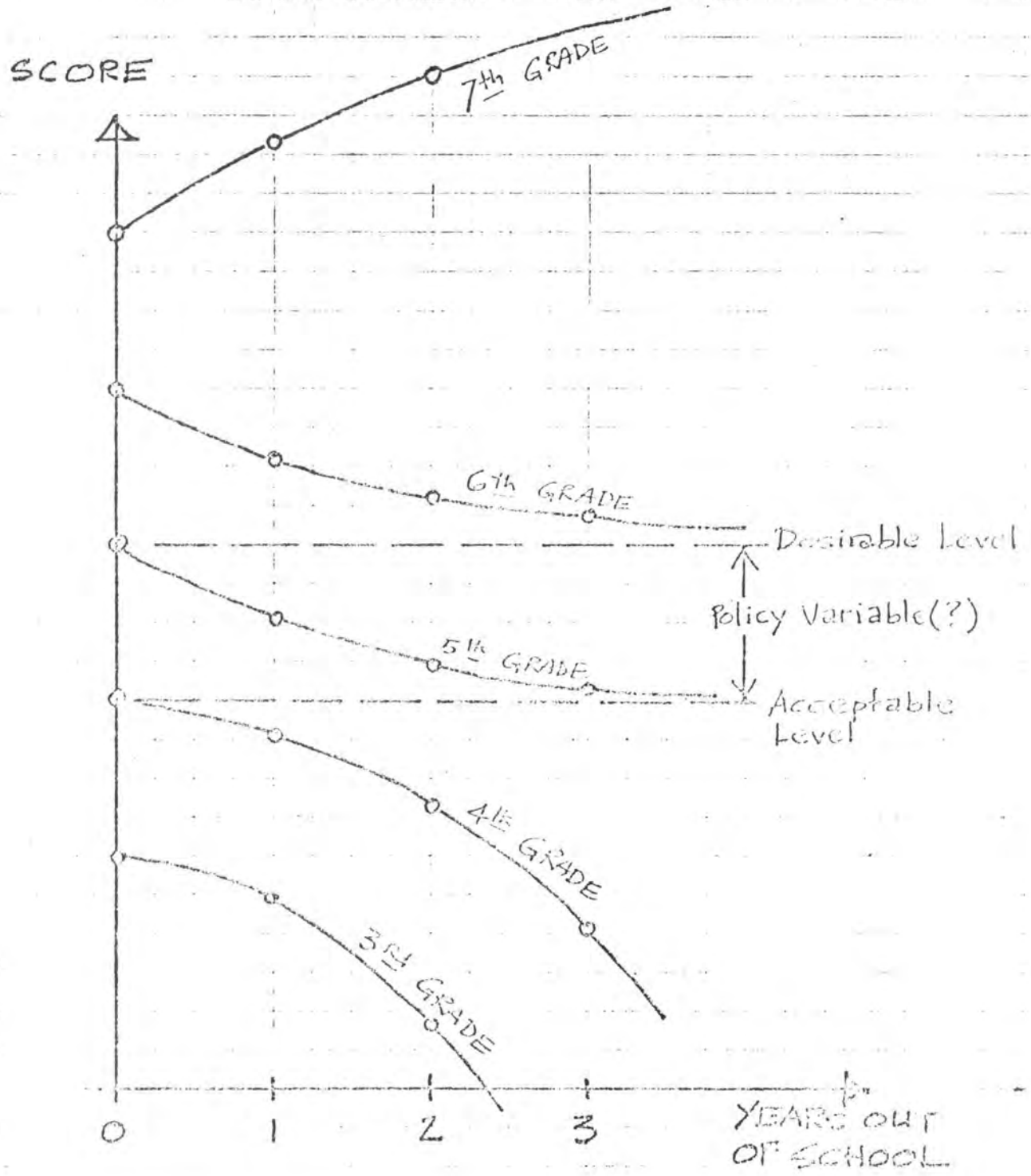

DIAGRAM 2 – HYPOTHETICAL CURVES PLOTTING TEST RESULTS AGAINST YEARS OUT OF SCHOOL.

Research - Education

Mr. D.S. Ballantine December 20, 1976

W. D. Haddad

Proposed research project in the discipline areas of ergonomics, production, management and education.

1. Although the subject referred to by Mr. C.A. Bunker is a basic component in the process of educational development, particularly in the fields of science and technology, the proposal itself is unclear about a number of issues.

2. The project fails to define the researchable problem. Is it the production of materials per se, or the management mode of production?

3. There is no attempt to formulate the purpose of local production which effects the basic assumptions of the project. A definition of the purpose determines to a large extent within the process of production the projection of the educational component on the economic one and leads to a selection of production areas that meet favorable criteria both educationally and economically.

4. The procedure outlined in the project reinforces the confusion about its purposes and the steps mentioned dotnot show any structured line of actions towards research activities such as collection of data, conjecturing, analysis, formulation of models, testing, etc. On the contrary the methodology components seem to be loosely put together with no explicitytarget.

5. The project seems to be based on a premise that a "manual" for manufacture, distribution, administration and innovation ..." of materials can be developed on an international level, which assumes that such processes can be isolated and generalized. It is more realistic to approach the production of educational materials as an integral component of an organic and sophisticated matrix of curriculum development. Some of the questions raised about the relationships within this matrix are not less difficult than those asked about the interaction between technology and culture.

WHADDAD/sg

Research - Education

Messrs. M. Hultin and T. King

D. Jamison and S. Futagami

December 13, 1976

Outline of a Research Proposal on Distance Learning

Our purpose in this memo is to discuss in more detail the possibility of undertaking a research activity on distance learning, as we discussed in our memo of October 4. Several considerations suggest the timeliness of a study of the cost-effectiveness of distance learning for teacher training and for basic education.

First, the just completed radio study found distance learning to be among the most attractive uses of radio. Second, while there exists good cost-effectiveness information on in-school uses of media, much less is known about the cost-effectiveness for out-of-school use. Thus this combination of apparent attractiveness and lack of existing evaluation information suggests the direction for the study we propose. Precisely because relatively little now exists in the evaluation literature, it will be necessary to undertake more in the way of a original research in a study of distance learning than we did with the radio study. The budget required for this original research would probably require research committee support rather than support from a departmental budget.

In the paragraphs below we discuss the informationtto be gathered by the case studies, the probable organization of the study, and an approximation of its costs.

Information to be Gathered

The case studies would gather three broad categories of information. The first would be descriptive information concerning the project being studied: information on its enrollments year by year, its course offerings, its geographical outreach, its operating methods, the composition of its audience, and its history. The second category of information would deal with the administrative aspects of the project: the location of the project in the education system, the structure of its administration, and the process and nature of the certification provided its graduates. The third category of information, and the most important, would be on cost and effectiveness: the cost effectiveness information would rely, to the extent possible, on previous evaluation material, but would in most cases need to go beyond that. It would be realistic to expect the case studies to result in good information on costs, reasonable information on effectiveness in terms of graduation and retention rates, but probably only rather poor information on student achievement.

Structure of Study

We would propose to arrange for three to five case studies to be undertaken in something like a one year period beginning late in the spring of 1977.

We would anticipate that each case study would involve perhaps two individuals visiting the project for 2-3 weeks plus several weeks of write-up time afterward. In addition to the manpower required for the case studies, we would expect that several additional man-months would be required to put together a synthesis volume entitled something like "The Seconomics of Distance Learning".

The manpower required to undertake an effort of this sort is unavailable within the Bank, and for this reason we feel it should be contracted out. One potential contractor wouldbbe the International Extension College in London, which is directed by the British sociologist Michael Young. Other possibilities in Europe would include Husen's organization in Sweden or the Institute for Research in the Economics of Education (IREDU) at the University of Dijon. Even if we do contract the study out, however, we feel that there should be substantial Bank staff participation in preparation of the case studies and of the overview volume.

UNESCO's Division of Educational Methods, Materials and Techniques, under the direction of Mr. Henri Dieuzede, has been increasingly interested in the economics of educational technology, and might welcome an invitation to be at least peripherally involved in this activity. We would recommend against structuring our program in a way that required their active involvement, but would welcome their partial sponsorship and any assistance they could easily provide with the research. We might seek a similar low level of collaboration with Mr. Arthur Melmed, Associate Director for Finance and Productivity of the U.S. National Institute of Education.

Costs

Our purpose here is to provide only a very rough idea of what the cost might be for this undertaking. If we assume four case studies with two individuals on each and allow for several transatlantic coordination trips with the contractor, our travel costs could easily reach $25,000.00. If, in addition, we request ten man-months of contractor time at $2,500 per month, that would be an additional $25,000.00. That total is $50,000.00 to which we might wish to add an additional $10,000.00 for unforseen contingencies. We would expect, in addition, that approximately six man-months of Bank staff time would be involved, or perhaps more. We would need to consider further the trade-off between more staff time and less contractor time or vice versa.

Next Steps

We would anticipate, then, that for about $60,000.00 plus staff time we would have completed in approximately eighteen months a study that would have as its outputs four or five case studies, an overview monograph, and a short document on implications for Bank policy. We feel this would be a

timely and operationally relevant piece of research, and one of sufficient scholarly merit to be of use to a much broader audience than within the Bank. We, therefore, propose that our departments proceed jointly to undertake the next steps required to initiate this activity. We feel those steps to be the following:

1. We should prepare a five page description of the objectives and probable outcomes of the research for circulation and comment.

2. On the basis of comments received, we should prepare a draft of a proposal to the research committee for critical review within our departments.

3. On the basis of that review, a decision should be made concerning whether to proceed with the project to the research committee.

cc: Messrs. Ballantine, Zymelman, Gilpin, Haddad.

Simmons.

SFUTAGAMI/sg

Research Education

Mr. Mats Hultin

December 2, 1976

W.D. Haddad WDH

Study of Retention of Basic Literacy Skills - Comments

1. The proposal for a study of retention of basic literacy skills as described by Mr. Serageldin in his memo to Mr. Ballantine dated November 16, 1976, falls within the category of policy-related research projects which the Bank should encourage, because of the strong implications the results may have on the lending policy.

2. Although the design suggested in the proposal is tentative and represents the "present thinking", there are some basic points to be considered regarding the design of stage II.

3. Since general studies of retention showed a strong correlation between the processes of learning and retention, it is important to:

i) match or stratify groups according to level of achievement at the time of school-leaving.

ii) construct the testing instrument along "taxonomic" lines, so as not to suppress any possible interaction between the suggested variables and taxonomic levels of retention.

iii) to include, as an integral part rather than an option, measurement of I.Q. of subjects for matching or stratifying, since it has proven to be one of the strongest predictors of achievement.

4. Since the design is based on a cross-sectional format, for good reasons of experimental convenience, such a decision has to be balanced by a rigorous statistical research design. In particular, I suggest more stratification than matching, lending to a multi-way analysis of variance, (or multi-variate analysis) to test for possible interactions of variables that are otherwise controlled under the "matching" design. Examples of such variables are: level of maturation, degree of reinforcement of retention due to kind of vocation, intelligence, and scholastic achievement.

5. In view of the importance of the study both in terms of development of research methodology and substance related to Bank concerns, I suggest an active participation of the Department of Education in this project.

cc: Mr. Ballantine

WDHADDAD/sg

Research Education

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2776 CHATENAY

THANKS YOUR TELEX 2226. EUROPEAN EDUCATION ENTERPRISES IS IN FACT GROUPING OF HIGHLY TECHNICAL EQUIPMENT MANUFACTURERS FROM VARIOUS EUROPEAN COUNTRIES OF BASICALLY VOCATIONAL TRAINING MATERIAL ESPECIALLY DESIGNED FOR LDCS. THEY ALSO DO CONSULTING AND TRAINING OF PERSONNEL HANDLING EQUIPMENT. EEE HAS ALREADY SENT ALL EDUCATION PROJECTS PEOPLE MENTIONED DETAILED DOCUMENTATION DIRECT. HOPEFULLY THIS WILL HAVE ARRIVED BY MONDAY NOVEMBER 29. THIS IS RECENT GROUPING AND I UNDERSTAND DEBRE MOSTLY INTERESTED IN GENERAL EXCHANGE OF IDEAS ESPECIALLY ON TRENDS AND EXPECTED NEEDS FOR CONSULTING SERVICES AND EQUIPMENT IN TECHNICAL VOCATIONAL EDUCATION FIELD. REGARDS

GRADVOHL

Research Education

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: November 4, 1976

FROM: D. T. Jamison DTJ and Shigenari Futagami

SUBJECT: Status of Bank Study on Educational Radio

Case Studies

1. All case studies assembled by this effort have been in virtually final form since mid-summer. We were considering publishing them through the IIEP or by the Bank in the format of a Type II Country Report. Mr. Jamison met with Mr. Hans Weiler, IIEP Director, on October 5 to discuss the matter. Weiler expressed only tentative interest in publishing the case studies and indicated that there would at best be substantial additional delay if we decided to pursue that possibility further. We thus decided to recommend publishing the case studies in the format of a Type II Country Report.

2. On October 28th we met with Mrs. de Tchihatchef to discuss next steps. She informed us that: (i) we would need to deliver camera-ready copy to her, and (ii) that before detailed plans for publication of the case studies were made, we should come to a final understanding concerning the disposition of the overview volume.

3. The Bank would have the copyright of the case studies if the authors agree. This question will be handled by Mr. Winterbottom.

4. Typing (by Videc), correction, printing and binding of the case studies will be done within the Bank. If case studies are to be published in one volume, the final paper should not be over two inches thick. The correction of the Videc-typed draft is to be done by the Education Department. All the mechanical process can be short, but the formats (e.g. the composition of paragraphs, titling) of the present drafts will be standardized by Mr. Spain. Mr. Spain has agreed to complete this standardization as soon as possible.

5. The Education Department should prepare a mailing list for distribution of free copies. IPA can supplement the list. Mr. Weiler indicated that the IIEP is willing to help in the distribution by providing mailing lists or by mailing out copies to one of its mailing lists under a cover letter from Weiler.

Overview Volume

6. Messrs. Jamison and McAnany are working on final revisions of the overview volume, which they expect to complete by the end of the year.

7. Sage Publications, of Beverly Hills and London, has expressed strong interest in bringing out the overview (plus bibliography) as a book late in 1977. The choice before us is whether to conclude negotiations with Sage (through Mr. Winterbottom's office) or to bring out the overview as a companion volume to the case studies, postponing any further discussions with Sage until the Bank publications are out.

8. Jamison recommends that the Bank bring out the overview as a companion to the case studies and that we postpone discussions with Sage. There are two reasons for this. First, the overview will be available substantially sooner this way (early 1977 instead of late 1977). Second, the Bank's effort in educational radio will be more neatly packaged: the case studies and overview will appear at the same time, in the same format, and under the Bank's imprimatur. If this course be chosen, the annotated bibliography would appear with the case studies.

9. Final decisions on publication should be made in mid- or late-November, after Mr. Futagami returns from Syria. Meanwhile, preparation of camera ready copy will proceed.

cc and cleared by: Mr. Ballantine

cc: Messrs. Gomez, Hultin, T. King, Winterbottom
Mrs. de Tchihatchef

DTJ:da

Research - Education

October 22, 1976

Dear Mr. Easton:

I was glad to have the chance to meet you when you were in the Bank a few months ago, and I found your report on the evaluation of the functional literacy project in Mali operationally most interesting.

As you may know, the Bank has asked the Unesco Institute for Education, Hamburg, to prepare a report which would outline a methodology for the diagnosis of basic education requirements, for analysis of the existing education situation and the design of an action program to meet identified needs. This report is intended as a complement to the national studies and experiments in basic education in Mali, Mauritania, etc. which the Bank is financing.

We are planning to hold a one-week meeting in Dakar from December 13-17 to discuss this report with a small group of African specialists from Mali, Mauritania, Senegal, Upper Volta, Niger and Chad. We hope that the meeting will provide a good forum for exchange of ideas and experiences with African educators and planners involved in the development of basic education, and it is our intention that the final draft of the UIE report should benefit from this discussion.

I understand from Michael Wilson that you will be returning from Mali to the U.S. around the time of the Dakar meeting, and we would like to invite you to participate in it as an observer. The additional per diem involved will be reimbursed to you by the Bank. I very much hope you will be able to attend. Please let me know if you will be able to do so, so that I can advise the Unesco Institute for Education to get in touch with you regarding further arrangements for the meeting.

Yours sincerely,

Clifford Gilpin
Education Department

Mr. Peter Easton
Conseiller Technique
O.A.C.V.
B.P. 72
Bamako, Mali
CGilpin:ks

Research - Education

Files October 7, 1976

Clifford Gilpin

Basic Education Study - Discussions on Draft Report in Paris

1. On October 4-5 Messrs. Verspoor, Jallade and Gilpin of the Bank met with Messrs. Carelli and Saliba of UIE, Hamburg and Mr. Botti of Unesco to discuss the draft of the above report and to agree on arrangements for the proposed meeting in Dakar with West African participants.

2. It was agreed that the authors of the report would make a number of changes in the draft, both to clarify certain points and to facilitate a constructive discussion in Dakar. These changes are:

a) to define "experimentation" as the first phase of an educational programme, not as a study;

b) to define "basic education" as applicable to all target groups, with reference, where appropriate in the report, to a specific target group;

c) to reorganize Chapter II to deal specifically with evaluation and the determination of basic education needs and to put the points regarding the logistics in an annex;

d) to make it clear that the approach taken regarding primary education is one of indirectly influencing the reform of the formal system through the development of practical basic education alternatives;

e) to shorten Chapter III by avoiding repetition in detail of points dealt with in the preceding chapter.

3. It was agreed that the overall purpose of the report is the production of a methodological guideline for the development of basic education programmes in Sahelian countries which could be used by national governments as well as Bank and Unesco staff. The purpose of the Dakar meeting will be to get feedback from African participants on the substance of the report. The report will then be finalized, taking into account the views expressed in Dakar.

4. Agreement was also reached on the number of participants to be invited to Dakar from Mali, Mauritania, Senegal, Upper Volta, Niger and possibly Chad. The Education Department would be responsible for sending the invitations after discussing with the West Africa Education Division the nominees from each country and confirming that the necessary financing is available. UIE, Hamburg, would be responsible for all subsequent contact with the Dakar participants, including making the necessary travel and accommodation arrangements. It was agreed that the revised draft report would be ready to send to the participants by mid-November.

Files October 7, 1976

5. During his visit to Dakar in the second week of October, Mr. Verspoor will discuss with the Unesco Regional Office the availability of their facilities for the seminar meetings.

6. It was agreed that no commitment has been made by the Bank following the Dakar meeting and the finalization of the report. A decision on a subsequent phase will be taken following review in the Bank of the final report of the first phase.

cc: Messrs. Ballantine, Hultin, Cole
Jallade, Wilson, Verspoor
Botti (Unesco)
Carelli (UIE, Hamburg)

CG.

CG:th

Research Education

October 6, 1976

Dr. Robert L. West
Professor of International
Economic Relations
Tufts University
The Fletcher School of Law
and Diplomacy
Medford, Mass. 02155

Dear Dr. West:

Thank you very much for the summary of the discussion of the seminar on "Public Administration and Development" which came with your letter of September 29. It was carefully done and a pleasure to read.

As you invited changes, I have edited where there seems to be a slight discrepancy between my own notes or recollections and your rendition. Of course where you are certain of your own text please disregard my personal comments. Except in one case, I have not checked with the other participants. I also fixed my own statement to conform more closely with the three points I was making.

The reason I scrapped "LNU:Bank" is that this refers to Mr. Makharita, who was brought in only as an observer and like other observers was requested not to speak so that the delegates could participate. He was not Bank staff and I do not know his real designation.

What do you think of attaching the agenda? I am enclosing a copy.

What would you like to do about follow-up? The summary does not analyze the outcome or offer conclusions so the recipients can draw their own. Do you plan to circulate the summary, publish it or publish a precis of it? We would like to circulate it here to each Bank participant, to Mr. Knapp, to Mr. Erdernin Turkey, to Mr. Frost who is on leave at Stanford, and to the Education Department staff. Perhaps you could suggest others in addition to those directly concerned with NASPAA.

If there is a similar summary available of the NASPAA conference discussion the following day which you mentioned in your letter, could we please have a copy?

Let me extend greetings to you from Manny Zymelman who is my next door office neighbor now, and please accept my own warm regards.

Sincerely yours,

R.W. Van Wagenen
Education Department

Enclosures
RVW/mms

Research Education

Mr. David Turnham

October 5, 1976

August Schumacher

"Non-Formal Education and the Rural Poor"
Conference (Sept. 26-28th) at Michigan State University

1. I attended the first two days of this excellent conference. Duncan Ballantine also participated from the Bank. A copy of my talk titled "Lending for Rural Development" is attached as well as a copy of the program, participatns and a list of principal papers 1/. Mr. Ballantine gave a very well received talk to the Plenary session on the Bank's early experience in supporting non-formal educational developments. It contrasted with a rather rambling and ill-focusedd discussion from the AID representative, surprising in that AID was the principal financial "angel" of the Conference.

2. While I was unable to stay until the end, the principle themes emerging from the first two days discussions were the following:

a. an acceptance of the Bank's definition that the process of rural development must be targeted primarily towards benefiting the rural poor;

b. the process of non-formal education must be seen as an integral part of the overall rural development strategy;

c. the direction of the non-formal education systems must be focussed on improving the productivity of smaller farmers, principally, but not exclusively, by improving the training of "extension facilitators";

d. productively focussed rural works programs are often a useful first phase in getting a sustained rural development process moving; and

e. a principal objective of non-formal education in rural areas should be to obtain fuller participation of the targeted beneficiaries.

3. An early highlight of the conference was a comparative analysis of three approaches to non-formal education, the Mexican PRONDAAT system, the Comilla Project in Bangladesh and the CADU Project in Ethiopia. In each case, the Project's relevance was outlined by nationals intimately familiar with the project. Each was candidly frank about their projects respective weaknesses. For example, in PRONDAAT, its Director said they had laid an important basis, but the national extension and research systems, even tho within the same Ministry, had actively lobbied against this new system. As a result, they had only got 15 programs started instead of the 30 to 40 they needed. Also, it was a "mono" rather than

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1/ The Conference proceedings are to be published. I will obtain sufficient copies for distribution within the Bank.

an "integrated" extension approach, an approach which led to weaknesses in devising technical recommendations in areas below 1000 mm. rainfall. The CADU representative said their attempt to build "demonstration farmers" was too successful, they quickly became elite farmers, purchased tractors and became much less relevant as "models" for the mass of small farmers in Ethiopia. The Comilla representative argued strongly for rural works programs as pre-cursors to group organization for improved extension activities. This point was also made in Moussa Ahmad's paper which was mentioned a number of times during the Conference proceedings.

4. Generally, it was my impression that the Bank representatives were well received, especially Mr. Ballantine, primarily, participants said, because of the clarity of the Bank's policies in targeting rural development to the rural poor and assisting governments in developing new and innovative means in a variety of sectors (agriculture, education, water supply etc.) to achieve this objective. This contrasted with the presentations of other agencies.

cc. with Attach. Messrs. L. Christoffersen
F. Lethem
Rural Development Division

ASchumacher/cp

Research Education

October 5, 1976

Mr. David Davis
Ford Foundation
International Division
320 East 43rd St
New York, New York 10017.

Dear Mr. Davis:

URTNA's Seminar on Multi-lingual Broadcasting

I would very much like a chance to talk with you after you have returned from your African trip, to follow up the conversation you had with Mr. Ballantine on the proposed seminar on multi-lingual broadcasting, which the Union of National Radio and TV Organizations of Africa (URTNA) is anxious to organize with the Bank's help. Perhaps Mr. El-Tinay of the Bank's Information and Public Affairs Department would like to join us.

We have become very much aware of the importance of the selection of teaching languages for both formal and non-formal education in LDC's, and agree that the proposed seminar will certainly contribute to the improvement of African education.

We should appreciate it if you would kindly give us your advice based on your firsthand observations on the latest development in the field of education and broadcasting in Africa, particularly on URTNA's activities.

For your reference, I am going to send to you, under separate cover, copies of studies which we have started to compile on the relationship between languages and education in LDCs.

Sincerely,

Shigenari Futagami
Mass Media Specialist.

SFUTAGAMI/sg
cc: Messrs. Ballantine, El-Tinay, Cole, Pennisi.

Research - Education

Messrs. D. Avramovic and D. Ballantine Oct 4, 1976

D. Jamison and S. Futagami

Possible Interdepartmental Research Activity on the Economics of Distance Learning, with Particular Emphasis on Implications for Bank Lending.

1. 'Distance Learning' is the British term for instruction that takes place with the students at a distance from the source of instruction. The British Open University is perhaps the most-discussed distance learning system now operating, but Australia and New Zealand have successfully used radio combined with correspondence for distance learning at the elementary and secondary levels for almost half a century. The University of London had its beginnings as an examining and accrediting institution in the 1830s, and correspondence schools sprang up to prepare students for these examinations; its 'external degree' program remains substantial. Major distance learning projects are also in operation at the university or secondary levels in Japan, Mauritius, Kenya, Korea, the Dominican Republic, Poland, France, Germany, the United States, and, undoubtedly, in numerous other countries. Iran and Pakistan are now initiating major university level distance learning projects.

2. The existing evidence is that distance learning can provide satisfactory instruction: its students pass the required examinations. Further, it has the potential for dramatically lowering costs (a potential that, sometimes, fails to be realized). This of course results from distance learning's dramatically lower requirements for teachers and classrooms than are the requirements of traditional instruction. Finally, distance learning can improve equity of access to schools. This is partially through its lower cost, but also through reducing barriers of geography and time to access to education: there is no need for students to live near a school, and there is much less need for them to give up daytime employment to continue their education.

3. The Hultin/Futagami project to study educational radio, in which Jamison participated as a consultant, included studies of two distance learning projects -- the Kenya teacher training program and the Radio Escuela Santa Maria project, in the Dominican Republic, which provides instruction leading to elementary school certificates for rural adults. These were among the most attractive of the radio projects studied, and, we feel, they suggest the desirability of following up the radio study with a study more specifically focussed on the economics of distance learning and on the implications of what can be learned about existing projects for Bank lending.

4. We propose that representatives of our two Departments meet sometime in November to discuss the desirability of a joint project. If there is to be such a meeting, we will prepare a background memorandum for it that discusses these issues in more detail.

cc: Messrs. Hultin, Stoutjesdijk, Little, King, Zymelman, Jallade, Simmons.

JAMISON-FUTAGAMI/sg

Research Education

Mr. Duncan S. Ballantine, Director October 1, 1976

J. P. Jallade, Senior Economist

Division Chiefs Meeting, September 28, 1976

Two items were on the agenda of this Meeting, namely, a paper on Urban Poverty originating in Mr. Jaycox's office and the memorandum prepared by the Education Department on Sector Work for FY 1976.

The Education Department first presented the Paper on "Urban Poverty Program Implementation" prepared by Mr. Jaycox's office. The central theme of this paper is to determine the impact of Bank lending in general and of educational lending in particular on the urban poor. It seeks to assess the extent to which education - and other sectors - lending benefit the poor, generate employment for them and at what costs. The Division Chiefs were required to provide education lending targets for the urban poor during the FY 76-80 period.

Various Division Chiefs objected that it was very difficult for them to provide accurate data about the beneficiaries of educational lending beyond FY-78 becuase the content of Educational Projects in FY 79 and 80 was not yet defined. The Education Department replied that it was understood that the figures requested were to be only "guessmates" and certainly not predictions. It was suggested to look at the pattern of lending by educational level, assuming that only lending for primary and non-formal education would benefit the poor. An assumption concerning the break down between urban and rural poor would provide the estimates requested.

The Meeting then turned to the second part on the agenda, namely, the Memorandum on Sector Work in FY 76 prepared by the Education Department. On the whole, the Division Chiefs appreciated the effort made to present an over-view of Sector Work for the education sector. One Division Chief stated that Sector studies are meaningful only when basic knowledge about the Education Sector in a given country is already at hand. He also stated that data were sometimes a problem in carrying out Sector Studies and that UNESCO Staff was not very good to do specialized, problem-solving Sector Work.

Another Division Chief stated that they have had problems with the Sector Studies undertaken so far. In his view, future Sector Work should still emphasize traditional Sector Memoranda. Another Division Chief stated that the quality of Sector Work leaves much to be desired and that the whole exercise still suffers from a lack of continuity, haphazard design and piecemeal approach. Another Division Chief supported this view stating that Sector Work in education had few links, if any, with economic development strategy with little programming and discussing actually taking place.

The Education Department stated that the above answers were the sign of a wide disparity between the Divisions in the programming and quality of Sector Work. Some Divisions were obviously much more advanced than others and this was reflected in the content of Sector Work. As far as the programming of Sector Work was concerned, the Education Department stated that there were only two ways to program Sector Work namely:

(i) to take the lending program two or three years in advance as a guide to select countries eligible for Sector Work, or

(ii) to take a "country approach" whereby Sector Work in education would be done in conjunction with Sector Work in other sectors. The Education Department said that the second method was the appropriate one according to the indications given by management. The effectiveness of Sector Work in education would be enhanced if it were coordinated with Sector Work in other Sectors and linked more closely with economic development strategy.

Two Division Chiefs did not agree with Paragraph 10 of the Memorandum which states that the treatment of the equity issue in Sector Work leaves much to be desired. One Division Chief also mentioned that manpower studeis are often financed by education projects and that should also be included in Sector Work. On the whole, there was an agreement that the links between education and the economy was a weak point of Sector Work.

Various Division Chiefs emphasized the need for more CPS staff participating in Sector Work. One of them stated that Sector Memoranda will become more and more important in the future as the first stage of the project cycle. It was, therefore, in the interest of CPS to be involved at that stage in project formulation rather than at appraisal stage when projects are already well-defined. This view was supported by two other Division Chiefs who stated that, in their regions, the trend was towards a simplification of project documentation with Sector Memoranda, Project Briefs and Issues Papers becoming key-documents of the Project cycle at the expense of appraisal documents.

The Education Department thanked the Division Chiefs for their suggestions and said that they would be included in the final paper on Sector Work which will be sent to the CPS Front Office.

JPJ/jt

Research Education

Mr. Mervin Muller, Director, CAD
Through Mr. M. Hultin, Education Department
Jacob van L. Maas, Education Department

October 1, 1976

Revisions to SEQIN Program

I attach a copy of this Department's Statement of User Requirements and Benefits for revisions to the existing SEQIN program, about to undergo a feasibility investigation.

CC: Messrs. Wood, Valenti, Cartography
Messrs. Hseuh, Ramiscal, CAD

John

DRAFT
JvanLMaas:ks
Oct. 1, 1976

Modifications to SEQIN Program

Statement of User Requirements

and Benefits

Introduction

The SEQIN program was developed in 1974/75 as a Special Request from the Education Department, CPS. Its need has been attested to by an increasing use in several Regions in approaching and helping to solve difficult issues related to distributional equity. So far its project-related application has been exclusively in the education sector, although expressions of interest have come from the Rural Development sector and its availability has recently been publicized by the CPS front office. Although the most pressing demand continues to be from the education sector, it appears worthwhile to continue SEQIN's development as a generalizeable tool, including a flexible capacity for adjusting labels to specific sectors as needs arise.

The use of SEQIN over the past year has highlighted a few areas where alterations or additions are now in order to make it more practical in project work. Furthermore, recent additions to computing capacities in the Bank, especially computer mapping techniques--SYMAP, CALFORM, SYMVU--can be brought to bear in increasing the readability of the SEQIN output display. The forthcoming investigation can assess the extent to which these alterations and additions are feasible.

The remainder of this statement is in the form of notes on changes to input, throughput and output of data, and mode of program operations.

A. Input of Data

1. Regrouping and updating "distributional basis" population data.

The problem has two aspects, usually occurring simultaneously:

a. population data is "old", i.e., is only available for

census year, not present, much less the next 5 years.

b. when it is available, its population figures are in the "wrong" sets of years, e.g., 5-9, 10-14, etc., whereas what is needed is, say, the 6-year age group ages 6-11 equivalent to the primary school cycle.

Solutions:

(a) can be solved by projecting census figures forward for x years a y annual growth rate. Usually this will have to be a national growth rate, but ideally it should be a rates specific to each region/group, if these are available, and specific to the proper age-group.

(b) interpolation, as worked out by Zafros and Mogielnicki (Demography, DPS). This needs to be done for each region/group.

B. Data Throughput

1. Simple forward projection of input data (Untampered Growth).

Some users would want to "see" (in a separate set of 'diagnostic' tables) the equity situation in a country, say, 5 years from now with (a) present population and enrollment growth trends continuing their present course, or

(b) population growth continuing "naturally" but enrollment raised by the Bank project's potential input, randomly distributed.

The presently displayed "planning" tables don't allow this because they already build-in various redistributive interventions.

Thus, the program needs to give the user some options for

projecting present-day data into the future:

(a) a lump sum projection: this would just be a single growth coefficient, say, 18%, applied to age-group population data, without specifying over how many years this occurs.

(b) an annual rate of increase: here the user specifies the average annual rate of increase (X%) and the number of years to apply it.

(c) the same pair of choices would apply to projecting forward the "distributed good", e.g., enrollment.

The capacity must exist for applying the above rates separately region by region.

2. Making "Planning" or "Redistributive" Tables More Flexible

(a) Problem:/ SEQIN Options C-1 and C-2 rigidly give the choice of a 10% or a 20% increase in the national participation rate as basis for redistribution. The user should be able to pick any percentage to apply there.

(b) Often project staff know in advance the total amount of the new resources (distributed goods) which the project can deliver and they want to allocate that amount between the regions to maximize equality/minimize Gini. So that amount as a fraction of the existing total supply should determine the amount of growth of the participation rate, as a basis for calculating the hypothetical redistribution amounts to equalize the distribution.

(c) Another method for calculating redistribution amounts is to start with the Region/group with the lowest

participation rate, calculate the amount required to raise it to the next lowest, then take those two areas together, calculate what is required to raise them together to the third lowest, and so on until all new resources are exhausted.

3. Computing the Gini coefficients of results of Redistributive Amounts added to existing distributions.

After every redistributive table a new Gini could be calculated to show the change of applying that distribution.

Same for other displays: Lorenz, Bar, maps.

C. Display of Results

1. Maps in addition to graphs (Sy maps) for R.I, PAR, Redist. Amts.?

2. User should have a means of selecting which tables he wants in output just as he now can select which graphs he wants.

D. Mode of Operation

This is the time to consider shifting at least part of the program onto interactive or time-sharing mode.

Research Education F-244

Mr. D.S. Ballantine

September 29, 1976

Jean-Pierre Jallade

Research Project on Basic Education in Low-Income Countries

1. I attach the minutes of the meeting on the draft Report (in French) prepared by the Unesco Institute of Hamburg.

2. I believe that a lot more work is required on this report before we can embark on the second phase of this project - i.e., the proposed Dakar meeting and the testing of the methodology in the field. Messrs. Botti and Carelli have to be thorougly briefed on this.

3. Subsequent phases of the project may also raise some budgetary problems which I would like to discuss with you.

JPJ/nm

Attachment

Research Education

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: September 29, 1976

FROM: Clifford Gilpin

SUBJECT: Basic Education Study - Comments on Draft Report

1. On September 23, 1976 Messrs. Wilson, Verspoor, Jallade and Gilpin met to discuss the draft report Basic Education in the Sahelian Countries prepared by Messrs. Botti and Carelli.

2. It was agreed that the report could potentially meet the terms of reference which call for an operation definition of "basic education" applied to different target groups, and the tentative outline of a methodology leading to guidelines for the design of basic education programs. However, it was also agreed that substantial changes should be made both in the substance and presentation of the report so that it would provide a suitable basis for discussion with West African education specialists at the Dakar meeting in December 1976.

Changes in Substance

3. The report should make it clear that basic education does not necessarily exclude primary education and that any diagnosis of basic education issues and problems should begin with an analysis of the existing delivery system (i.e. primary education in most cases) in the country.

4. The report should focus more directly on the outline of a methodology for diagnosis and design of basic education programs.

5. The report should make it clear that attaching basic education, both organizationally and in terms of content, to a development project is an approach particularly relevant to adults but may not be appropriate to certain target groups, particularly children, or to certain situations.

6. The report places too much emphasis on reducing teacher salaries as the only solution to financial constraints and does not consider sufficiently other variables such as the use of distance learning.

7. The report should devote more attention to the methodology of evaluation of existing basic education programs, including the formative evaluation of learning achievement, as a guide for designing new programs or generalizing existing ones.

Changes in Presentation

8. There is a great deal of repetition in Chapters II and III which should be merged.

9. The overall length of the report should be reduced by half.

10. The report should be divided into a larger number of smaller chapters which could be used as discussion papers at the Dakar meeting The themes of the chapter might be:

(i) examination of formal and non-formal approaches to basic education;

(ii) suggested operational guidelines; and

(iii) problems of application.

11. More care should be taken to avoid mixing methodological advice and policy views - such as, for instance, in the discussion about language policy.

12. The changes proposed will probably require 4-6 man-weeks of rewriting which would have to be completed before the proposed Dakar meeting in the second week of December. It would not be possible to postpone the Dakar meeting because of other commitments.

cc: Messrs. Ballantine
Cole
Jallade
Wilson
Verspoor

CGilpin/JPJ/nm

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

Central Files
Research Education

OFFICE MEMORANDUM

TO: Mr. D.S. Ballantine

DATE: September 23, 1976

FROM: Jean-Pierre Jallade

SUBJECT: Sector Work on Education During FY 1976

1. As you may recall, this Department has been asked by the CPS front office to prepare a note assessing the sector work done in the education sector during FY 76. This note, together with similar notes prepared by other CPS Departments, is to be used as an input for a Bank-wide assessment of sector work by CPS during FY 76.

2. In order to collect the views of the Divisions on this subject, a questionnaire was distributed to them four weeks ago. The following observations are based on their replies complemented with personal interviews whenever possible.

3. Following the instructions included in Mr. Baum's memorandum of May 5, 1975 to the Regional Vice-Presidents on Country Sector Work, I have divided the presentation in five sections:

(a) Sector Work Output
(b) Quality of Sector Work
(c) Effectiveness of Sector Work
(d) CPS Participation
(e) Proposals for Future Action

You may wish to discuss this note - and, above all, the fifth section - with the Division Chiefs before sending it to the front office of CPS.

(a) Sector Work Output

4. The sector work in education completed by the five education Divisions during FY 76 is depicted in Table 1. Sector Memoranda - 17 of them - are already accounting for a major share of total sector work perhaps at the expense of the more traditional "PIM" reports. Three basic sector surveys on Thailand, Togo and Zaire were completed. These are comprehensive, in-depth works covering the whole education sector. Only four, more narrowly focused, sector studies were carried out. Most Sector Memoranda and Studies are still in draft form but one Division distributed Sector Memoranda in their final, white cover versions. Only basic sector surveys go beyond the white cover status.

5. Total manpower allocation to sector work amounted to 583 man-weeks in FY 76: Table 2. Unesco's contribution amounted to 55% of the total as against 32% for education divisions staff. Outside consultants provided only a marginal contribution (8%) to the overall manpower picture. CPS contribution was 5% of total and was unevenly distributed with Asia and EMENA as the main beneficiaries. Only one Division -

Latin America - claims to have received significant inputs from borrowers in doing sector work.

6. Unesco manpower was heavily concentrated on three countries where basic surveys were carried out (Zaire, Togo and Thailand) and one "PIM country" (Bolivia). These four countries account for 80% of Unesco time spent on sector work. Unesco potential is also apparently underutilized by four Divisions out of five.

7. All Divisions mentioned difficulties in reporting time spent on sector work due to confusion in appropriate coding in Time Reporting Sheets. In all instances, the time spent on sector work was probably under-reported. Under-reporting seems to be particularly high in the IAC Education Division for which the time estimates provided refer to report writing exclusively.

8. Based on estimations coming from three Divisions, Sector Memoranda require between 6 and 10 man-weeks for completion, while basic Sector Surveys range between 50 and 150 man-weeks.

(b) Quality of Sector Work

9. The quality of sector work is generally good although it varies from country to country. Three possible areas where the quality of sector work could improve are worth mentioning. First, the analysis of the education sector, although satisfactory, could be improved through a greater emphasis on issues of internal efficiency. By this it is meant how the country fares with respect to drop-out and repeat rates, use of physical facilities and teaching body, allocation of financing among levels of education and the like. Too often, Sector Memoranda take existing situations for granted and fail to pinpoint possible areas of improvement.

10. The treatment of the equity issue is a second weak area. The lack of relevant data, sometimes singled out as the main cause of weakness, is not an entirely convincing explanation because equity issues have been dealt with very satisfactorily at the project level in a number of recent cases. The least that Sector Memoranda can do in this area is to signal in advance that equity (and which type of equity?) is a problem area worth considering in identifying future projects.

11. Third, few Sector Memoranda deal with the external efficiency of education systems adequately. To be sure, the relationships between economic development strategy and education strategy are largely overlooked and education appears too often as a self-contained activity with little or no relationships with the outside world. The relationships between educational development and the labor market, employment and the distribution of income are, in many cases, not even mentioned. Sector Memoranda cannot possibly provide detailed analysis of those issues but they should at least show that some interaction is going on between education and the economy.

12. The treatment of external efficiency issues could be considerably improved by greater inputs from the various policy and projects departments of the Bank and by closer coordination with country economists. Many policy papers presently in circulation do have important implications for education and training which should appear more clearly in sector work.

(c) Effectiveness of Sector Work

13. Opinions about the effectiveness of sector work vary widely among Divisions. Only two Divisions believe that sector work is having a decisive impact on project identification while two others stress its contribution to preparation and appraisal. All Divisions but one are skeptical about using Sector Memoranda as an input to CPPs. This calls, once again, for closer cooperation between sector work and overall economic work.

14. Only two Divisions stated that sector work would contribute to improve relationships with borrowers. It seems to be difficult to improve on this as long as Sector Memoranda are not systematically distributed to borrowers. The usefulness of Sector Memoranda as "entry" documents in countries where Education Divisions have never been active was underlined by two Divisions.

15. Two Divisions visualize for the future a new sequence of operations for the project cycle which would then consist of three steps: initiation by a Sector Memorandum followed by the "Project Brief stage" leading directly into preparation and appraisal.

(d) CPS Participation and Procedures

16. Three Divisions declared that they would like to have more CPS staff participating in sector missions and subsequent report writing. While the contribution of CPS to the review process of sector work was welcome, only one Division felt the need for specific guidelines for Sector Memoranda.

17. The expected lending program as proposed in CPPs is a decisive factor to select countries eligible for sector work. At least two Divisions, however, claim that a comprehensive sector work program aiming at full coverage of the region in five years should be set up.

18. Efforts to formalize the reviewing process by including representatives of CPS and Country Program Departments participating in the final draft are being made in some divisions. Others indicated a lack of interest in commenting from Programs Departments and, in one instance, wished to have received more advice from CPS.

(e) Proposals for Future Action

19. Type of Sector Output. One of the recommendations made by management to increase the effectiveness of sector work was to increase the emphasis in specific, problem-solving sector studies at the expense of time-consuming surveys. Mr. Baum's memorandum on the subject[1] even indicated that we should aim at a target of 50% of sector work manpower devoted to special studies.

20. During FY 76, the five Divisions devoted about 71 man-weeks to sector studies,[2] that is, about 12% of available manpower and none seem to be very keen in increasing this share in the future. In the view of what was said earlier about the present weaknesses of sector work, sector studies could usefully concentrate on some of those issues especially when the basic knowledge about one particular country is already considered as satisfactory. The effectiveness of sector work could be enhanced by more issue-oriented, problem-solving reports.

21. Unesco Participation. The concentration of Unesco manpower on "big jobs" (basic surveys) may need to be reassessed in the light of the CP review which is presently underway. Ways and means to ensure a better utilization of Unesco manpower by all Divisions will, hopefully, emerge from tee review.

22. Programming of Sector Work. The Divisions are apparently programming their sector work with little or no coordination from Country Program Departments in spite of the recommendations made to the Regions to assign overall responsibility for coordinating the programming to the Chief Economist in the Region in cooperation with the Assistant Projects Director. No doubt that closer coordination of programming among sectors would help to link education strategies more closely with economic strategies.

23. CPS Intervention. When and how? The question goes beyond the intervention at the reviewing stage to the extent that direct participation in missions and subsequent report writing is requested. A CPS commitment to a certain number of man-weeks of sector work during a given year would help the Divisions to program their work.

Attachments

JPJ/nm

1/ Memorandum of May 5, 1975 to the Vice-Presidents on "Status Report on Country Sector Work".

2/ 60 man-weeks on Mauritius alone.

Table 1

Sector Work Completed in FY 76

	WAPED	EAPED	LACPED	AEPED	EMENAPED	Total
Sector Surveys	1	1	-	1	-	3
Sector Memoranda	3	5	5	2	2	17
Sector Studies 1/	-	1	2	1	-	4
Cooperative Program Reports (Including PIM)	1	-	1	-	-	2
Others 2/	2	2	1	-	12 3/	17

1/ i.e. studies focusing on one specific aspect of the sector.

2/ SSuch as Education chapter/annex in Economic Report, "Regional" Studies, etc...

3/ Includes education chapter in Economic Reports, technical memoranda and comments, notes for CPPs, etc...

Table 2

Allocation of Manpower to FY 76 Sector Work
(Man-weeks)

	WAPED	EAPED	LACPED	AEPED	EMENAPED	Total Man-Weeks	Total %
Education Division Staff	30	60	8	37	50	185	32
Consultants	11	7	1	0	28	47	8
Unesco	47	190	41	44	-	322	55
CPS	1	1	4	13	10*	29	5
Total	89	258	54	94	88	583	100

* Special study for the TAS Division in EMENA.

Research - Educ...
undated
8/27
RB

August 26, 1976

Mr. Peter M. Lewis
17 Southernhay Ave.
Clifton Wood,
Bristol BS8 4TJ
England

Dear. Mr. Lewis:

It was good news to hear that UNESCO have commissioned you to carry out a study of all the uses of VTR in non-formal education. This will not only be useful and important but also very timely since many Governments are at last facing the multitudinous problems raised by trying to formalize the non-formal or perhaps how to make it work without formalizing it. VTR is at last on the move but so far only when stimulated by outside influences. I know of three countries which have the equipment, albeit not the new light weight, but never use it except for recording ceremonies with important people. I hope that the result of your work will show countries that VTR can be used and to good effect. The Bank invited the Chatuverdi/Heyn team up for a seminar and it was heartening to note the effect it had on colleagues when they could see what it is all about especially since the team used the participants as raw material for a programme. (You will of course already have their articles etc. on their work in Rajasthan and Ethiopia as well as the studies being done by the UNESCO Mathur/Abrahamson group.)

At the moment I can add nothing to the present sum of knowledge but am shortly going on mission and will be discussing out of school education with at least two Governments and will let you know if there is anything to report. In the meantime I will check whether Mr. Futagami knows about your study - he is communications in education - and also send a copy of your letter to the nutrition in rural development people. At one point we wrote a good deal of VTR equipment into a project and they may have news of its progress.

Sincerely yours,

Alexander Shaw
Population Projects Department

cc: Mrs. Domingo
AShaw:tv

General/PNP

Research - Education

Mr. D. Jamison

August 11, 1976

Shigenari Futagami

The Bank Study on Educational Radio -
Mr. Jamison's Memorandum of August 9, 1976

I would like to add one more option; that is, to select a number of the best case studies and to compile them into a book together with two overview papers and an annotated bibliography. I prefer, however, the option No. 3 which Mr. Jamison explained in para. 4 and 6 because of more readability and earlier publication.

cc: Messrs. Ballantine, Hultin, de Tchihatchef.

SFUTAGAMI/sg

Research Education

Mr. D.S. Ballantine July 19, 1976

Shigenari Futagami

Department Work Program - The Bank Study on Educational Radio
An Editorial Meeting at Stanford University

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1. Since the three compilers of the Study, Messrs. Jamison, McAnany, and Spain, and Mr. Hultin and I had, in December 1975, an intermediate meeting at the Bank for reviewing the progress of the Study, the compilers have tried to improve the contents according to the guidelines given at the meeting. The major points modified are as follows:

a) The entire contents were reduced to about two-thirds. The compilers obtained the consent of all the relevant authors for the necessary reduction;

b) A summary table was added to nearly all of the case studies; and

c) The case study on the community use of radio in the Canadian North was rewritten by the author.

2. The three compilers and myself attended a conference on Communication Policy and Planning for Education and Development at Stanford University July 13, 1976; we made use of this opportunity to get together to discuss the final draft of the Study report. We agreed that the draft was now ready to be handed over to a publisher.

3. We did, however, find necessary the following minor additions and changes:

a) The composition of the case study on the in-service training of teachers through radio and correspondence in Kenya should be revised so that numerous redundant descriptions may be eliminated.

b) The synthetic studies (i.e. part one: overviews) should be placed after the case studies instead of before them.

c) An appealing title for the whole report (e.g. "Is Radio an Appropriate Medium?" "Innovative Radio") should be sought.

d) A possibility of adding a new case study on radio school broadcasting in the Dominican Republic (by Robert White) will be considered provided that this does not delay the report's publication; Mr. Jamison recommended this addition because of the Study's quality and timeliness.

4. Mr. Jamison's paper, "Radio's Role in Formal Education" should be revised following Mr. Hultin's suggestions (a memo of July 15, 1976).

5. I now feel that the Bank can agree that the compilers are ready to enter into formal negotiations with prospective publishers.

cc: Mr. Hultin, Mrs. de Tchihachef.

SFUTAGAMI/sg

Research - Education

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. D.S. Ballantine DATE: July 30, 1976

FROM: Shigenari Futagami

SUBJECT: San Francisco: International Conference
Communication Policy and Planning for Educational Development

1. According to the terms of reference dated June 25, 1976 I joined the conference on Communication Policy and Planning for Education and Planning at Stanford University that was held under the joint sponsorship of USAID, the National Institute of Education (NIE) of HEW, and the Stanford University from July 11 - 16, 1976. The conference's agenda is shown in Annex 1.

2. About 110 participated in the meeting who belonged to various sectors which were relevant to development support communication. Among them, about forty came from LDCs; almost all of them are policy-makers in national government organizations controlling education, agriculture, information or broadcasting. LDCs' participants are listed in Annex 2. The countries were selected following the USAID's advice.

Objectives

3. The present situation in the field of educational technology with its many novel elements gives rise to the need for a face-to-face meeting among educators, researchers, project managers and engineers. This conference was intended (i) to improve the quality of decision-making in planning the delivery of education and information services by understanding what research and technology tell us, and (ii) to define further research and evaluation based on policy-makers' needs.

Achievements

4. With all the usual defects which are inherent in any conferences, many participants agreed that the conference was successful in bringing numerous policy-makers in LDCs together with researchers, engineers, and staff members of bilateral and multilateral aid agencies. All of them are working for education, development and communication technology. They exchanged their opinions, experience and plans always from practical points of view. Through these discussions on concrete data which were gathered from various parts of the world, the following salient consciousness emerged.

Incorporation of Broadcasting with Education

5. Quite a few speakers noted that much progress had been recognized in the field of communication planning. More practicable plans have been made and more high ranking officials in LDCs' governments now understand the impact of media. LDCs' ministries of education have been trying to use media not as sporadic enrichment but as essential tools to teaching.

6. The well-known examples of these efforts are El Salvador's secondary education and Ivory Coast's primary education, both using instructional TV. While the conference often referred to these two on-going projects, the conference has added two encouraging experiences - Kenya's teacher training making the most of radio program and correspondence course materials; and the other, Korea's instructional broadcasting for the elementary and middle schools.

(a) Kenya's Radio Teacher Training Project

7. Tied in with printed materials and with master teachers' supervision, Kenya's Correspondence course Unit has been using radio programs for upgrading teachers' quality. It offers strictly academic material, with the goal of aiding more teachers to improve themselves professionally by passing a qualifying examination thus making them eligible for salary increase. Through this system more teachers are becoming more qualified; this was one of the principal reasons why the Ministry of Education decided, in 1974, to give the four-year course of primary education free to all children. The Correspondence Course Unit has always been active in encouraging better teaching and quite often even in initiating curriculum improvement.

(b) Korea's School Broadcasting

8. Korea's approach is more direct aiming at pupils in classrooms. The Korean Government, convinced by the three-year experimental operation of ITV, is now determined to expand ITV to all the elementary and middle schools making the ITV use in all classrooms mandatory. One-third of the teaching activities in classrooms is to be done by ITV so that classroom teachers can give more attention to individual pupils.

9. An independent governmental organization, the Korean Educational Development Institue (KEDI) was established in 1973 with four major responsibilities in the order of priority; (i) development of new educational systems; (ii) studies on curriculum; (iii) educational policy studies; and (iv) educational broadcasting. KEDI has its own broadcasting facilities (two TV studios and two radio studios), and about 90 staff members are working specifically for broadcasting (including 53 of technical staff). However among KEDI's total 300 staff members 85 researchers are working for educational planning, curriculum improvement, and evaluation. Here ITV is clearly meant for a tool of curriculum improvement. This organization is ideal.

Decentralization

10. A strong argument for decentralizing broadcasting systems prevailed among the conference participants. An agricultural development officer from Honduras stressed the need of media that can respond to grass-roots requests.

The diversities in customs, languages and culture in various localities were discussed not as a bottleneck but as the facts that any media specialists should live with. Even womens lib advocators at the conference, tried to call the audience's attention to the life-style of women in other regions.

11. The former General Manager of the Pakistan TV introduced Pakistan's Integrated Rural Development Project (IRDP) now under the control of the new Ministry of Rural Development. They recognized that small land holding which IRDP is encouraging is not always inferior to large-scale farming in terms of productivity, and that, among the Markaz that IRDP has organized unifying each fifty villages throughout Pakistan, traditional landlords are now finding it more inconvenient to exploit peasants' labor. Some Markaz are now seeking to have their own radio station.

12. J. Lewis of the Woodrow Wilson School, crystalized, in his opening speech, his new conception of development strategy into the following seven major modifications to the "conventional wisdom":

i) more interest in the market and less confidence in planning;

ii) a priority for agriculture;

iii) accent on labor-intensive, smaller scale production;

iv) a penchant for decentralization;

v) demand for equity with respect to employment and incomes;

vi) politics of participation and reform; and

vii) changing attitudes about population policy.

13. All these seven strategies are to be interrelated; Lewis said "there is recognition of the common need that a modernizing agriculture and modern but labor-intensive, smaller-unit manufacturing have for stronger growth centers - smaller and more numerous than cities - centers at which many of the inputs-supplying, outputs-processing, commercial, and training service institutions can interact."

14. Following up these modifications, H. Dienzeide of Unesco classified the scope of communication media as follows:

(i) Mega - satellite communication; (ii) Macro-nationwide network; (iii) Meso - national network and local distribution; (iv) Micro - within institutions; and (v) mini - individualized information. His emphasis was placed on radio broadcasting based on a hybrid system with a network and local independent stations (i.e. Meso).

Educational Radio

15. Though, for a while, the conference's attention was focused on India's ETV experiment with the ATS-6 satellite, many of the participants were anxious to make the best of the small media, especially radio. Even in the United States, the National Institute of Education intends to secure a $500 million budget for distributing radio receivers and slide projectors to every school. W. Schramm of the East-West Center summarized his speech saying, "First of all decide the needs; then start considering the cheapest medium and select a less expensive medium or combination of media serving bigger needs; and thus save money spending it for training and other preparations." Some participants asserted that visual communication, especially of moving objects, are indispensable to teaching of, for instance, some aspects of science, most agreed that the major part of teaching can be done with the combined use of radio and printed materials.

16. In the field of non-formal education, Tanzania's radio campaign presented the conference with an encouraging case. With SIDA's assistance, the Institute of Adult Education organized, in 1970, a nationwide adult education study campaign (titled "the choice is yours") on the purposes of the election mobilizing three media: radio, supporting printed materials, and radio study group. This campaign was followed up in 1971 (the 10th anniversary of Tanzania's independence) by another radio program series which was named "a time for rejoicing" encouraging the nation to think over Tanzania's struggle and achievement since its independence. (The total costs of this campaign was only $600,000).

17. In 1973, a larger campaign was run, called "man is health". This campaign was particularly meaningful since this was more action-oriented. Evaluation clearly indicated that among about 75,000 radio study groups nearly one-third of them cleaned each household, and one-fifth improved latrines and destroyed containers of stagnant water. (This campaign cost $0.5 per active participant.) Throughout these campaigns, Ujama villages scored significantly higher than non-Ujama villages. A new campaign, "food is life", started in mid-1975.

Satellite Communication for Education

18. India had been active in organizing community listening groups (radio forums in villages) but it seems now that much of their attention has been shifted from radio forums to the on-going Satellite Instructional TV Experiment (SITE). An Indian engineer working for SITE reported that with all the predicted managerial and technical difficulties the Indian Government would accomplish the big experiment by late July.

19. SITE had to pay desperate efforts for selecting about 2,350 villages to install TV sets (receiving TV signals directly from the ATS-6 satellite) starting from the most backward areas, and then SITE was confronted with the challenging task of securing electricity for these TV receivers. Next came the problem of receiver and antenna maintenance. SITE managed to solve these problems by setting up one maintenance center plus three sub-centers in each of the six pilot states. (In addition, since SITE is designed as a hybrid system, TV signals can also be rediffused through ground transmitters to ordinary TV receivers.)

20. The quality of earth stations and receiving equipment matched the excellent quality of the satellite; the TV pictures received in the remotest villages were often clearer than those received in cities from local TV stations.

21. The total program hours needed for SITE is about 1,200, i.e. four hours daily. The four hours are divided into the morning (1.5 hour) and evening (2.5 hours) segments. The morning programs aim at schools, and the evening programs are telecast for communities dealing with agriculture, health, family planning, and culture. Most programs are broadcast in four languages. Audience Profiles and Needs Assessment Studies were prepared and continuous feed-back systems were set up.

22. Some preliminary findings of these studies are as follows:

	Hypothesis of SITE impact (in schools)	Finding
i)	Attendance of children will increase.	Negative
ii)	Children will have better language development.	Positive. Significant in some states.
iii)	Children will seek more information.	Positive
iv)	Scholastic achievement will improve.	Negative
v)	Children will ask more questions; better interaction with teacher.	Negative

Teacher attitude towards SITE was warm and positive.

23. Encouraged by these technical feasibilities and program impact, the Indian Government has decided to have its own domestic communication satellite(s) again with NASA's help toward 1981. The Government also is thinking to use tethered balloons as a stop-gap until then.

24. An educator-journalist of the Philippines (the Deputy Director of the Bank Pre-Investment Study on Mass Media for Education) warned the conference of the too triumphant attitude toward the satellite use for education, emphasizing the need of cautious evaluation. The staff of the Indonesian Government, that has just launched its own domestic communication satellite, remained silent throughout the meeting.

25. As regards the use of tethered balloons, KEDI's (Korea) director admitted that KEDI had been suffering from the malfunction of the balloon communications system which KEDI adopted. The difficulty is, he said, mainly due to the balloon's poor adaptation to weather conditions. The Director-General of the Nigerian Broadcasting Corporation who has decided to use ten balloons for the country's broadcasting and telephony appreciated the explanation on Korea's experience.

Follow-up

26. Dieuzerde of Unesco, judging from many governments' anxiety to set up national and regional schemes of using mass media for education, urged the international aid agencies to help these governments start operating any feasible communication systems instead of demanding sophisticated institution buildings from the outset.

27. C. Block of USAID said to me that, under the Secretary of State's recent advocacy of the better use of communication technology, USAID was going to expand its activities in this field identifying viable plans of using mass media for LDCs' development. He said he would keep the Bank informed of USAID's findings.

28. A. Melmed of the National Institute of Education (another sponsoring agency of the conference) is satisfied with the achievement of the conference; he hopes to organize the similar meeting regularly once a few years, and, for this purpose, he wishes to establish a standing planning body. As the first step, a plan is presented to start publishing a periodical to be distributed among LDCs' educators, policy makers and engineers in the field of educational technology. Melmed and I agreed that, if a similar meeting is held, more dialogues between education policy makers and engineers should be encouraged.

cc: Messrs. Hultin, Zymelman, Chittleburgh, Gilpin, Chiefs of Regional Education Divisions;

Messrs. Vasudevan, Weiss, Shaw, Jamison.

SFUTAGAMI/sg

Annex 1

CONFERENCE PROGRAM

1976.

SUNDAY, July 11

4:00 p.m. — Welcoming Remarks
John K. Mayo and William F. Massy, Stanford University
Arthur S. Melmed, National Institute of Education
Clifford H. Block, Agency for International Development

4:30 p.m. — "Newer Concepts of Development Strategy: Their Bearing on Education and Communications"
John P. Lewis, Princeton University

MONDAY, July 12

9:00 a.m. — "Current Goals and Models of Development: Implications for Communication Planning"
Speaker: Aslam Azhar, Pakistan Television
Panelists: Denis Goulet, Overseas Development Council
Christopher Kolade, Nigerian Broadcasting Corporation
Moderator: Stanley D. Handleman, USAID

2:00 p.m. — "Communication Planning in Education: State of the Art"
Speaker: Henri Dieuzeide, UNESCO
Panelists: Philip Coombs, International Council for Educational Development
Vijaya Mulay, Centre for Educational Technology, India
Moderator: Emile G. McAnany, Stanford University

TUESDAY, July 13

9:00 a.m. — "Criteria for Selecting Appropriate Media Systems"
Speaker: Wilbur Schramm, East-West Communication Institute
Panelists: Hernando Bernal, Accion Cultural Popular, Colombia
Alan Hancock, UNESCO
Majid Teheranian, National Iranian Radio and Television Organization
Moderator: David Hawkridge, British Open University

2:00 p.m. — "Economic Analysis of Communication Media for Education and Development"
Speakers: Dean Jamison, World Bank
Steven Klees, Cornell University
Stuart Wells, San Jose State University
Panelists: William Coleman, U.N. Economic Commission for Africa
Henry Levin, Stanford University
Moderator: Arthur Melmed, National Institute of Education

WEDNESDAY, July 14

9:00 a.m. "Critical Decision Points in the Implementation and Evaluation of Media Systems: Six Case Studies"

Satellite Instructional Television Experiment (SITE)
Speakers: Kiran Karnik, Space Applications Centre, Ahmedabad, India
(E.V. Chitnis video tape on SITE)
Moderator: Clifford Block, USAID

10:45 a.m. Case studies (continued)

A. "Correspondence Teacher Training with Radio in Kenya"
Speakers: Peter Kinyanjui, Institute of Adult Studies, Nairobi, Kenya
Arthur Krival, University of Wisconsin Extension
Moderator: Herbert Marchl, UNESCO

B. "Educational Reform with Television in El Salvador
Speakers: Irma Chavez, former Director of El Salvador's ETV System
Robert Hornik, Stanford University
Moderator: Ricardo Morales Basadre, Ministry of Education Peru

THURSDAY, July 15

9:00 a.m. Case Studies (Continued)

"Radio Campaigns for Adult Education in Tanzania"
Speakers: Julius Matiko, Ministry of Information and Broadcasting, Tanzania
Hugh Barrett, Agricultural and School Programs Consultant, England
Moderator: Peter Spain, Stanford University

10.45 a.m. A. "Telemedicine in Alaska: The Applied Technology Satellite Demonstrations"
Speakers: Martha Wilson, Alaska Area Native Health Service
Edwin Parker and Dennis Foote, Stanford University
Moderator: Pat Pearce, Canadian Radio-Television and Telecommunications Commission

THURSDAY, JULY 15, 1976

10.45 a.m. (cont) B. "Systems Planning for Television and Educational Reform in Korea"

Speakers: Yung Dug Lee, Korean Educational Development Institute
Robert Morgan, Florida State University

Moderator: Yona Peless, Everyman's University, Israel

2:00 p.m. "Synthesis and Discussion of Planning Lessons Emanating from Case Studies"

Moderator: Everett Rogers, Stanford University.

PARTICIPANTS FROM LDCs

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Guatemala

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Vice Chairman
State Film Authority
Pakistan

BERNAL, Hernando
Accion Cultural Popular
Colombia

CALDERON, AURELIO B.
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Philippines

CHAVEZ IRMA
School-TV
El Salvador

CHITRAKAR, PREM LAL
National Planning Commission
Nepal

CHOWDHURY, KAMALUDDIN
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PARAVICINI, IGNACIO
Coordinator Nacional Del Programa de Desarrollo Rural
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PELESS, YONA
Center for Educational Technology
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ROMERO, GONZALO
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TELL, SAID
Dean, School of Education
University of Jordan
Jordan

Research - Education

Mr. Dean T. Jamison July 15, 1976

Mats Hultin

"Radio for Education and Development"
Chapter II--Radio's Role in Formal Education: An Overview
Comments

1. I have gone through your Chapter on "Radio's Role in Formal Education." My main impression of your chapter is that your conclusions support the use of educational radio more than the findings of the case studies do. It is conspicuous that the unit costs of educational radio have been comparatively high despite the fact that they could be low if the audiences have been sufficiently large. Your own reporting of the case studies raises, therefore, doubts about your conclusions, particularly considering the fact that the educational advantages of educational radio are not that impressive. You might want to rephrase your conclusions accordingly.

2. Would it be feasible to compare this study with the IIEP study some ten years ago on the use of mass media? What has happened? What are the improvements?

3. You state in two conclusive statements on page 35 that your proposals "of the two preceding subsections will be politically inacceptable." I tend to agree with your conclusion, and I feel that you might moderate your formulations to make them more saleable.

4. Your Chapter contains some mathematical expressions on pages 5 and 11. I have no objection to them as such, and they are not that complicated. I question, nevertheless, their place in an overview chapter. I have a similar objection to pages 31 and 32, "Modelling Cost-Effectiveness." They appear a bit out of context.

MGH/rcm

cc: Messrs. Ballantine, Futagami

Research Education

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

Central Files

OFFICE MEMORANDUM

TO: Files

DATE: July 12, 1976

FROM: R. Grawe

SUBJECT: Meeting with D. Fiske of High/Scope Educational Research Foundation

David Fiske is the director of international programs at the High/Scope Foundation. He joined them about a year ago after several years with USAID in Latin America, primarily Chile. High/Scope is a non-endowed foundation specializing in curriculum reform and development for pre and primary schools and in the training of child development facilitators, whether they be teachers, parents,or paraprofessionals. The foundation has a staff of about 85 and a budget of $2.5 million.

The main points covered in our discussion were the following:

1. High/Scope has been involved in the provision of technical assistance to a number of projects in Latin America, although their role has been primarily confined to training with little input yet into project design or evaluation.

(a) The president of the foundation, Dr. David Weikert, provided technical expertise in the development of the day care curriculum associated with the Cali, Columbia "Human Ecology Research Station." Although administrative weaknesses and other difficulties have delayed the final report of this project, preliminary results have been widely disseminated.

(b) High/Scope has provided technical and training assistance on a second project in Columbia directed at families in Bogota with infants at high risk. A general description of the project design and of the initial results of the pilot phase is attached. Fiske said that he had been told informally that a first cut at the data seemed to show greater health gains for the group of infants in the child stimulation program than for other groups which were receiving only nutritional food supplements. The Bogota project has shown that it is possible to adapt training techniques for community based paraprofessionals developed for use in the US to an LDC environment.

(c) Finally, High/Scope has participated in two relatively short training programs, first in Peru and subsequently in Chile. In Peru, brief training was given to child care trainers working in a remote rural setting (Puna), in the context of an integrated rural development project sponsored by UNICEF. Subsequent evaluation by USAID has been positive on the impact of the training on day care activities. High/Scope staff have not actually yet visited Puna. The Chile program occurred in the context of University extension training for day care workers and has also had a positive impact on day care curricula.

2. High/Scope's continuing evaluation of its Ypsilanti intervention program of the early 1960's has indicated some interesting long term results. Although the early cognitive gains of the experimental group

lost statistical significance relative to the control group in the third and fourth grade (a pattern now well established), the experimental group showed distinct increments in achievement in high school and consistently had significantly fewer placements in remedial and special education classes. On the basis of these cost savings along it has been estimated that the initial intervention earned an internal rate of return to the Ypsilanti school system over 8 percent p.a.

3. Possible areas of collaboration were discussed, including the visit to Ypsilanti of ECDPH staff members to observe and discuss first hand High/Scope training in curriculum reform and preschool intervention. Fiske also broached the possibility of bringing Weikert to the Bank for a presentation of High/Scope's Latin American experience to interested staff members. I agreed that both these possibilities would be discussed within the division and that I would be in touch with Fiske later in the month.

R. Grawe:da

Attach.

cc: T. King
J. Simmons
D. Jamison

IBRD LANGUAGE SERVICES DIVISION	
CONTROL No. E-1325/76	DATE: June 8, 1976
ORIGINAL LANGUAGE: Spanish (Colombia)	
DEPT. Dev. Econ.	TRANSLATOR: TS/lb

A Study on Malnutrition and Mental Development in Underprivileged Families in Bogotá

General design of the study

The work of the definitive phase of the Project is designed in the form of experimental research consisting of a prospective study of various alternatives tried out with children from families considered to be exposed to a high risk of malnutrition. The study is started before the children are born, at the time the mothers reach the sixth month of pregnancy. The period of action and observation extends until the children reach age three, after which observation and followup are continued through the basic education period, to allow measurement of relatively long-term effects.

The families for the study are selected from among the population of certain quarters in the southern part of Bogotá, on the basis of two criteria:

1. The mother must be in the first or second three months of pregnancy, and
2. At least half of the children under five must be undernourished.

The first criterion was adopted so as to be able to start the study as early as possible in the child's growth and development period, and also to fully cover the period termed "critical" or "vulnerable", i.e. that of greatest growth of the central nervous system, between the final third of the pregnancy and some point between six months and two

years of age. The second criterion serves to ensure that the children are at a high risk of being born or becoming malnourished, if no outside assistance is provided.

Once selected, the families are assigned at random to one of six basic groups, viz.:

Group A: Receives a complete natal care and child health program, entirely free of charge (including free drugs).

Group B: Besides the health program under A, receives a nutrition supplement for the entire family during the period between age six months and 36 months of the child concerned.

Group C: Besides the health program, receives nutrition supplement for the entire family between the sixth month of pregnancy and the sixth month of age of the child concerned.

Group D: Besides the health program, receives nutrition supplement for the entire family from the sixth month of pregnancy to age 36 months of the child.

Group A1: Besides the health program, is included in a child stimulation program from shortly after birth of the child through age 36 months.

Group D1: Besides the health program and nutrition supplement received by Group D, is included in a child stimulation program from shortly after the birth of the child through age 36 months.

Throughout the period, all the groups are included in an identical and complete prenatal and natal protection and maternal and child health program, together with a uniform measurement and observation program. The measurements include development of the pregnancy, nutritional status and health of the mother, physical growth of the child, social factors, mother-child interaction and psychology.

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Results of the pilot phase to date

Although the definitive stage of the study has not yet been started as regards child stimulation, important observations of this type of program in the environment of underprivileged urban families can be derived from the results of the pilot phase to date.

Broadly speaking, a child stimulation program based on visits to homes by subprofessional personnel appears feasible in this environment. Specifically, the attitude of the families to the program has been found to become increasingly positive from day to day, and the mothers of child-minders have found the activities easy to understand and carry out.

When the program was first offered to the pilot-study families, their attitude was one of passive acceptance. In the words of one of the supervisors, "they said yes because it required an effort for them to say no". This initial attitude changed quite quickly; by the end of

the third or fourth visit the members of the family were beginning to express their enthusiasm about what the visitor was doing and their interest in having the visits continue. What is more, the visits were observed from the start by other mothers living in the same building or neighboring houses, and they quickly began to ask whether the visitor would be able to "come and work with my child". One of the neighboring mothers said to one visitor: "Since you don't come to my place, I'm going to copy everything you do (during the visits to the other family) and do them with my boy". It has also not been unusual for participating mothers to spontaneously recommend a neighbor with a small boy for the program.

One thing that has been somewhat surprising has been the considerable interest shown in the program by the fathers. On one occasion, when the mother had to go away suddenly at the time set for a visit, the father of the child insisted that the visit go ahead, with himself taking care of the child. And it must be added that the session was a very good one! The mothers constantly tell the visitors how interested the fathers are in learning more about the latest activities done with their children and their progress.

In all cases, the main persons taking care of the children have been the mothers, although in three families this responsibility was shared with the oldest girl (aged 6, 8 and 9, respectively).

It was feared to begin with that when mothers saw that their children were in good hands with the visitor, they would seek to leave them with her while they went on with their household chores. This is in fact just

what happened during the first visit in some cases, but the visitor insisted that the mother stay and she did so. From the second visit onward, the problem never arose again. In one instance, the mother had been physically maltreated by her husband and was clearly under some stress; however, when the visitor suggested postponing the session she said: "No, let's go ahead; it occupies me and pushes all these worries out of my head". And a very satisfactory session was held.

It was observed during the visits that the degree of participation by the mothers increased. In the optimum situations it was noted that the child played by himself, with suggestions or occasional help from the mother, and virtually no direction from the visitor during the greater part of the hour, apart from incidental comments.

Additional evidence that the mothers understand and appreciate the activities is provided by the obvious changes in the number and availability of toys in the homes. The visitors have handed over a few items or left some scrap materials which the mothers have then made into playthings themselves; in certain cases the number of toys has increased considerably because the families have started to buy cheap ones for the youngster, and also because more expensive toys which used to be used more as decorations are now being given to the children to play with.

Some other general observations are that the mothers and other family members now allow the children to explore the objects around them (and comment proudly on this to the visitors), and also let them do things formerly thought to be undesirable. For example, Oswaldo's mother proudly announced that her little boy had gone into his grandfather's

shop and started playing with the oranges, "but because grandpa knew why he was doing it, he didn't get cross with him". The mothers have already stopped punishing or scolding their children for putting things in their mouths or for using them in ways inappropriate for adults. In general, the family members have become more careful and appreciative observers of the children.

One mother commented to the visitor: "They are very simple things, which one can do and make easily oneself; but I would have had no idea it could be done if you had not shown me".

- In terms of changes which become quickly apparent, the program has proved to be effective with the children. There have been changes in the children that are visible not just to the program staff, but to their families too.

The following changes have been evident, to a greater or lesser extent, in nearly all the youngsters as the visits have progressed:

- The children have begun to recognize the visitors and look forward to their coming.
- The children have begun to appreciate and to look forward excitedly to the presentation of new materials and activities.
- Oswaldo's visitor can be sure that as soon as she goes into the house he will go straight to the bag she carries the toys in, take it from her and sit on the floor to open it, tip everything out and see what's there.
- The children's attention span in the activities has lengthened

considerably and they no longer seek emotional support from their mothers. Their interaction with their mothers has changed into one of sharing the activities with them; the same has come about in relation to their fathers, as can be seen when the fathers are there during the visits and also from what the mothers say. Jairo's mother now knows that whatever time his father comes in, he'll wake the boy up and they'll play together on the bed. "And once that's happened, nobody stays asleep", she added with a note of pride.

- The amount of talking done by the children appears to have increased; they also seem to laugh more and have increased their speed of reaction to activities, materials and new situations. All the children have not changed in exactly the same way: their initial situations and forms of behavior were very different, even for those of the same age, some being very passive while others were highly reactive. In come cases progress has definitely been on the slow side, while in others there have been partial reverses after initial advances. However, there have been changes in all of them, and in many the results are highly promising.
- Also in terms of changes quickly apparent, the program has shown that it can help change the families as a whole.

As regards the patterns of intrafamily interaction, there have also been important changes. The mothers say they now spend much more time playing with the children, and also that (as already noted) the fathers are showing much more interest in them. In various instances the mothers say that the fathers are now spending much more time than before playing with the youngsters in the evenings and weekends.

In almost all cases there have been changes in the arrangement of furniture and other objects in the rooms, or in the degree of order or cleanliness in them and also changes for the better in the children's diet; all of these factors imply an improvement in the environmental conditions in which the children are growing up.

Finally, there appear to have been certain changes (which it would, of course, be very difficult to attribute directly to the effect of the program) in the patterns of conjugal and family relations. In various cases comments by the mothers indicated that the level of communication between husband and wife had risen considerably, due at least in part to the fact that they now had something to talk about: the program and how their child was getting on. Also, in two cases, the wife's mother-in-law has changed from a hostile and critical person into one who is greatly interested in her grandson and his development, upon seeing the changes in him, and through this she has become more communicative and positive with the mother and the family as a whole.

- Finally, it has been demonstrated that a group of persons of relatively low professional level can be motivated and trained to be home visitors in a child stimulation program. The visitors have been able to understand the activities and to grasp their purpose and the general aims of the program; to begin with they waited passively to be told what to do and learn, but now they demand what they believe they need to do their job better.

Implications of the work to date

As already noted, the work of the study has not yet been completed, although some positive preliminary indications have emerged. Two essential

aims remain to be achieved: first, ensuring that the type of changes apparent in the short term can be duplicated and extended in the better controlled definitive study run over a much longer term, and second, ascertaining that the type of work which has proved to be feasible in this study can reasonably be repeated on a much larger scale. Although there is perhaps sufficient evidence that the first is possible, the second may require some study.

Especially in the area of child stimulation, the purpose of the Project study is twofold: application and basic research. In other words, the aim is to ascertain whether the child stimulation program can prevent delays in psychological development which would otherwise occur, and at the same time to determine up to what point the reduction in variation of levels of stimulation contributes to the reduction in variation of levels of psychological development. In practical terms, we have sought to create a child stimulation program the effectiveness of which as regards services will be unquestionable, in order to evaluate its effects on psychological development. Once it is established that a maximum program level has favorable long-term effects, it should be checked whether similar effects can be achieved using ever-simpler and lower-cost methodologies. This stage of replication with simplification and cost reduction will not be carried out directly in the Project, but will be handled by other divisions of the Instituto Colombiano de Bienestar Familiar, or other government or private organizations.

What are the possibilities of extending the range for replication

of a stimulation program at a more reasonable cost? First, it would be possible to serve a larger number of families per visitor, for each supervisor to take care of a larger number of visitors and for each professional to look after a larger number of supervisors. Other possibilities include the use of group meetings of mothers to extend the program, the use of mothers as visitors to their neighbors, the use of voluntary personnel, the creation of "resource-mothers" who would serve as focal points for the passing on of information of their neighbors, the use of mass media, etc. It is probable that some of these techniques would be used in combination and not separately.

In conclusion, it is worth noting two important characteristics of the Child Stimulation Program which make it unique in its implications and possibilities for application in the general context of Social Welfare: first, the fact that its basic purpose is the PREVENTION of a low intellectual yield on the part of underprivileged children as a result of affective and psychological deprivation, an aim which is considered of greater social impact and wider scope than the efforts to remedy or reduce retardations already caused; and secondly, the fact that the type of methodology used is based on carrying out actions oriented toward the family as a whole and not just one individual. As a result of this approach, besides its effects being exercised in the general context of the family and hence being wider-ranging, it makes it possible to carry out a great variety of other actions designed to improve family life, through the social welfare instructional work and programs already in existence and without entailing the establishment of new institutions or the construction of costly facilities.

Research Education

Mr. Benjamin King

July 8, 1976

Manuel Zymelman MZ

Economic Cost of Internal Brain Drain

The paper presents a methodology by which it is possible to measure the economic impact of an educational reform. The utilitarian argument for free schooling has been for a long time that the pool of abilities available for education will increase with free access to school. Attempts to measure pool of ability of a nation were made in the U.S. and Europe for the last 40 years. The novelty here is the linkage of the pool of ability to future earnings and hence, productivity. This should be made clear at the outset.

The paper only cites the benefits of the reform but ignores the costs. Two types of costs are very important and may affect drastically the numerical results: (a) the costs of a process of continuing testing at all school ages (assuming that valid tests to determine ability are available), and (b) the costs of inducing the poor with talent, once identified, to stay in school, (the subjective opportunity costs may be very high). In summary, this study should be presented only as a methodology, including all the caveats, to measure the effects of an educational reform, and use the calculations as an example only, without trying to infer policies or reach definite conclusions on the basis of dubious premises and data.

cc: Mr. Hultin

MZYMELMAN/sg

Research-Education

Central Files
F244

Mr. C. J. Howse
Oxfam
274 Banbury Road,
Oxford OX2 7DZ
England

April 26, 1976

Dear Chris,

Your letter of March 25, was awaiting me when I returned from Indonesia where I was participating in the appraisal of a project to rehabilitate the sugar industry.

You asked about the "Benor" approach: his system is making a big impact on current ideas about extension - mainly in Asia at present, but the principles of his system are applicable to a greater or lesser degree anywhere in the developing world. Benor himself is a hugely dynamic person, previously head of extension in Israel (among other things), who is now travelling from one country to another as a full-time Bank consultant introducing his new approach.

Basically, the system involves a drastic simplification of extension activities to concentrate only on a very limited number of essential and topical items; imposing a rigid discipline on extension staff, and involving the farming population by forming the farmers into groups who elect group leaders with whom the extension agents (village level workers) meet regularly at least once a fortnight. I enclose an extract from a description of the system written by the Department of Agriculture in West Bengal, which sets out all the rules of the game. As you read this, the system will seem simple enough - however, some of the effects which have resulted from the introduction of the system have been quite remarkable. By ensuring that the village level workers have topical and useful information to impart on every occasion they visit the village, and have been well prepared to get their messages across, their standing in the community has risen dramatically and they have become more determined to maintain their new position and to obtain more information for their farmers. The supervisors have to be one step ahead all the time so that they can provide the necessary training at every bi-weekly session (which keeps them on their toes), and, by involving research staff as subject matter specialists, research workers are being brought out of their research stations and given an object in life. A particularly interesting aspect of the new system is that, whereas previously extension and research staff were only answerable to their superiors, they are now finding themselves becoming answerable down the line to farmers' demands, and the farmers themselves are setting the pace.

Next month I am off to appraise extension/research projects in West Bengal and Orissa, both of which will be modeled upon this new approach, and I shall learn a lot more about it during this trip. If, after reading the enclosed description,

Mr. C. J. Howse

you have more questions please write.

I continue to preach savings clubs wherever possible. The clubs which I started on the Thaba Bosiu project are doing very well and seem likely to spread rapidly. I did not bring any of your descriptive material about the savings clubs with me - could you please let me have some copies of your hand-out on the clubs as a number of people have shown interest. I hope something brings you in this direction so that you can pay us a visit.

With best wishes,

Yours sincerely,

Bernard M. Woods
Training Officer
Education Department, CPS

BMWoods/jdg

cleared with and cc: Mr. Van Wagenen

File No. TAO 1/4

4. The posts of S.A.Os. will be created very shortly. In each sub-division there will be on average 8 to 9 blocks. The S.A.Os. will report to the P.A.O./D.A.Os. and will be drawing and disbursing officer for the field level workers. They will conduct and supervise training and extension work of the A.E.Os. and V.L.Ws. There will be 50 S.A.Os. and the list of the Sub-divisions is shown in Appendix-VII.

5. The A.E.Os. will function under the direct control of the S.A.Os. and those of the officers of the District and Range Level. They will be assisted by the Asstt. A.E.Os. and A.Ds. in execution of various departmental schemes and also in conducting training of the V.L.W.s.

6. The B.D.Os. will be the chief coordinator in block. Though the B.D.O. can obtain information about the progress and achievement in agriculture within the block, he will have no day to day command or control over the A.E.O. or V.L.W. placed to the A.E.O. Till the S.A.Os. are posted B.D.Os. will continue function as drawing and disbursing officers in respect of all agricultural schemes.

7. The A.E.Os., Asstt.A.E.Os., A.Ds., V.L.Ws. and other agricultural field staff in blocks will be under the single line control of the Director of Agriculture, with uninterruped chain of command from the top to the field level.

IV. NEW APPROACH TO EXTENSION.

1. The overall objective of agricultural extension is substantial increase in agricultural production. Mr. Daniel Benor, World Bank Consultant on agricultural extension, during his visits emphasised that though supply of energy is needed for maximising level of production, much could be achieved with existing level of resources

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and technical know-how provided extension machinery is put to its proper gear. Mr. Benor suggested a simple, but very pragmatic and effective system which he described as T.V. i.e. Training and Visit. There should be frequent and ceaseless visits in the villages by the V.L.W. to communicate technical know-how to the farmers. There should be continuous and fortnightly training of V.L.Ws. on essential technology that can be easily translated into the action in the local situation even with existing resources.

2. The V.L.W. will have a jurisdiction or area of operation, covering 800 to 1200 farming families. This number of families may be of one Anchal or part of a big Anchal or parts of two Anchals. The owner farmers as well as the share cropping farmers should come under this programme.

3. Jurisdiction of the V.L.W. will be divided into 8 units - each unit having 100-150 families, The VLW. will work one whole day in every unit once in two weeks. Day of visit (not date of visit) is to be fixed. Day-fixed visits by the VLWs. in each unit is emphasised.

4. In each unit 10 contact farmers will be selected. A contact farmer is one who is early or more prone to adopt new ideas and practices and from whom other farmers seek guidance. V.L.W. will reach his entire clientele in the unit through the 10 contact farmers. The contact farmers will advice other farmers between visits of V.L.Ws.

5. A suitable place within each unit for assembling of contact farmers and other farmers is to be fixed. The VL . will visit the unit on the fixed day and his period of stay in the unit will not be less than 8 hours. In the morning between 8 to 12 noon, VLW. will

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visit the fields of the farmers;he will hold meetings and discussions with the farmers, in the afternoon, between 2 to 5 P.M. or at a time suitable to the farmers.

6. The VLW. will communicate ideas to the contact farmers and other farmers by (a) discussion and talk, and (b) showing how to do the work. More time should be spent in the field to explain what should be done and how it could be done.

7. During his visit to the units the VLW. will communicate only two or at best three topics and ideas (impact point) which he learnt in the fortnightly training conducted by the AEO. The farmers may seek information on several other topics or subjects in agricultural and allied fields. The VLW. may furnish replies if he is very sure and certain about the correct scientific answer.He should record these questions and queries in his diary and collect correct answer during his training.

8. The Headquarter for each VLW is to be more or less centrally located in a suitable place within the jurisdiction so that each unit is easily accessible from his headquarters.

9. In two weeks, the VLW. will -

Visit	-	8 units in 8 days.
Enjoy	-	Two Sundays.
Have	-	One day training conducted by AEO.
Utilise	-	Three days for other jobs for special visits,demonstrations,office work etc.

VLW. will be allowed to enjoy holidays. If a holidays coincides with a day of visit, the VLW will not visit the unit on that day.

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10. A chart for each VLW showing his fixed days of visit to each of 8 units of his jurisdiction and also mentioning the place of assembling and time of visit should be kept hanging in the walls of the AEOs. office room. A model chart is shown in Appendix IV.

11. The VLWs. are not expected to keep many records or to do unnecessary paper works. He will maintain records of his day-fixed visits in the prescribed and printed diary.

V. TRAINING OF VLWs.

1. AEOs. will conduct training of VLWs. once every two weeks. This training is to be completed before the commencement of the two weekly visits of the VLWs. SAOs. and PAO/DAOs. are also, as far as possible, required to participate as trainer. Once in three months, VLWs. should be trained at Sub-divisional level.

2. Training should preferably be conducted in block seed farm or district seed farm where facilities are available for both practical and theoretical training. In blocks with no Govt. farms, AEOs. should select a suitable site, such as, school, progressive farmer's field etc. for this purpose.

3. Since large variety of crops is grown by farmers, and many improved practices are recommended, it would appear that, to have immediate impact priorities should be set, aiming at achieving visible progress in several economically important crops and practices. Success is the prime motivator for both the farmers and the extension workers. Otherwise, there is a danger that the VLW will spread his efforts in too many directions at a time and they will be dissipated.

4. Only one or two (and not more than three in any case) to-pics or subjects very important and relevant to the following two weeks and applicable in farmers' situations should be selected on

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priority basis. Training should be given on these selected topics only. Further information as wanted of the VLW by the farmers may also be furnished. Catch-words or slogans should be enunciated, if possible, for each topic. VLWs and other supervisory officers should use these catch-words or slogans during discussion with farmers.

5. Training should be imparted by discussion and practicals. After thorough discussion and explanation of the subjects each VLW should be asked to narrate in his own words what he has learnt. This practice will help the VLWs to learn how to talk and discuss with the farmers.

6. Thereafter the VLWs. should be given practical training. These practicals will teach them how to do the job in the field. The practicals should cover important agricultural operations for raising of important major crops and connected with the selected topics being taught. After practicals the topics should be re-discussed and misconceptions or doubts if any of the VLWs should be allayed.

7. During discussion and practicals actual specimen of seeds, fertilisers, pesticides and fungicides, insects, symptoms, various equipments etc. should be shown to them.

8. The basic principles of training will be seeing, hearing, discussing and doing by the VLWs. The VLWs. should also carry specimens to educate the farmers exactly on the same principles and methods by which he learnt the topics.

VI. TRAINING OF A.E.O.s.

1. The training of the AEOs will be conducted by the SAOs. once in a month. The duration of training will be of two days. The PAO/DAOs. and other Subject-Matter Specialists should also participate. The

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Research Experts from the State Department and the Universities should be requested to participate particularly to discuss about the special problems and very recently developed technology.

2. Only 2 to 4 topics (not more than 6 in any case), very important and relevant, should be selected, on priority basis. The topics should be divided into two parts viz., (a) those to be taught for the first two weeks visits of the VLWs. and, (b) those to be taught for visits in the last two weeks. Other important information to satisfy the question and queries of the VLW , and also of the contact farmers should be furnished.

3. Training of AEOs. should preferably be conducted in the district seed farm, Gramsevak Training Centre or in any other suitable place where land, equipment and facilities are available.

4. The method of training will be mainly discussion and question-answer forum. Important agricultural operations and practices should be shown to them. It is also desirable that AEOs. should perform practicals for learning these operations. Each AEO must be asked to delivera talk and also to submit a write-up on topics taught in the training session.

5. Leaflets, pamphlets, bulletins, handouts, I C A R. publications, various scientific reports etc. should be placed at the disposal of the AEOs. They will be required to collect materials from these publications and also from the discussio' and practical classes for preparation of the write-ups.

6. AEOs. will be required to collect samples and specimens of insects, disease, symptoms, fertilisers, pesticides, seeds etc. which they should use during training of the VLWs. They should

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also learn in their training classes how to give effective talks using specimen, models, posters, charts and slides.

7. Range level training conference for the AEOs/SAOs and other district level officers will be arranged by the range JDAs., atleast twice in a year before the commencement of two main cropping seasons. Research Experts from the Department of Agriculture and from the Universities should be involved as trainer in such training programmes. A copy of the schedule of a Range level training meeting held in Nadia district of Kalyani Range is given in Appendix V.

VII. SELECTION OF TOPICS FOR TRAINING OF A.E.Os. AND V.L.Ws.

1. A monthly bulletin consisting of important topics relevant for each month will be issued from the Directorate sufficiently in advance. This bulletin will contain materials covering practices and recommendations for all the districts. In Appendix VI a schedule of important topics for monthly training programmes for the whole year has been furnished.

2. Similar monthly bulletin is to be prepared in the district headquarters incorporating the recommendations of the Directorate and also other topics suitable for the local situations.

3. A good stock of various audio-visual materials should be built up in the office of the DAO/PAOs., SAOs. and the AEOs.

VIII. EXECUTION AND SUPERVISION.

1. VLWs. and similar other field staff like JFA., Cotton Field Assistant etc. are to be pooled and engaged for visit of units of the jurisdictions. The ADAs should be excluded as they will be required to help the AEOs. for training of VLWs. and also for

performing other activities including block seed farm.

2. Asstt. AEOs. will help the AEOs in training of VLWs and also for preparation of miscellaneous reports. Notwithstanding the normal duties of Asstt. AEO. he may, if necessary, be employed to perform personal duties assigned to a VLW.

3. Success of this new pattern of day-fixed training and visit programmes depend entirely upon the thorough supervision and guidance. Officers of all levels will be required to participate in the training programmes as well as in supervision of visits by the VLWs.

4. AEO. will devote atleast 8 days in two weeks for supervision of visits by the VLWs. In a single day he may supervise the visits of two or more VLWs. so that he can ultimately see and guide each VLW. during two weeks schedule.
When the AEO. is present in any unit he should also actively participate in the discussions and demonstrations.

5. SAO will devote atleast 15 days in a month for supervision of the visits by the AEOs. and VLWs. and for training of the AEOs.

6. PAO/DAOs. will visit units of the VLWs atleast 12 days in a month including training programmes of AEOs and VLWs. Frequent visits of the units by the PAO/DAOs. and also his participation in the training programmes of the AEOs. and VLWs. will enthuse all staff and will keep morale high.

7. JDAs of the ranges should supervise training schemes and visits of the AEOs. and the VLWs. atleast 15 days in a month. He should also help and guide the PAO/DAOs. to develop monthly bulletins, for training programme and to organise this new pattern

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of extension service/a systematic and effective footin.

8. Officers of the Directorate Headquarters also will visit the training programme in the districts and also units of the VLWs as frequently as possible. A special cell has been formed for this purpose at the Headquarters.

IX. EXECUTION OF AGRICULTURAL DEVELOPMENT SCHEMES.

1. There are various agricultural development schemes for different crops. Examples of such schemes are, Jute Development Schemes, Cotton Development Schemes, Multiple Cropping Scheme, Oilseed Development Scheme, Pulse Development scheme, Sugarcane Development Scheme, National Demonstration Scheme etc. Funds as well as field level staff are also some times provided for execution of the schemes. These schemes are usually executed by the BDOs. to whom the funds are allotted for this purpose. Some of these schemes are financed by the Govt. of India.

2. Since the AEOs and VLWs, and other agricultural staff of the block have been brought under single line administration of the Agriculture Directorate these schemes are now to be executed by the AEOs and VLWs and not by the BDOs. When the post of SAOs will be created and filled up the function of drawing and disbursing of funds for these schemes will be performed by the SAOs.

3. The main item of operations for execution of such schemes is conducting demonstrations in the farmers fields for motivating farmers to adopt improved practices in cultivation of these crops.

contd....

Research - Education

April 21, 1976

Dr. David C. Wigglesworth,
President,
Technical Research Associates,
Box 1062
Los Altos, Calif. 94022

Dear Dr. Wigglesworth:

Mr. Ballantine has asked me to thank you for sending the interesting proposal of Mr. H. Richard Wall for a "Feasibility Study of an International Technical Workforce Development Organization", with a request for comment.

We share your view that this is an extremely important problem. In our own work, of course, we are continually trying to help the less developed countries overcome the endemic shortage of trained manpower at virtually all levels. We agree also with the judgment that the consequences of too many expatriates are frequently negative and that overseas training has questionable benefits in many cases. Training programs do indeed need to be carefully targeted.

As to the proposed feasibility study, my first reaction is that a thorough search of the literature for experience, plus a few interviews, might provide a focus which would bessharp enough so that the study itself need not be as extensive as outlined. Publications of the SID, records of USAID, and experiences of UNDP Representatives, for example, could yield information that would sharpen the focus and even, perhaps, render most of the study unnecessary.

Another reaction goes to the idea of a central training center (p.9, para.3). This would be quite similar to the existing Center for Advanced Technical and Vocational Training operated by the ILO at Turin, Italy. Their limited experience along some of the same lines might be decisive, one way or the other.

Finally, if the study is undertaken as outlined, I think you may find that the amount of work involved is larger than the cost figure indicates, even though the personnel costs seem to be too high for a Senior Professional when fringes, general overhead, and fee are added to a high salary.

I any case, we would be very interested in receiving any published result if you decide to undertake the study. I assume that we may keep the copy of the proposal you sent, even though we are unfortunately not in a position to assist in its execution.

Sincerely yours,

R. W. Van Wagenen
Training Officer
Education Department, CPS

RW.

Research Education
cp file

MICHIGAN STATE UNIVERSITY

OFFICE OF THE DEAN OF INTERNATIONAL STUDIES AND PROGRAMS

EAST LANSING · MICHIGAN · 48824

April 20, 1976

Mr. L. H. Christoffersen
International Bank for Reconstruction
and Development
1818 H Street NW
Washington DC 20433

Dear Mr. Christoffersen:

It has occurred to me that you might find the enclosed monograph of some interest to you. It attempts to put the planning of the new emphasis on non-formal education into a planning context for all forms of education - especially as addressed to the needs and interests of the rural poor.

If you have any reactions to the ideas expressed, we would be pleased to have them.

Sincerely,

Ronnie

Richard O. Niehoff
Professor
Advisor on Program Development

cb

note: attachment retained in the Rural Dev. Div (Mr. Christoffersen's Office)

~~Research Program~~
Research on Education Finance

February 18, 1976

Mr. Eurico de Andrade Nevas Borba
General Director
Fundacao IBGE
Av. Franklin Roosevelt 166
Rio de Janeiro, GB
Brazil

Dear Mr. Andrade:

Following my letter of April 9, 1975 requesting a few special tabulations based on the last household survey carried out by Fundacao IBGE, I received your tabulations in November 1975.

In your accompanying cable dated November 14, 1975, you mentioned that a technical problem prevented you from sending me the C-I series of tables. I wonder whether you would be kind enough to send me these missing tables as soon as possible so that we can close this contract. I would be grateful to you if, at the same time, you could send me the final bill for this operation so that our controller can disburse the money in the course of the present fiscal year.

The C-III series of tables, which you already sent me, expresses the monthly income as a multiple of the minimum salary prevailing at the time of the survey (fourth trimester of 1972). I would like very much to be informed about the exact amount of minimum salary for: (a) Brazil as a whole, (b) the state of Sao Paulo, and (c) the state of Pernambuco on which the computation are based.

I look forward to hearing from you at your earliest convenience. Best regards.

Sincerely,

Jean-Pierre Jallade
Senior Economist
Education Department

JPJ/nm

cc: R. Gomez & file

Research
Education

January 22, 1976

Dr. Rudolf Troike
Center for Applied Linguistics
1611 North Kent Street
Arlington, Va. 22209

Dear Dr. Troike:

I would like to express our appreciation for the work of the Center for Applied Linguistics in connection with the five country language profiles recently completed for the Bank. We have particularly appreciated the interest and cooperation of Mrs. Ohanessian and Dr. Gage.

Each of the language profiles will be a valuable tool in the Bank's work and they have been well received by our colleagues in the regional education divisions. Discussion of the reports has also facilitated a greater understanding and appreciation of language planning and policy issues among our education staff. We feel sure that this will contribute to the better design of education projects.

We have written separately to Mr. Hammer indicating our willingness to contribute to the cost overrun which the Center incurred in completing the language profiles. We understand the difficulty in accurately estimating the costs and acknowledge the great amount of work which went into producing language studies of such high quality.

Yours sincerely,

Mats Hultin
Senior Adviser and
Acting Director
Education Department

Cgilpin/hl

Research - Educ

January 8, 1976

Mr. L. R. Fernig
Director
International Bureau
of Education
Palais Wilson
CH-1211 Geneva 14

Dear Leo:

This letter responds to your letters of both December 8 and December 19. First, I understand that while I was away Necat Erder did send you some material on our Mali study project, and also a descriptive table on innovative items in recent Bank projects. We will try to keep the IERS advised of other things in which we think you might be interested.

Second, you have asked me to comment on the report of your meeting of December 3 in New York (BIE/IERS/PRG 75/7 of December 18, 1975). I am sorry to have missed the meeting itself but for what they are worth here are some comments on the document.

1. Selectivity and Definition of Innovation

As you know, I have been troubled from the beginning by what seemed to be the lack of a sufficiently precise working definition of innovation and also of categories of activities (sub-headings) in which innovation takes place, e.g., the area of teacher training mentioned in your paragraph 19 (b). Both Necat and I have felt the need for such definition with regard not only to the subject matter but also, and equally important, with respect to the mechanism and procedures for the collection, editing, dissemination and absorption of information provided through the IERS. I think that selectivity is of critical importance in this process and that means, obviously, criteria for selection. This is true especially when one considers the audience you are addressing - decision-makers, middle and high level managers, etc. These are busy people who have all too little time to read (we know that ourselves) and there is therefore a serious danger of information overloading, which in the end defeats itself.

2. A second thought is that the term "evaluation" dealt with in paragraphs 7 ff. may suggest a bit more than what is called for, or even possible, during the time period indicated. A "progress report" would perhaps be a more appropriate formula. That would mean a much simpler exercise which did not attempt to cover all the things suggested in your

paragraph 13, and especially would not seek to reach serious judgments on the use of the material, which would certainly not be possible within the time allowed. I do not mean that you should not be developing feedback from your clients but simply that no judgment made so early would be reliable or fair to the IERS.

3. My third comment deals with the paragraphs (14 ff.) on shortfalls and new needs. You indicate that while it is the intention that the normal budgets of Unesco and IBE should, in due course, pick up the running expenses of IERS, this will not be possible during the biennium 1976-77. You do not indicate what the prospect is for the 1977-78 biennium and I think anyone at all familiar with Unesco's financial problems would have to ask that question. In this context I have doubts about the advisability of some additional outreach project as outlined in paragraphs 15-18, which would operate within the framework of the overall IERS effort and be heavily dependent upon its successful functioning. Indeed, even your best friends might regard this less as an "outreach" project than an "overreach" one. If, as I hope it will, the progress report indicates that IERS is a viable idea and is shaping up, I would think that an appeal to the donors for an extension of the first phase, which would include some of this work in any case, would be a much better bet.

There it is. I am sorry that as of the moment we are not in a position to offer you more than advice. As Samuel Goldwyn once said of oral contracts "It may not be worth the paper it is written on".

Best wishes for a happy and successful New Year, and looking forward to seeing you before too long,

Sincerely,

Duncan S. Ballantine
Director
Education Department

DSB/hl

Research - Education

December 2, 1975

Dr. Lars-Olof Edstrom
Head, Education Division
Swedish International Development Authority
Klarabergsgatan 60
S 105 25 Stockholm, Sweden

Dear Lars-Olof:

Re: SIDA Vocational Training

I hope you have received my letter of November 21 by now. I have given some thought to additional materials for your vocational training activities.

I assume that you are in constant touch with ILO. The case studies in their employment program are of interest in this context and contain such information on vocational training in the countries covered by the case studies such as Kenya, Sri Lanka, Colombia, the Philippines, etc. There are also special studies of interest, for instance, Ghana: National Vocational Training Programme (GHA/011) Technical Report 2: "The Development of Rural Training" (ISBN 92-2-101382-0) Geneva 1975; Qatar: Vocational Training Scheme (QAT/72/002): "Further Technical Evaluation of the Work of the Project." I assume also that you have been in touch with the ILO center in Turin which can provide you with some interesting materials.

Another possible source of information is the French consulting firm of Bureau pour le Developpement de la Production Agricole (BDPA); 202, rue de la Croix-Nivert; 75015 Paris. They are involved in a number of vocational training programs, particularly in agriculture. Finally, the European Committee of Consulting Engineering Firms (CEBI); B-1000 Bruxelles; Rue Royale 74, Belgium, which is an organization of European consulting engineers. It has a number of projects in training which might be of interest. In both cases, I would suggest you write to them. I know that they are willing to submit their reports to SIDA.

With kind regards,

Sincerely yours,

Mats Hultin
Senior Adviser
Education Department

MGHultin/rcm

Research Education

OFFICE MEMORANDUM

TO: Mr. D.S. Ballantine DATE: November 7, 1975

FROM: Manuel Zymelman

SUBJECT: Report on Visit to Korea, October 15 - 30, 1975

The purpose of my visit was to help set up a research project to ascertain the cost-effectiveness of different modes of vocational training. After initial contacts with KDI, KEDI, EPB, OLA and MOE 1/ I prepared a short description of the project and a tentative budget. A preliminary questionnaire was prepared, and I set out to interview government officials, technical high schools, vocational training institutes, training programs in industry and managers of industries in the Seoul and Pusan areas (see Annex 1). From all these visits a clearer notion of the problems facing this sector started to emerge. As a result I reviewed the original questionnaires to incorporate important new issues and delete some questions irrelevant to the Korean reality. (See Annex 2).

I prepared also a set of instructions for Mr. Yoon Tai Kim, my counterpart in KEDI, for the administration of the questionnaires, costs investigation and format for the data (see Annex 3). The administration of the questionnaires and the gathering of the data will require strong supervision, but the time required should not be more than a month or two.

If the tabulations can be ready by the end of this year, it will be possible to analyze the results early January 1976. These results could be extremely useful for the R.O.K. in its planning of vocational education and for the IBRD in its forthcoming mission.

Some Preliminary Observations on the Korean Industrial Training System

The system consists basically of three parts: Technical High Schools, (THS), Vocational Training Institutes (VTI's) and In-Plant Training.

The VTI's are relatively new institutions. The preliminary impressions from the visits and interviews with employers, principals and government officials are that part of the systems are competitive at some skill levels but not at others. For example, THS's and VTI's are competitive at lower skill levels, i.e. employers could fill the position of a lathe operator either with a middle school leaver with a one year training at a VTI, or with a THS graduate. On the other hand the job of a craftsman (i.e. tool and die maker) is likely to be filled with a THS graduate. Therefore, at first blush I would guess that VTI's are more cost effective at lower skill levels than THS's. In general and with a few exceptions

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1/ KDI - Korean Development Institute
KEDI - Korean Educational Development Institute
EPB - Economic Planning Board
OLA - Office of Labor Affairs
MOE - Ministry of Education

such as the Korean German VTI, an employer would prefer a THS graduate rather than a VTI graduate because the former has been better selected and has more theoretical knowledge, (practical knowledge is probably the same in both cases), but there is no doubt that costs graduate are much higher for the THS. This is so because at least 40 to 45% of the subjects taught are non-job related. It should however be noted that the new type of Mechanical Technical High Schools are more job oriented and the non related subjects there are only 20% to 25% of the total curriculum. While employers prefer THS graduates, they comment at the same time that three out of four applicants lack sufficient practical knowledge to be hired for higher skilled jobs. This reflects the poor practical preparation of the THS graduate, that is the results of schools poorly equipped and,what is worse, with poorly trained teachers.

Training for an assembly line job usually of a duration of less than 12 weeks is quite common, but systematic in-plant training for higher skills is offered only in few firms. Firms that offer longer training, two years for example, usually prefer academic high school graduates that pass a difficult screening test over Technical high school graduates. Firms that offer shorter courses (one year) prefer THS graduates.

In general an industrial consciousness for training people in plant is not easy to find, and there is a tendency to shift the burden of training on to the public institutions. A recently enacted law will compel firms with more than 200 employees to offer training either on its premises or by paying for training in schools. The feeling is that many firms will opt for paid cheap training. This may put added pressures on VTI's.

These institutions provide only basic shop training and only for low port of entry jobs. Their teachers are poorly trained, although some of the VTI's are better equipped than some Technical High Schools.

In view of this situation the following suggestions are offered:

1) Given the coexistence of the VTI's and THS's it would make sense to think of VTI's as a main instrument for the production of lower level skills, and the THS's as the main avenue for higher level skills.

2) The average THS as it exists at the present is both costly and deficient in practical training. Therefore quantitative expansion of this system will only produce graduates that will compete with graduates from VTI's.

3) A qualitative improvement of THS could shape the institution into producing higher level skills. The new system of Mechanical Technical High Schools or similar systems for electrical skills and electronics could be a way of overcoming the problem of the high proportion of non-related subjects in the curriculum. Providing more equipment to existing schools will not do that.

4) The provision of more equipment to schools can improve the ratio of machines to students but will not ensure that sufficient resources will be dedicated to operate the equipment. Budgets usually depend on local boards and the item "materials" is a convenient one to cut in time of budget constraints.

5) The biggest problem in lending for THS, mechanical or otherwise, is the lack of good training teachers. The institutions providing certification of training teachers are poorly equipped and concentrate on theoretical knowledge. The courses are also unduly long. A good teacher trainer must have industrial experience which very few existing teachers have. A person with good experience and the theoretical knowledge of an institute of higher education could do much better, financially speaking, in industry. The THS system as presently constituted will not allow differential salaries sufficiently large to attract people with the necessary certification and experience.

6) In the present institutional set-up a possible solution would be the improvement of the teacher training by developing a particular institution that will allow:

(a) cutting the length of training,

(b) revamping the curriculum to substitute theoretical for practical subjects,

(c) providing scholarships to attract those people with five years experience in industry and giving them academic credit for their experience,

(d) by placing the new graduates in new THS with a different status than existing THS's that will allow to offer better salaries.

7) VTI's are also faced with the problem of poor teachers. The training of teachers in CVTI (Central Vocational Technical Institute) is no answer to the problem because the program is of a low caliber. Thoughts should be given to the creation of an institute to train teachers for two years, but with a prerequisite for admission of a secondary education plus five years experience in a highly skilled job. This, again, will require a thoughtful scholarship program and the careful development of incentives; but if the existing training law is given teeth, the demand for this type of trainers will sky rocket, and the investment may then have a high pay-off.

8) One of the best VTI's is a private one managed by a foundation in Seoul. Its biggest asset is that it is unencumbered by rules and regulations governing regular VTI's and THS's and is, therefore, able to offer better employment conditions and innovative programs. An effort should be made to try to replicate this type of institution, perhaps for higher level skills, with the help of industrial associations or the presidential house.

9) Thoughts should be given to the creation of institutes or schools offering high quality specialized high level skill training, i.e., an electronics and electrical institute, chemical institute, smaller in size than regular High School but located in areas with a heavy concentration in this type of industries.

10) In general, it seems that concentration of investment in a few institutions will be more effective than spreading the same amount over a larger number.

cc: Messrs. Loos, Kalu, Rao, Golladay
Johanson.

MZYMELMAN/sg

INSTITUTIONS AND PEOPLE INTERVIEWED

Government

Kyung Sik Kang	-	Director, Economic Planning Bureau, MOE
Sang Kyu Rhi	-	Director, Office of Planning & Management, MOE
Hai Kyung Lee	-	Director, School Facilities Bureau, MOE
Jong Rae Hong	-	Director, Office of Vocational Training, OLA
Sang Sun Suh	-	Chief, Vocational Training Section, OLA
Won Chul Oh	-	Presidential Secretary

Research Institutes

Yung Dug Lee	-	Director, KEDI
Bon Ho Koo	-	Vice President, KDI
Chuk Kyo Kim	-	Director, Research Department II, KDI
Yung Bong Kim	-	Senior Fellow, KDI
Shin Bok Kim	-	Senior Researcher, KEDI
Yoon Tai Kim	-	Deputy Director, Planning Office, KEDI
Chong Jae Lee	-	Senior Researcher, KEDI

Schools

Sang Hoon Han	-	Principal, Seoul Puck Technical High School
Chun Soo Jun	-	Principal, Busan Mechanical Technical School
Senior Officials	-	Central Vocational Technical Institute
Norbert Jasper	-	Chief, Korean German Technical Institute, Pusan

Industry

KIA Industries	-	Jung Moon Lee - Director of Training Department Hi Koo Lee - Chief of Training Section
Goldstar Co	-	Yung Sur Part - Plant Manager Sang Rak Kim - Manager of Production Department

International Electric Wire Co - Dong Hyoun Kim - Director of Education Department

Tai Han Electric Co	-	Y.J. Byun - Manager Dong Hun Jung - Instructor in Training Section

Korea Ship Building and Engineering Corp. - Soo Bin Kim, Director of Training

QUESTIONNAIRE FOR EMPLOYERS

Name of Company: .....

Industry: .....

Number of workers: 1) 50-200 2) 200-500 3) more than 500

This questionnaire will refer only to (a) skilled workers and (b) higher skilled workers or craftsmen.

1. Approximately how many workers in these occupations did you hire last year?

(a) ..... (b).....

1 - less than 10

2 - 10 to 20

3 - 20 to 30

4 - 30 to 50

5 - 50 to 100

6 - 100 to 200

7 - 200 to 300

8 - more than 300

2. How do you recruit your new workers (choose the two more important ways)

1. Through advertising in the newspapers
2. Through word of mouth of employed workers
3. By contacting vocational schools
4. By contacting training institutes and skill centers
5. Billboard advertising
6. Other

3. For each job opening in (a) and (b) occupations how many applicants do you get?

for (a) ..... for (b) .....

4. Which of the following criteria do you use when hiring new workers?

(Choose the two more important ones)

1. References from former employers
2. References from other workers
3. References from vocational schools
4. References from institutes and training centers
5. Evaluation of vocational school grades
6. Examination and practical tests at the plant
7. Other

5. For occupations (a) and (b) which candidate is most likely to be hired?

(a) (b)

1. Middle School with VTI
2. Middle School with one year experience
3. Technical High School with no experience
4. Academic High school with one year experience

6. Why do you prefer (refer to previous choices for (a) and (b)?

(Choose the two more important ones)

(a) (b)

1. Because they have more theoretical knowledge
2. Because they have more practical knowledge
3. Because they have more theoretical and practical knowledge
4. They have more initiative
5. They can produce more immediately
6. They can advance faster into higher skills
7. They are more reliable
8. They follow instructions better
9. Their starting salary is lower

7. Even though candidates seem to have the background you prefer, it is probable that you reject some before hiring one. How many of the same background do you usually reject before hiring one worker?

   for (a) ..... for (b).....

8. In general what is the reason for rejecting them?

	(a)	(b)
1. Because they lack theoretical knowledge		
2. Because they lack practical knowledge		
3. Because they lack the proper attitude		
4. Because they ask too much money		
5. Because they lack theoretical and practical knowledge		

9. When you hire workers without experience how do you train them?
   1. Foremen and other skilled show them how to work
   2. We provide special in plant training
   3. We sponsor training in skill centers or vocational training institutes

10. Are you acquainted with vocational training institutes or skill centers?

    1. Yes
    2. No

11. If yes, to perform successfully in occupation (a) do you think that a Middle Schools' graduate with one year VTI training could do as well as a Technical High School graduate?

    1. Yes
    2. No

12. To perform successfully in occupation (b) do you think that if an Academic High School graduate is given one year of formal shop training in industry or in a VTI he could do as well as a Technical High School Graduate?

    1. Yes
    2. The Technical High School graduate is preferable
    3. The Academic High School graduate with training would be preferable

13. What of the following do you consider when promoting workers? (Choose the first two most important reasons)

    1. Seniority
    2. Honesty
    3. Initiative
    4. Productivity (quantity and quality)
    5. Previous educational attainment
    6. Type of training (THS, VTI, In Plant Training)
    7. Loyalty to the firm

14. If you are acquainted with either or both technical High School (THS) and vocational training institutes (VTI) indicate what in your opinion are their two major drawbacks

	THS	VTI
1. Equipment is old		
2. Shop teachers lack experience		
3. Time spent in practical subjects is limited		
4. Equipment is not available in sufficient quantity		
5. Theoretical knowledge is inadequate		
6. Materials for practice are inadequate		

15. What approximately is your yearly turnover for (a) and (b)

1. 10%
2. 15%
3. 20%
4. 25% or more

16. The workers that leave your firm, where do they go?

1. to firms of the same size
2. to larger firms
3. to smaller firms

17. Why do they leave your firm?

1. Because salaries there are higher
2. Because there is more job security
3. Because there are better chances for advancement

Give your opinions on the following:

18. If given resources, theoretical knowledge comparable to the one imported in Technical High Schools could be provided in plants and in vocational technical institutes.

    1. Yes

    2. No

19. Schools should only provide basic theoretical knowledge and basic shop knowledge. Advanced shop training could be provided better in plants.

    1. Yes

    2. No

20. Schools should provide basic theoretical knowledge, shop training could be provided better in skill centers

    1. Yes

    2. No

21. Industries should get together to sponsor training, theoretical and, practical.

    1. Yes

    2. No

Questionnaire to be added for industries that provide organized in plant training

1. How many workers do you train a year?

2. Why do you have to train workers other than those for the assembly line?
   1. I cannot get skilled workers readily
   2. Applicants don't have factory experience
   3. Our tasks are very specialized
   4. Workers with desired traits are too expensive

3. Who are you teachers in the training program?
   1. Graduates from teacher training institutes
   2. Our own engineers, technicians, and foremen
   3. University graduates

4. What special facilities do you have for training?
   1. Classrooms
   2. Shops
   3. Contract with schools

5. If you have special training shops, is machinery used also for production?
   1. Yes
   2. No

6. From where do you get your teaching materials?
   1. Technical High Schools
   2. Office of Labor Affairs
   3. Association of industries
   4. Other

7. What percent of trainees graduate from your courses?

.....

8. Who are your trainees (express your opinion in approximate percentages)

Academic High School Graduates

Middle School Graduates

Technical High School Graduates

9. Do you test them before accepting them?

1. Yes

2. No

10. If yes how many do you reject for each one accepted?

.....

11. How do your graduates compare with Technical High School Graduates?

Equal

Better

Worse

12. How do they compare with High School Graduates plus experience?

Equal

Better

Worse

13. How do they compare with Vocational Training Institute graduates?

Equal

Better

Worse

14. How much do you spend yearly on a trainee?

.....

15. If foremen and production workers also train, how much time in man hours do you think they spent on training?

..

16. Could you estimate how much cost to pay for the rent of the equipment used in training, if the rental would be available?

.....

17. Could you, if necessary, expand your program?

1. easily
2. with difficulty

18. If the answer to previous question was (2) why?

1. lack of good teachers
2. lack of space
3. lack of equipment
4. lack of incentives from the government

Questionnaire for Employees

Name of Company: .....

Industry .....

Size - Number of Workers: 51-200 200+500 500+

Name of employee .....

1. Occupation Skilled - Highly skilled or Craftsmen

2. Age:
   1. 16-18
   2. 19-21
   3. 22-25

3. Level of formal schooling previous to training program:
   1. Middle School
   2. Academic High School, Public
   3. Academic High School, Private

4. Type of training program
   1. Technical High School - Public
   2. Technical High School - Private
   3. OLA Training in Vocational Technical Institutes
   4. OJT in industry
   5. Formal Training in industry
   6. Other

5. Type of general training program:

   1. Mechanical
   2. Electrical
   3. Electronics

6. Length of training program and total hours of practical training per month

	HOURS
1. 1-6 months	.....
2. 7-12 months	.....
3. 13-18 months	.....
4. 19-24 months	.....
5. 25-36 months	.....

7. Year when graduated from formal school .....

8. Year when graduated (or finished) training .....

9. Is this your first job:

   1. Yes
   2. No

10a If yes, how long are you working in the firm?.....

10b If no, what occupation did you have before this one?.....

11. How long did it take you to find a job after training?

   1. I found a job immediately

2. 3 months
3. 6 months
4. 9 months
5. one year
6. more than a year

12. How much do you earn now? .....

13. How much did you earn last year? .....

14. When you graduated did you expect to earn:

1. More than now
2. Less than now
3. About the same
4. I don't know

15. Is your present occupation related to your training?

1. Yes
2. No

16. If no, Why?

1. I did not find work in the occupation for which I trained.
2. I did not wish to work in the occupation for which I trained.

17. What type of knowledge do you think is primarily needed for performing efficiently in your job?

1. Theoretical

2. Practical

3. Experience

4. Theoretical and practical

5. Theoretical and experience

6. Practical and experience.

18. Are you applying in your work mostly what you have learned during your training?

1. No

2. A little

3. A lot

19. From all of the things you have learned in your training what is the one thing that is most useful for your work?

1. Use of machinery

2. Explanations to use machinery

3. Theoretical instruction

4. Advice of teachers

20. In the course of your work are you using similar equipment to that used during your training?

1. Yes

2. No

21. Whatever was taught to you during your training, was it enough to perform successfully on your job?

1. Yes

2. No

22. If no, why?

    1. Training did not provide me with experience
    2. Training did not provide me with practical knowledge
    3. Training did not provide me with theoretical knowledge
    4. Training did not provide practical nor theoretical knowledge
    5. Training was too short
    6. Training was long but irrelevant
    7. Other

23. Did some of your do-workers go through the same type of training as yourself?

    1. Yes
    2. No

24. If yes, what is your opinion of their capacities compared with those that work with you but didn't go through the same type of training?

    1. They are better workers
    2. They are not as good
    3. They have more responsibility
    4. They behave better

25 b. If you consider your training mates less capable than other workers why is it so?

    1. Other workers have more knowledge
    2. Other workers have more practice
    3. Other workers have more responsibility
    4. Other workers have better behavior

26. Do you think it has paid off to have gone through your special type of training?

1. Yes
2. No
3. I don't know

27a. If the answer was (1), if you think it was worth it, what is the reason?

1. I have got a good job
2. I am earning more money than without the training
3. I have more prestige than somebody without my training
4. It opened up employment possibilities and advancement

27b. If (2), if you don't think it was worthwhile, why is it so?

1. I didn't get a good job
2. I am not earning more than I would have earned otherwise
3. I have little status at work
4. It did not open up advancement possibilities

28. How did you get news of the job opening?

1. Through school placement
2. Through friends
3. Through newspaper advertisements
4. Through an employment agency
5. Other

29. To get a job did you have to pass a test

1. Yes
2. No

29. To get a job did you have to pass a test

    1. Yes

    2. No

30. Did your training program prepare you sufficiently to pass the test

    1. Yes

    2. No

31. Would you recommend to your friends or your relatives the same type of training you took?

    1. Yes

    2. No

Recommended procedures for the administration of the questionnaires

1. Choice of industries

Since we are dealing with industrial occupations mainly, the cross classification of occupations by industry of the three major vocational options: mechanical, electrical, and electronics, shows that the major employers in these occupations are: the machinery industry (including transportation equipment and shipyards), metal industries, electrical, and electric utilities.

2. Choice of geographical area

The industries that will be surveyed should be, for reasons of economy and efficiency of the administration of the interviews, mainly in the Seoul-Inchon, Pusan-Ulsan, and another less developed industrial area.

3. Choice of the number of plants to be interviewed

The suggested number of plants to be surveyed is around 100. Fifty plants should be surveyed in person, and fifty by mail with no follow-up.

The fifty plants that will be interviewed personally should be divided in three groups according to size:

1. 20 plants with more than 500 workers
2. 10 plants with 200 to 500 workers
3. 20 plants with 50 to 199 workers

The fifty plants to be interviewed by mail only should also be chosen in the same proportion.

4. Choice of Plants

A random sample should be drawn from lists of industries from the Ministry of Industries or industrial associations. The restrictions are that the largest number of plants should be in the Seoul and Pusan areas and that at least five different industries be represented.

5. The plant chosen for personal interviews should be contacted by phone or letter explaining the purpose of the research. If there are some difficulties the next random number in the list should be chosen.

6. When the interviewer visits the plant, he should bring along the questionnaire for the employees. These questionnaires should be given to the employees to be filled out during lunch time. No more than 20 workers per plant should be given questionnaires. The workers chosen to fill the questionnaires should have the following characteristics:

    1. younger than 25 years

    2. working as a skilled or higher skilled worker (i.e. not in an assembly line nor as a supervisor)

    3. The skills should be in the mechanical, electrical, and/or electronic areas.

    Since there might be many workers with these characteristics the interviewer should try to identify some higher skilled workers, technical school graduates, academic school graduates and middle school graduates with vocational training institute backgrounds. At least one of each should be represented in each plant.

7. Mail interviews for employers should be accompanied by a simple letter explaining the purpose of the research.

Tabulation of the questionnaires

The answers to the employer's questionnaire should be tabulated in the following manner:

Questionnaires from personal interviews should be tabulated separately from questionnaires mailed to the firms.

Each interviewed plant should be put on one card. Questions that have multiple answers should be assigned as many columns as possible choices. Sufficient columns should be reserved for identification of the firm, size, industry, etc.

The procedure should be followed with the employers mail questionnaire. The questionnaire of the employee should be coded so that each respondent can be identified by his background (THS, AHS, Middle School). There should be only one card per respondent.

Cost data for Vocational Training Institutions

Cost data gathering for Technical High School

The general criteria for the choice of the THS's should be that the schools should be located in areas where the interviews of the firms are taking place. This means basically the Seoul area, Pusan, Taegu, or some other city chosen by the random sampling of industries.

In each of the areas at least two schools should be analyzed: one school considered to be a very good one and the other an average one.

For each school the following data on costs should be gathered:

1. Cost of Administration.(annual)
2. Cost of maintenance of building and equipment.(annual)
3. Number of technical teachers and their annual total salary (this includes teachers of theoretical related subjects as well as shop teachers).
4. Number of non technical teachers and their annual total salary.
5. Estimated cost of land
6. Estimated costs of buildings
7. Estimated costs of equipment and laboratories
8. Annual costs of materials and supplies used in the shops and laboratories
9. Other miscellaneous costs.

Items 5, 6, and 7 are readily available of the school is new or has been funded by international agencies.

Number of students in each of the three years. In case of schools offering evening courses the number of students in evening courses should be given together with the number of hours each student spends every week/month.

Cost data gathering for Vocational Training Institutes

The following data should be detailed:

1. Cost of land
2. Cost of buildings
3. Cost of equipment
4. Cost of administration (annual)
5. Cost of maintenance (annual)
6. Cost of instructors (annual)
7. Cost of materials (annual)
8. Miscellaneous

If costs of items 1, 2, and 3 are not readily available estimates should be made on the basis of new installations. Also in case the facilities are rented, the yearly rent should be provided.

In each case, the number of students should be provided together with the number of hours they spent in the institutions. This will allow to express the costs in non/student hour.

As in the case of the Technical High School and effort should be made to have at least 2 VTI's in each geographical area that contains the industries that are being interviewed.

Cost gathering for Academic High Schools

In this case we have to deal only with total yearly costs in terms of recurrent costs, plus an estimate of land, building, and equipment. This can be obtained from standard construction and equipment costs provided by the Ministry of Education. No special effort is needed to visit schools. However, it is important to link the data obtained with the specific number of students of the particular school or schools.

Research Education

Form No. 27
(3-70)

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: ARTHUR PORTER
UNISAL
FREETOWN

DATE: OCTOBER 15, 1975

CLASS OF SERVICE: LT x2601

RUA

COUNTRY: (SIERRA LEONE)

TEXT:
Cable No.:

REGRET DELAYED ANSWER YOUR REQUEST FOR PERSONAL COMMENT ON DRAFT CARNEGIE PROPOSAL RECEIVED HERE OCTOBER NINE STOP EYE REGARD PROPOSED OUTREACH PROGRAM AS GOOD EXAMPLE OF CURRENT TREND EXAMINED AND ENDORSED BY HED STUDY AND OTHERS TO RELATE HIGHER EDUCATION MORE FULLY TO DEVELOPMENT NEEDS AND PROBLEMS THROUGH RESEARCH COMMA SERVICE AND TEACHING STOP PLANNING UNIT AS DEFINED IS PROPER BEGINNING STOP PAPER REFERS TO BANK SUPPORT OF IPAM BUT COULD BE MORE EXPLICIT HOW IT DOES AND DOES NOT RELATE TO AND SUPPORT THIS PROPOSAL ESPECIALLY REGARDING TWELVE MANYEARS TECHNICAL ASSISTANCE STOP ALSO NOTE POSSIBLE SLIGHT OVERLAP BETWEEN THIS PROPOSAL AND BANK ASSISTED UNIVERSITY PLANNERS STOP SUGGESTION TO ESTABLISH DEPARTMENT COMMUNITY HEALTH IS INTERESTING COMMA POSSIBLY INSPIRED STOP WILL EXPAND THIS COMMENT BY LETTER IF DESIRED ALSO WOULD BE HAPPY TO DISCUSS FURTHER IN JANUARY IN CONNECTION AFRICAN EDUCATION MINISTERS MEETING LAGOS STOP COPYING TO EDSTROM REGARDS

BALLANTINE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME D. S. Ballantine

DEPT. Education

SIGNATURE D. S. Ballantine
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE: DSB/hl

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc and cleared: Mr. Romain

For Use By Communications Section

Checked for Dispatch:

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: ARTHUR PORTER
UNESAL
PRESTOWN

DATE OCTOBER 15, 1975

CLASS OF SERVICE LT

x2601

COUNTRY: (SIERRA LEONE)

TEXT:

Cable No.:

PROJECT DELAYED ANSWER YOUR REQUEST FOR PERSONAL COMMENT ON DRAFT CARNEGIE PROPOSAL RECEIVED HERE OCTOBER NINE STOP EYE REGARD PROPOSED OUTREACH PROGRAM AS GOOD EXAMPLE OF CURRENT TREND EXAMINED AND ENDORSED BY NED STUDY AND OTHERS TO RELATE HIGHER EDUCATION MORE FULLY TO DEVELOPMENT NEEDS AND PROBLEMS THROUGH RESEARCH CORMA SERVICE AND TEACHING STOP PLANNING UNIT AS MENTIONED IS PROPER BEGINNING STOP PAPER REFERS TO BANK SUPPORT OF IPAM BUT COULD BE MORE EXPLICIT HOW IT DOES AND DOES NOT RELATE TO AND SUPPORT THIS PROPOSAL ESPECIALLY REGARDING TWELVE MANYEARS TECHNICAL ASSISTANCE STOP ALSO NOTE POSSIBLE SLIGHT OVERLAP BETWEEN THIS PROPOSAL AND BANK ASSISTED UNIVERSITY PLANNERS STOP SUGGESTION TO ESTABLISH DEPARTMENT COMMUNITY HEALTH IS INTERESTING CORMA POSSIBLY INSPIRED STOP WILL EXPAND THIS COMMENT BY LETTER IF DESIRED ALSO WOULD BE HAPPY TO DISCUSS FURTHER IN JANUARY IN CONNECTION AFRICAN EDUCATION MINISTERS MEETING LAGOS STOP

COPYING TO EDSTROM RICARDS

BALLANTINE

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME: D. S. Ballantine

DEPT: Education

SIGNATURE:

REFERENCE:

DSB/hl

ORIGINAL (File Copy)

(IMPORTANT: See Secretary's Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc and cleared: Mr. Romain

For use by Communications Section

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RDS Education

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Benjamin King, VPD

DATE: August 27, 1975

FROM: Helen Hughes, ECDDR

SUBJECT: Proposal for a Research Strategy and Program in Education

As you know, this paper was written jointly by this and the Education Projects Department and I had a hand in it. I am thus in some difficulty in contributing to its discussion. Wearing my personal rather than Department hat, I still want to raise those questions which I did not think were appropriately covered in our joint product. As I do not think the eve of my leaving the Bank is a time for setting precedents by not saying what I think, here goes.

(a) The first issue I want to raise is one of guidance to the authors of future papers. In my opinion survey papers for the Research Committee should be more in the format of issues papers with the problems and difficulties of a subject clearly displayed. Past failures should be exposed rather than papered over. Research on education seems to me to be in relatively worse straits than other development areas. Why is the subject so difficult? What can be done about it? What is wrong with what the profession has done about it in the past?

(b) I find some difficulties with the list of project funded research on page 13 and the priorities listed on page 16. On past research I would have preferred a much meatier discussion of what good the various past research has done, what can be learnt from past expenditures, etc. The list of priorities covers practically all possible research and there is no recommendation which of these 5 huge subjects is more important than any other. Given budget constraints, what should be done now, and what should be done in the Bank and what should be done outside? How can past mistakes be avoided?

(c) The paper reads like one that was written to present the Bank Group's view on education research to the "world". I suppose my real point is that one cannot start from that point even if it would be nice if one could because it would avoid a lot of messy drafting. I think the only way to get real "think" pieces to the Research Committee as a basis for research strategy discussions is to ask one or two people to write an issues paper in their own name. The Bank can be relied on to turn it into a bland enough product by the time it has been discussed. As it is, will the authors tell us what the difficult and controversial issues are at the meeting?

HHughes/kg

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OFFICE MEMORANDUM

Ref Education

TO: Mr. Benjamin B. King, Office of VP, Development Policy

DATE: August 26, 1975

FROM: Barend A. de Vries, Chief Economist, LAC

SUBJECT: Proposal for a Research Strategy and Program in Education

This rather broad proposal meets with a number of critical comments (attached) from the education experts in the LAC Region. Clearly the paper can be made more specific if it is to be relevant for our lending policies and for the situations we face in our member countries. I would, in addition, suggest that the paper explore the possibility of designing research projects on region - specific situations - which vary so widely from continent to continent.

cc - Messrs. Tsantis
Thint
Wolff
Miss Dowsett

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

Research Education

TO: Mr. Barend A. de Vries, LCNSA

DATE: August 19, 1975

FROM: Andreas Tsantis, LCPED

SUBJECT: Comments on the Proposal for a Research Strategy and Program in Education

Per your request to Mr. Thint, attached you will find the comments on the above proposal by two of our staff: Ms. Dowsett (Economist) and Mr. Wolff (Education Planner). I think most of their comments are well taken.

Our experience has been that research in our sector within the Bank is not sufficiently operationally oriented, with some exceptions particularly as related to education finance matters. We have been stating our views on this matter quite often in the past and definitely whenever we have been asked to review research proposals. As we have seen no particular improvement, our interest in reviewing such proposals and our time allocation to that task have really been diminished. I particularly share Ms. Dowsett's comments on this matter (end of paragraph two and related discussion).

Surely, there are many topics where Bank research can contribute to guide Borrowers and us in more meaningful and informed decision making. There are various topics also which non-operational Bank staff can explore for the information and support of the operational staff. For example, the research done on student loan funds has provided us with an extremely useful background in our dealings on this matter with our Borrowers. Mr. Wolff has proposed a few other very operationally relevant topics. We can add to this list, but I am afraid our additions would not be in the areas of interest of the Bank researchers.

Attachments
ATsantis:mp

cc: Messrs. Blaxall (LCPDR), Hultin (EDPDR), Thint, Wolff (LCPED)
Miss Dowsett (LCPED)

OFFICE MEMORANDUM Re: Education

TO: Mr. Andreas Tsantis, Deputy Chief, LCPED DATE: August 15, 1975

FROM: Donna-Marie Dowsett, Economist, LCPED

SUBJECT: "Proposal for a Research Strategy and Program in Education" - Comments.

1. I have reviewed the abovementioned paper, which purports to develop a framework within which proposals for Bank-supported research could be considered. The paper reviews the objectives and gaps in present educational research and identifies the most urgent needs for educational research in the future. Heavy emphasis is placed on the fact that much on-going research does not have a policy orientation and therefore is of limited use to decision-makers in developing countries. A brief summary is made of the principal research programs of other agencies not affiliated with the Bank to ensure against a duplication of efforts.

2. In general, I found the paper very disappointing. Many of the individual suggestions for research are good and would be helpful to the Bank in the conduct of its operational activities. However, almost every section of the paper is riddled with conceptual inconsistencies. More disturbing is the degree to which supposedly objective considerations are interspersed with judgemental assertions. If the authors had said that, on the basis of the Bank's diagnosis of the world's principal educational problems, they would like to support certain kinds of research, the reader would at least have been given an honest statement of intention. Instead, we are led through a tortuous discussion of what policymakers supposedly perceive as their most difficult problems, what other research institutions are or are not doing, and so on -- all to arrive at a foregone conclusion. Namely, the Bank will support research in the areas of principal interest to its CPS and DPS staff, plus a few extra topics from the Education Sector Paper. The following may help to illustrate my point.

3. Having discussed the need for policy-oriented research, major "problem areas" are identified on the basis of four criteria (p.2):

(a) Is the question important to policy makers in a large number of countries?

(b) Will additional research lead to a new level of understanding which will contribute to the formulation and implementation of realistic policy options?

(c) Will the results lead to an improvement in resource allocation and income distribution?

(d) Can the results be obtained within a reasonable time and at a reasonable cost?

I would agree that (a),[1/] (b) and (d) are relatively objective criteria, insofar as objectivity is at all attainable. But, what place does (c) have in such a list? If resource allocation and income distribution are of importance to policy makers, they would emerge under a discussion of (a). What we have here is a fundamental philosophical question: Is our starting point to be the opinions of policy makers in our client countries or is it to be the opinions of the Bank? I would personally be willing to accept the latter (for the purposes of defining our research program), but I resent the authors' attempts to mislead the reader into thinking that the analytical process for arriving at the conclusions was an objective assessment of perceptions from below (i.e. from Borrowers).

4. I suppose the second most disappointing feature of the paper is its total failure to provide a clear set of guidelines for determining those areas in which, for some reason, the Bank would have an advantage vis-a-vis other institutions in conducting research. The mere fact that our concerns are broad and increasingly engulf almost every aspect of socio-economic life is not enough of a reason for us to conclude that we should develop the answers ourselves rather than turn to some other sources of information. In a curious way, this does come out in the paper, in that some of the best research proposals are in the area of educational economics (specifically educational finance and manpower). This reflects the fact that based on the nature of our work and the kinds of information to which we have access, we are in a particularly strong position to define, conduct or monitor research on such questions.

5. One final point. Although the paper does in fact open the way for research into almost any topic we chose (because the "problems" it identifies are so comprehensive), it is curious that it does not raise as a specific research topic the question of whether or not the education system can serve as a vehicle for fundamental social transformation (the question of whether education leads or follows change, or, put differently, whether it is an independent variable of change).

cc: Messrs. Germanacos, Wolff (LCPED)
DDowsett:mlm

1/ I wonder to what extent it would be administratively feasible to institutionalize an arrangement whereby our Borrowers would have a chance to react to and voice their opinions regarding our research activities - some sort of review committee, the conclusions of which would serve as one input in our decisions to make sure that we were not misreading our Borrowers' concerns.

OFFICE MEMORANDUM

Ref. Education

TO: Andreas Tsantis, Deputy Chief, LCPED DATE: August 15, 1975

FROM: Laurence Wolff, Educational Planner, LCPED

SUBJECT: Review of "Proposal for a Research Strategy and Program in Education"

The following are some comments on the paper:

1. The paper gives the impression that the entire field of education is open for research grants, since it describes needs for research on educational opportunity, on internal efficiency, on external efficiency, and on management and finance.

2. The specific research priorities overlap, but the report does not discuss in what ways. For example, the need to provide equity in terms of "outcome" means that the entire learning process must be studied; if "outcome" also means employment, then the labor market would also need to be studied. The need to improve education in rural areas means that studies would be needed related to identifying new target learning groups, to studying employment and productivity in rural areas and to providing greater opportunities for education in rural areas. Issues regarding financing are intimately related to the inputs to the learning process as well as to employment.

3. Some concepts are not properly defined. On page 6, the need for equity is defined as the need to "equalize educational opportunities and outcomes." But usually unequal opportunities (e.g. greater opportunities to disadvantaged groups) are required to get equal outcomes. On pages 3 and 6 "minimum" learning and "minimum" cognitive skills are mentioned but not defined. It would be best to eliminate these phrases, since they can't be defined except in terms of specific tasks and activities. An example of another phrase which is undefined is "active rather than passive roles in rural development" (page 6).

4. Two kinds of research are suggested but not fully discussed. The first is that of the testing of specific proposed educational policies. The second is the expansion of our knowledge about educational processes. It would be useful to carefully relate these two types of research - especially in terms of the basic knowledge we need before we can test out certain policies. The paper could also provide more discussion of types of research, e.g., experimental, longitudinal, evaluative, cross-sectional, etc. and discuss priorities for specific types.

5. The paper doesn't examine the proposed research topics in terms of present knowledge or lack of knowledge about each of them.

6. The sections on costing and finance and on management are the best, especially since they consistently talk about specific policies whose effectiveness needs to be tested.

7. I would suggest the following improvements in the paper:

(a) a priority listing of specific policies which need to be tested and evaluated;

(b) a priority listing of areas to improve our knowledge about educational processes (separate from specific policies to be tested); and

(c) a matrixing of priority lists with each other and with Bank policies as expressed in the sector paper.

8. I would also suggest a need to do the following studies:

(i) The urban marginal population: its needs and how education and training can reach this group. One useful approach is to consider how people can be trained to generate their own work opportunities.

(ii) How to develop cheap and flexible learning materials and what effect these materials would have over time. Recent research has already provided strong support for experimental programs on the use of educational materials.

(iii) The role of administrators, directors, and supervisors in directing and improving student learning, and how to expand their role. This topic has been seriously overlooked.

(iv) Further understanding of the role of education in society, especially in terms of its dependency on social, political, and economic factors. To what extent can education initiate social change and to what extent is it a product of social change? The experience in Colombia, where the introduction of prevocational training at the secondary level has been difficult because of economic and social factors, makes this kind of study particularly important at this time.

LWolff/dw

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OFFICE MEMORANDUM

Research - Education

TO: Files (AID Conf)

DATE: July 24, 1975

FROM: T.V. Tiglao, PNP Department

SUBJECT: Mini-Seminar on Non-Formal Education and the Use of Media and Technology, Information Center on Instructional Technology

1. On July 23, 1975, I attended a mini-seminar hosted by the Information Center on Instructional Technology on "Non-formal Education and the Use of Media and Technology", vice Mr. Alex Shaw. The subject was presented by Messrs. Bernard Wilder and James Hoxeng, non-formal education specialists of USAID, who briefly outlined the agency's philosophy. There were about 30 participants, representing different organizations.

2. The presentation centered on four major points:

a. The organizational structure of the USAID non-formal education projects;

b. The 1973 revised AID bill, the Congressional mandate around which the informal education projects are planned;

c. Primary goals of non-formal education;

d. Strategies of USAID non-formal education projects.

Organizational Structure--Non-formal education is one of the four areas on which the Office of Education and Human Resources, Technical Assistance Bureau, USAID, focuses on; the other three are higher education, finance and analysis and educational technology. The office does not have regional responsibilities nor country programs; it provides central support and establishes linkages.

The 1973 Revised AID Bill--provides the basic philosophy and it is within this context that programs are planned. This includes:

i. less concern with capital transfer and more emphasis on technical assistance;

ii. support should center on critical problems such as food and nutrition, family planning, education and human resources;

iii. the use of private organizations;

iv. administrative support in collaborative style; more involvement of countries; and,

v. direct assistance towards improving the lives of the rural poor.

Primary Goals of USAID non-formal education program:

i. internalization of the broad perspective of non-formal education;

ii. adoption of the following characteristics of educational programs:

(a) programs based on the participants' needs;

(b) programs should be dynamic;

(c) participation at the local level in program planning;

(d) decentralization of non-formal education programs.

Strategies:

i. development of knowledge base;

ii. production of handbooks for donor agencies and LDCs;

iii. development of LDC's institutional capability for non-formal education programs;

iv. support of sectoral analysis;

v. action-oriented research particularly on how to reach the "hard-to-reach"; and,

vi. development of alternatives in vocational training.

2. USAID has given grants to: the Michigan University to develop the knowledge base; World Education to deal with program planning and evaluation and the University of Massachusetts in developing field programs using field-base research.

3. The presentation was followed by some discussions which centered on the following topics:

a. The need to develop a multi-media approach and innovative approaches;

b. The need for self-determination and participative educational programming in LDCs;

c. The need to develop the content of education on recognized need of the people in the community and what they perceive they need to know;

d. The need to establish network of linkages within countries;

e. The problem of integration and decentralization;

f. The problem of some countries' resistance or indifference to informal education; some countries are suspicious of non-formal education, especially when funded by donor agencies;

g. How to use educational technology to best advantage--often times the 'hardware' precedes the 'software' so that the equipment are not used for lack of people who know how to use them. It was stated that there is a need for a philosophy in the use of educational technology; the focus should not be on the media but on the people's participation.

4. The whole discussion is almost a repeat of Coomb's Attacking Rural Poverty, How Non-Formal Education can Help.

cc: Mr. Messenger, PNP
Mr. Kang, PNP
Mr. Shaw, PNP (o/r)
Ms. Hammond, PNP

AW: Conf:PNP
TVTiglao:sr

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

Research - Education

OFFICE MEMORANDUM

TO: Mr. B. B. King, Research Adviser, Development Policy

DATE: June 12, 1975

FROM: D. S. Ballantine and R. Gulhati

SUBJECT: Proposal for a Research Strategy and Program in Education

We attach a copy of the paper "Proposal for a Research Strategy and Program in Education" prepared jointly by the Education Department and Development Economics Department.

The paper is designed initially to provide a framework for the consideration of Bank-supported research projects. In addition, the paper includes a survey of a variety of research activities undertaken as a part of the Bank's lending operations.

We hope that the discussion of the paper by the Research Committee and by the operational departments will not only stimulate research in education but will also help that our future efforts in this area are focused around issues reflecting the Bank policies as defined in the Education Sector Working Paper.

Attachment

cc: Messrs.	Chenery	Baum	Blaxall	Johanson
	Stern	van der Tak	El Darwish	Lethem
Mrs.	Hughes	Hultin	Hendry	Pennisi
Messrs.	T. King	Erder	Pouliquen	Stewart
	Simmons	Jallade	Vergin	Thint
	Rao			

NErder/HHughes/rcm

PROPOSAL FOR A RESEARCH STRATEGY AND PROGRAM IN EDUCATION

Table of Contents

ANNEXES

PROPOSAL FOR A RESEARCH STRATEGY AND PROGRAM IN EDUCATION

I. Introduction

The need for a long-term research strategy to support the formulation and implementation of educational policies is felt by many educators and government officials in both developed and developing countries. The Bank's Sector Working Paper on Education shows a pervasive concern for research and experimentation connected with the new education policies advocated by the Bank. In this paper, the word "research" is taken in its broadest sense. It encompasses any activity that leads to a better understanding of educational problems and solutions and produces findings relevant to policy formulation and project design and evaluation.

The purpose of this paper is to discuss the objectives, gaps and priorities in educational research. It concentrates on the research needs of planners and policymakers while recognizing the importance of improved information for other producers and consumers of education: teachers, parents and students. The needs for education research are being surveyed by the IDRC Working Group. The Bellagio Consortium periodic meetings have helped to focus attention on such specific areas as higher education and development, nonformal education in a rural context as well as the issue of appropriate research strategies for agencies and countries.

It is sometimes argued that a great deal of past educational research in developing countries has not significantly contributed to understanding the problems of the policymakers. First, it has often been done by foreigners whose objective was to satisfy a dissertation committee 10,000 miles away or a board of journal editors who were more concerned with refining knowledge than applying it. Second, it was usually so designed as not to yield information that was actually useful for making policy decisions. Options were not explored, costs were not evaluated, and the opinions of the various constituencies about the proposed change were not consulted. Third, the results were never properly disseminated to the various interest groups and information agencies. The project ended with the final draft of the paper, but little was actually done to help solve the problem.

To a certain extent, the frustration felt by educational authorities over the lack of immediate applicability of research results is growing out of a misconception of the role of research. Too often, planners and policymakers expect research to provide them with clear-cut solutions to solve their problems or with recipes to simplify and reduce the uncertainties of the decision-making process.

Too often, research results appear to do exactly the contrary. They make things look more complicated rather than simpler. They tend to be conditional on many facts or phenomena outside the scope of educational planners, thus restricting their margin for manoeuvring and their ability to take unquestionable decisions.

To be sure, the results of educational research should not be expected to produce immediate changes in educational practices. The main contribution of research will be, in the short run, to establish evidence about controversial issues and, in the long run, to alter and deepen policymakers' awareness about those issues.

Perhaps, current misunderstandings between researchers and policymakers could be, at least partially, sorted out if research needs were from the beginning determined in a policy-oriented context. In such a context, research (and other sources of information) ought to be treated as inputs into the decision-making process. Identification of research needs should, therefore, be based on the analysis of decisions to be made for the implementation of major policy objectives.

Policy-oriented research should also reflect the education policies and priorities of each country and vary according to differences in country situations. The creation of a research capacity responsive to national problems must, therefore, be considered as an appropriate course of action. It is, however, possible to discuss educational research on the basis of broad issues common to many developing countries. The international perspective is useful here as it helps focus on similarities rather than peculiarities, although the priority assigned to specific questions within each of these research areas vary significantly from country to country.

In the second section of this paper, the most urgent research needs are identified and categorized in terms of broad research areas. A cursory survey of the most important on-going education research programs carried out outside the Bank is made in Section III (Annex I). The two types of Bank-sponsored education research (project-funded research and RPC research) are reviewed in the fourth section.

II. Identification of Research Areas and Issues

Six major areas have been identified as "problem areas" for policymakers in developing countries, namely: (a) the process of learning, (b) education and employment, (c) education and rural development, (d) equity, (e) cost and finance and (f) evaluation, planning and management.

Under each of these areas, which are reviewed below, a number of research issues and questions critical to the decision-making process are mentioned.

Four criteria have been used to select the research issues discussed below. These reflect the concerns of both the producers and the consumers of policy research. The criteria are:

(a) Is the question important to policymakers in a large number of countries?

(b) Will additional research lead to a new level of understanding which will contribute to the formulation and implementation of realistic policy options?

(c) Will the results lead to an improvement in resource allocation and income distribution?

(d) Can the results be obtained within a reasonable time and at a reasonable cost?

1. The Learning Process

For analysis, this policy area will be divided into two topics: (a) identifying target groups and their learning needs and (b) the determinants and the efficiency of the learning process.

(a) Identifying Target Groups and Their Learning Needs. Education systems suffer from two major shortcomings in this area. First, they tend to privilege school-age children at the expense of other groups. Second, learning needs are seldom tailored according to the roles played by the various groups engaged in development.

Additional target groups include adults engaged in the production process, especially women, and school-age dropouts. The former group is eligible for a wide array of compensatory education programs ranging from literacy campaigns, health and nutrition courses, extension services, and vocational training. The latter should be provided with second-chance opportunities aiming at preparing for active life.[1/]

The learning needs of these various target groups have yet to be defined in a systematic way. Research in this area should seek to clarify two major issues. First, it is important to identify both the minimum cognitive skills such as reading, arithmetic and basic knowledge of the environment, and the minimum non-cognitive skills like responsibility, cooperation and initiative which are required for productivity and job satisfaction. Second, information is critically needed on what the target groups already know--what they have learnt through informal training--how they utilize this knowledge, and the economic and political realities which inhibit the application of the knowledge. A recent survey in Thailand surprised officials because it showed that villagers knew enough about solving their problems related to family planning, but were constrained by economic and political factors in achieving the solutions.

Learning needs are sometimes poorly defined even in the formal educational system. For example, while everyone agrees that learning to read is very important, it is unclear to what level students should read when they leave the primary schools. Should they be able to read national newspapers, or is passing the test for entry into secondary school sufficient? Dissatisfaction with present learning objectives of formal education is pervasive throughout the system. The attempts presently made to "ruralize" primary education curricula, to "vocationalize" secondary education or to gear higher education towards development aim at identifying new learning needs more closely tailored to the expected contributions of the various target groups to development than at present.

[1/] See research area 4 on Equity.

(b) The Determinants and the Efficiency of the Learning Process. The development of realistic programs tailored to the needs of the various target groups requires an understanding of the determinants of learning and the efficiency of the learning process. It is surprising how little is known in developing countries about the impact on learning of even the most conventional schooling inputs. Is the learning process more efficient when it takes place with a pupil-teacher ratio of 35 to one and one book for every five pupils or with a pupil-teacher ratio of 50 to one and one book per pupil? In many developing countries, governments are investing heavily in upgrading the qualification level of the teaching force and building educational facilities, but there is virtually no evidence that teachers with more years of teacher training, and who command higher salaries, are better teachers or that smaller classes significantly affect the learning process. A recent study in a Latin American country indicates, in fact, that students do almost as well when studying under normal school teachers as they do when they are taught by university graduates. There is also contradictory information available on the contribution of expensive technologies such as different media and individualized instruction to cognitive growth, which are being used in a number of countries.

Even less is known about the impact of non-school factors on the learning process. Few studies, comparable to those available in developed countries, have so far sought to sort out the relative impacts on non-school factors on educational outcomes. Even fewer studies have done so with the explicit objective of increasing the cost-effectiveness of the learning process.

Research should seek to clarify some dimensions of these problems. For example:

(a) Can the period of teacher training be reduced significantly without affecting teaching quality and pupil learning?

(b) Does the use of vernacular language as the medium of instruction in the early years of primary schooling improve pupils' performance and reduce costs?

(c) Do non-school factors such as nutrition and health significantly affect learning and to what extent can these factors be cost-effectively manipulated to boost learning?

(d) Does the introduction of mass media in an otherwise traditional education system improve cost-effectiveness?

2. Education and Employment

The major research issue to be addressed in this area is how to balance effectively the supply of skills by the education-training system--including on-the-job training--and the demand for these skills from the economy. Research in this area should be directed to elucidating the causes of imbalances. Broadly speaking, these causes can be quantitative--shortages or surpluses of certain categories of skilled manpower--or qualitative--the skills learned at school are not those required by employers. No meaningful discussion of these imbalances can take place without taking into account the structure of incentives (wages) prevailing throughout the economy.

More specifically, the following issues should be dealt with:

(a) assessing the long-range availability of jobs requiring critical skills in the economy;

(b) identifying policy mechanisms to channel the demand for education to appropriate levels and fields of study;

(c) using "tracer studies" as a management tool to highlight the process of allocation of graduates and dropouts to jobs and explore the transition from study to work;

(d) appraising the impact of alternative types of training (comprehensive vs. technical, formal vs. out-of-school education) on employment, worker productivity, job promotion and satisfaction. For example, there is a need to know more about the cost-effectiveness of various systems of vocational training such as technical schools, apprenticeship programs or on-the-job training.

(e) exploring the relationships between the issue of educated unemployment and the overall labor surplus;

(f) surveying the causes of unemployment among the educated manpower with a view to pinpointing the role of unrealistic expectations among these causes;

(g) exploring the phenomenon of overqualification, that is, the constant upgrading of recruitment standards even though persons with less education would perform the job and at less cost. Insofar as the phenomenon reflects an oversupply of graduates from higher levels of certification rather than actual technological requirements, it should be solved by appropriate education policies.

3. Education and Rural Development

In this area, the overall policy objective is: How to improve the contribution of learning systems to rural development? This general objective may, in turn, be broken down into a set of issues on which decisions will have to be made:

(a) determine the minimum learning needs of critical groups like small farmers and women in order to enable them to perform active rather than passive roles in rural development through (i) effective participation in community action (rural cooperatives, family planning programs and the like), and (ii) adoption of more productive methods of farming;1/

(b) assess efficiency and cost-effectiveness of different rural training schemes and select those which are most appropriate for increasing worker participation and productivity;

(c) review the determinants of farmer behavior and experiment with such training systems as rural training centers, mass media and extension services, to alter farmer behavior;

(d) identify local, regional and national management needs of rural development programs and propose ways of training and using various types of management personnel (voluntary vs. professional, local vs. regional, community vs. government salary);

(e) assess the scope for mobilization of local resources and self-help in implementing training programs with a view to (i) increasing participation and relevance and (ii) reducing costs.

4. Equity

The central policy issue is how to reach low-income groups in order to equalize educational opportunities and outcomes. In order to implement equity-oriented educational policies, research is required to:

(a) survey the socio-economic profile of students and dropouts at different levels in the education system with emphasis on the rural/urban gap;

1/ See also the first research area about the learning process.

(b) identify school and non-school factors affecting school participation, achievement and dropout with emphasis on factors responsive to public policies such as the duration of the school cycle, the quality of teaching and the relevance of curricula to the socio-economic environment;

(c) assess the extent to which compensatory education actually contributes to equalizing educational outcomes in the context of LDCs. Can adult literacy courses, for example, succeed in bringing adults on the same "starting line" as school-age children?

(d) study the merits of a set of "second chance institutions" for those who lacked adequate educational opportunities during or after school age or for those who dropped out of school before being ready for work;

(e) experiment with fair and effective criteria such as quota systems based on parental income or geographic origin to complement exams for promoting students from one level to the next and particularly in selecting students for secondary and tertiary schooling;

(f) explore cost and sociologically effective ways of reducing the bias against education for women. This is particularly important in view of the high correlation between education for women and falling fertility rates, child care and second generation education opportunities which may help to break the poverty cycle.

5. Cost and Finance

In a typical developing country, expenditures on education account for 20% of total public expenditure and 4% of GDP, and they are increasing. The issue here is twofold: (i) how to reduce cost per student-year and per graduate by increasing internal efficiency, and (ii) how to ensure that adequate and equitable financing is available? These give rise to the following research questions:

(a) Systematic inquiries are required to assess the effectiveness of such costly educational inputs as low pupil-teacher ratios, the use of new media, small class sizes and the long duration of courses for teachers;1/

(b) To the extent that teachers' salaries are, by far, the biggest component of unit costs--between 60 and 90%--

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1/ See first research area on the efficiency of the learning process.

innovative policies concerning the use of teachers--double-shift teaching, part-time versus full-time teaching, use of advanced students to teach less advanced students--should be explored and implemented;

(c) Systematic assessment of the evidence already available about the use of local materials, simplified architectural designs and indigenous expertise and labor is required as construction costs in developing countries are often extremely high and there is a strong tendency to "overbuild." Furthermore, the existing evidence on the intensive use of physical facility such as double-shift for full-time students and an evening shift for part-time and adult students in some Asian countries should be reviewed to facilitate similar programs in other countries;

(d) Methods of reducing capital costs such as self-help, local participation in planning, and designs for multi-purpose community centers need to be reviewed;

(e) Heavy reliance on expensive boarding facilities especially at the secondary and post-secondary levels is customary in many parts of Africa. As this policy contributes to drive unit costs upwards, it should be seriously scrutinized in these countries, and the feasibility of alternative policies such as better localization of facilities should be explored. However, secondary and tertiary boarding schools may be appropriate, particularly to overcome inequities in access to education in higher income, and particularly in oil-rich countries. The African experience should also be examined from this viewpoint;

(f) Present systems of education finance are seldom geared towards the implementation of education policies, perhaps because their impact on the demand for education, on equity and on both internal and external efficiency has not yet been systematically explored. Recent evidence--in Kenya--shows a strong and negative correlation between tuition fees in primary education and the private demand for this level of education. In many developing countries, the level of subsidization of the various educational cycles is to a certain extent responsible for a distorted pattern of educational demand. Inquiries about appropriate subsidization policies are in order;

(g) Present systems of education finance are often inequitable insofar as they lead to a redistribution of income from the poor to the rich through the tax system. The feasibility

of corrective tax policies such as a new education tax, or an increase in the progressiveness of the tax system should be explored;

(h) Both equity and the internal and external efficiency of education could be affected by such financing policies as loans or fellowship programs, where such policies are explicitly designed to meet these purposes. The potentialities and the limitations of such policies should be spelled out with due consideration to national contexts and situations.

6. Evaluation, Planning and Management

(a) Systematic evaluation should become an essential tool for planners and policymakers. Assessing the effectiveness, efficiency and replicability of existing programs should be a prerequisite for their expansion and improvement. Simplified evaluation methods making use of control group and sensitivity analysis are needed to be incorporated in day-to-day operations and easily executed by researchers and planners. Evaluation should actually become the necessary complement of experimentation which is itself an indispensable step of the process leading towards large-scale educational reforms;

(b) Planning. Traditional educational planning methods such as manpower forecasts and rate-of-return analyses are no longer sufficient. New approaches to planning corresponding to a broader concept of human resources development have to be designed. In this connection, three major improvements in planning methods are in order:

Firstly, the information basis for planning should be broadened to include all members of a given age group--enrolled and unenrolled youth, dropouts, job seekers, and inactive persons. This procedure--which can be called "cohort analysis"--is a prerequisite for the designing of human resources strategies adapted to progressive development policies;

Secondly, the ways and means to enlist the participation of such groups as students, teachers, parents and administrators in the planning process should be explored. Local participation in the implementation of nonformal, rural training schemes is already a common feature in many African countries. In a more general way, participatory planning, including the users and consumers of education, should be actively promoted;

Thirdly, intersectoral resource allocation decisions need clarification. The social as well as the economic profitability of the various levels of schooling needs to be explored and explicitly taken into account for investment decisions.

(c) Management. Experimentation with the adoption of modern management techniques such as use of systems analysis, decentralization of administrative decision and planning, better record-keeping systems, and worker participation are required. In order to ensure appropriate information flows--which are often a prerequisite for educational reforms--better communication systems ought to be worked out "vertically" that is to say, between the various levels of management (central, regional, local and school level) and "horizontally" between researchers, planners and decisionmakers;

(d) Research Capacity. In spite of repeated pledges made by rich countries and international agencies to promote research capability in developing countries, an overwhelming proportion of education research and studies is still being initiated and carried out by individuals or research centers from developed countries. In many cases, these individuals are often nationals from developing countries where research capability is said to be lacking. However, even if they are working on problems of their countries, the fact that they are not located in the country reduces the policy impact of their work and sometimes even makes their participation counterproductive. A bolder emphasis on the institution-building aspect of research projects in developing countries will be required from donor agencies if this trend is going to be reversed.

III. Education Research Outside the Bank Group

The major on-going research on education in developing countries was reviewed in the preparation of this paper to identify the gaps in the research effort. This review was not exhaustive, only including research programs that have reached a substantial size or are likely to yield policy results. The following table lists the major agencies doing studies and the amount spent on educational research. A lot of educational research is also taking place in universities. While there are several centers that have attracted a critical mass of researchers, most work is done by individuals--too numerous to be listed--across many university departments. These centers are often funded by the organizations listed below.

Major Research on Education in Developing Countries[1/]

	Annual Expenditure[2/] (US$)
A. International Organizations	
1. International Institute for Educational Planning (IIEP)	700,000
2. International Bureau of Education	400,000
3. UNICEF	100,000
4. UNDP	14,000,000[3/]
5. International Labour Office (ILO)	2,000,000
6. OECD - Development Center	350,000
7. OECD-CERI-Center for Educational Research and Innovation	-
8. Council for Asian Manpower Studies (CAMS)	100,000
9. Estudios Conjuntos Sobre Integracion Economica Latino Americano (ECIEL)	700,000
B. Other Organizations	
1. CIDA	2,400,000
2. United States Agency for International Development (USAID)	600,000
3. Educational Testing Service (ETS)	8,000,000
4. National Institute of Education (NIE)	1,000,000
5. Educational Development Center (EDC)	1,000,000
6. Ford Foundation	4,000,000

A review of this work shows that important efforts are beginning to be made, particularly in the field of internal efficiency, the determinants of learning and the effects of educational investment on income distribution. In the future, however, as second generation hypotheses which have been derived from these results are explored, improved coordination will be needed to fill in the gaps and to avoid unproductive duplication. This is a major reason pointing out the need for initiating a significant inter-agency effort as soon as possible.

1/ Further information on the research efforts of each of these organizations is included in Annex I.

2/ 1974 or average annual expenditure for the 1970-74 period.

3/ Education research allocations under current projects.

Source: Preliminary information collected by IDRC and compiled by the Bank staff from agency budgets.

IV. Education Research and the Bank

1. Introduction

Education research in the Bank may be directly related to and funded through education projects or financed by the Research Committee (RPO research). The first type of research is in the long run paid for by the borrowing country while the second one is wholly financed by the Bank. This basic difference in financing is reflected in both the subject of research and its implementation. Clearly, project-funded research--because it is paid by the borrower--will have to deal with issues of immediate relevance to the situation faced by the country under consideration. It usually originates from the user; that is, the borrower who will also have a major responsibility in carrying out the project on both the institutional and technical levels.

On the contrary, RPO research tends to be generated by the researchers. This means that proposals for research come typically from those Bank staff who will carry out the research or at least have a direct role in its execution. As a consequence, RPO research usually addresses itself to issues of a more general and conceptual nature and of a less immediate relevance to decision-making than project-funded research.

Needless to say, there are exceptions in both cases. A well-conducted project-funded research may yield results which go beyond the particular issue for which it was originally designed. In the same way, the broad conception of RPO research does not necessarily prevent its applicability to specific situations.

A research strategy should start with a review of research needs. Such a review could appropriately be a part of the education sector analyses carried out by the Bank as the purpose of these analyses is precisely to highlight the deficiencies of the education/training systems. In doing so, reviewers are inevitably faced with a range of problems some of which may be solved by appropriate investment, while others need careful definition and study before any remedial action can be taken. Research needs as they arise during sector work could be dealt with either through project-funded research or RPO research.

2. Project-Funded Research

As was mentioned in the introduction, research proposals funded through projects are geared to the immediate needs of the policymakers. They also lend themselves particularly well to reinforce the local research capability. The institution-building aspect of project-funded research is important as it can bring a fresh spirit and an increased awareness to otherwise bureaucratic institutions such as education ministries.

So far, project-funded research can be categorized in five types:

(a) Fact-finding studies: These are studies designed to raise coherent information about a specific problem area. Such studies are used to enhance the planning and decision-making process. The studies on "School Facilities, Furnishing and Mapping Survey" and on "Post Secondary Technician Training in Brazil: Proposals for Formulation of Policy and a Development Plan" included in the second education project in Brazil are examples of fact-finding studies.

(b) Evaluation of on-going programs and experimentation with new schemes. This type of research takes usually the form of "follow-up" or "tracer" studies. Such studies--which are particularly useful to assess the effectiveness of a new type of training and analyze the transition from study to work--have been included in at least a dozen of recent Bank projects under the technical assistance component of these projects. It will take, however, several years--the time for the project to reach maturity--before the actual results of these studies can be compiled.

(c) Pre-investment, feasibility and preparation studies. Pre-investment and feasibility studies are standard procedures whenever the principle of investing in a given area of the education/training system has been agreed upon at the identification stage while the full implications in terms of costs, benefits and implementation remain to be worked out. When such studies take place during the project cycle, they usually require retroactive financing. In some operating divisions, it has become customary to earmark a small proportion of project funds for the preparation of subsequent projects. This time-saving procedure is often used when the appraisal team is convinced that something could be done in a given area but lacks the knowledge required to propose it in the present project. For instance, an exploratory study of the farmers training centers presently proposed for a third education project in Chad was financed by the second education project in the country. Many innovations in Bank lending are actually brought up in this way. This has the traditional advantage of increasing the consistency of the Bank's lending strategy in a given country.

(d) Comparative studies. Some research issues are pervasive enough to actually lend themselves to comparative studies across countries. Basic education in Western Africa is a case in point. The purpose of the study is to establish a typology of experiences in basic education in different

countries. The financing is secured through various project funds. Such a system cannot be repeated easily everywhere as it is clearly contingent on an adequate schedule of education projects in various countries.

Project-funded research faces the same constraints in terms of localization as those of the project itself. The time horizon may sometimes be extended beyond that of the project, especially in the case of tracer studies for which the "longitudinal" perspective is essential. The financial constraints do not appear particularly severe in the broad framework of an education project. Constant scrutiny is, however, required in identifying research priorities in cooperation with education officials in order to avoid duplication with on-going efforts and overspecification of objectives. The amount of finance available for project-funded research came close to US$4 million during the past two fiscal years (see Annex III).

3. Research Committee Funded Research (RPO Research)

RPO research is financed by the Bank through a separate budget since 1972. The responsibility for allocating this budget rests with the Vice President, Development Policy, which acts with the advice of a Research Committee drawn from all parts of the Bank. As a general rule, research projects are initiated by staff members, selected through a formal review process, funded by the Research Committee and carried out by Bank staff with or without the help of outside consultants.

Past Bank research efforts in education have been substantial in the field of nonformal education, educational finance, cost-benefit planning, alternative learning technologies in vocational training, and education production functions. In addition to a host of mimeographed papers and position memoranda on the six research areas identified above, the "visible" output of their research effort consists of about 10 Bank Staff Working Papers out of 200, 2 Occasional Papers out of 20, and a two-volume study on nonformal education in rural areas (see Annex IV).

Past Bank Group external research expenditure on education has averaged US$140,000 per year over the FY 1970-75 period (see Annex V).

(a) Main Characteristics

By and large, RPO research attempts to:

- explore new areas of knowledge such as cognitive versus non-cognitive outcomes of education or education expenditure and income distribution;

- test commonsense assertions such as the negative effects of malnutrition on education or the positive effect of education on earnings;

- generate new methodologies for project design, appraisal, implementation and evaluation such as the education evaluation project in Tanzania.

As a result of the close relationships between education and other human resources sectors, much education research is actually taking place under such headings as employment, nutrition, income distribution, population and health. Most of these research projects include surveys designed to collect presently unavailable data and are more analytic than descriptive. Many of them aim at exploring new issues or disentangle contradictory evidence over old ones. Preference is often given to research methods that concentrate on longitudinal (time series data) and experimental designs as the most likely to yield information useful for policy decisions. Efforts are made to increase the cost-effectiveness of research projects by relating the level of outlay to the amount of new information obtained.

The use of RPO research findings by policymakers has sometimes been difficult in the past. Although part of the problem of reconciling "research" and "policy" lies in the insufficient lead time often expected between the two, education research findings have led to an increased awareness of operational staff about such unresolved issues as education and equity, education and earnings and optimum learning technologies.

(b) Constraints

The research budget allocated by the Research Committee during FY 1975 came close to US$2 million, 3.7% of which was to be devoted to education. This percentage actually underestimates the share of education as a lot of education related research projects are categorized under other human resources headings such as labor/employment and population/health.

The costs of the various research projects so far funded by the Research Committee range from US$10,000 to US$70,000. Only one new research project was funded in FY 1975; most of the authorization for this year is allocated to continuations or extensions of research projects from previous years.

These cost estimates do not include Bank staff time. Actual involvement of Bank staff in carrying out research projects tends to decrease overtime as the increasing number of projects is not matched with a parallel increase in staff availability. As a corollary, the use of outside consultants or research institutes tends to rise, thus driving the external costs of research upwards.

Although no major breakthrough in the size of the overall Bank research program is expected during the coming fiscal years, there is room for increasing the share of education from 3.7 to 5% according to the guidelines put forward in the Bank Group Research Program.

(c) Priorities

Bank Group objectives focus on the design of projects that increase the productivity of resources and more equitably distribute the benefits obtained from these resources. With these objectives in mind Bank research in education could profitably concentrate on studies which show how to improve or optimize (i) the internal efficiency, (ii) the cost effectiveness, and (iii) the social equity effects of investments.

Priorities in education research should also take into account the work done by other institutions and donor agencies (see Annex 1) in order to avoid duplication of efforts and waste of resources.

In view of these considerations, the Bank Group could give research priorities to research projects aiming at:

(a) Increasing the internal efficiency of educational systems by (i) minimizing education costs, (ii) altering the input mix in order to improve the efficiency of the learning process, and (iii) promoting out-of-school training whenever indicated by cost-effectiveness criteria;

(b) Clarifying the relationships between education, employment and income distribution with a view to highlighting the impact of education investment programs on these relationships;

(c) Experimenting with alternative training schemes aiming at providing "critical" inputs for rural development;

(d) Promoting equity at all levels through (i) a better distribution of educational opportunities, (ii) the adoption of equitable educational finance methods, and (iii) a fostering of "critical" education outcomes;

(e) To develop planning, management and project design tools corresponding to new policy emphases; mass education, integration of rural programs, community participation in decisions and evaluation.

Research Done Outside the Bank

This Annex provides a selected catalogue of donor agencies and research organizations with on-going research programs in the field of education in developing countries. The list is by no means exhaustive. It includes only research programs that have reached a substantial size or are likely to yield results of particular interests for the six research areas described in the preceding section.

1. International Organizations

International Institute for Educational Planning (IIEP). This institute, started with Bank, Unesco and Ford Foundation assistance in 1963, carries out research in educational costs and financing. They have done a number of country monographs in the past five years. Their future research program will focus on the following topics: educational planning at the sub-national level, education, employment and work, disparities in education and teaching - learning strategies. Research funding is presently at the level of about 700,000 dollars a year.

International Labour Office (ILO). This agency has carried out important work in the area of education, employment, income distribution through its world employment program. A large output - mainly in the form of country case studies (Colombia, Sri-Lanka, Kenya, the Philippines, Santo Domingo, Jordan) or working papers - is already available and more is about to come. This effort has brought together an impressive amount of evidence on this news of issues within the framework of an employment-oriented development strategy. The level of funding is about US$2 million per year.

OECD - Development Center. This agency is presently concentrating its capability in the specific issue of the employment/unemployment of graduates and school-leavers in five or six selected countries. The entire research program is worth about US$350,000.

OECD-CERI - Center for Educational Research and Innovation. The CERI is devoting the bulk of its resources to the problems of education quality in OECD member countries. The emphasis is put on early childhood education, recurrent education, innovations in the teaching-learning process, curriculum development and the process of educational change.

Council for Asian Manpower Studies (CAMS). The council is a group of researchers in South and East Asia who have been working for several years on education and employment studies. Their modest studies, $15,000 on an average, have focussed on policy issues. While they have received only a small contribution from the Bank, significant efforts have been made by the staff of the Development Economics Department to review and assist the researchers (RPO-307). Their funding in the past several years has averaged about 100,000 per year.

Estudios Conjuntos Sobre Integracion Economica Latino Americano (ECIEL). This agency is a private international research organization based in Rio. Among its various economic research efforts, it is presently carrying out a research program on (i) educational cost and finance, and (ii) education and income distribution. The geographical coverage of this agency is restricted to Latin America. The four-year research program on education, which started in 1974, is expected to cost about US$3 million.

2. Other Organizations

Educational Testing Service (ETS), Princeton, N.J. Research at ETS is on a wide range of policy issues and is not limited to testing. Although they have a limited amount of work that uses data from developing countries, much of their theoretical and empirical work is relevant. Their annual research budget is about 8 million dollars and virtually all of the research is done in the house.

National Institute of Education (NIE), Washington, D.C. The purely international program of NIE is less than a million dollars of their 60 million annual budget. But again much of their research is relevant for gaining insight into the educational problem of developing countries. Their research spans all six of our topics, and virtually all of it is contracted.

Educational Development Center (EDC), Newton, Mass. The research of EDC has concentrated on curriculum development and teacher training. While most of its work has been on American education, it has an important tradition of curriculum development in developing countries. For example, it has spent fifteen years developing and implementing science curricula for primary schools in Sub Saharan Africa. They have also been active in the African Examination Councils. Although their budget for international work is about a million dollars annually, they have completed more than $34 million in international research and a large percentage of the work is done by their permanent staff.

United States Agency for International Development (USAID). This agency has the highest level of educational research expenditures of any organization. They have spent important amounts in all the six problem areas mentioned in Section II above. With one or two exceptions, all USAID research is contracted, mainly to American universities. Annual research spending is now at about $10 million a year, with bbout $35 million in work under contract. They have undertaken major evaluation of educational television, the measurement of educational outcomes, non-formal education, and educational finance, just to suggest the range of their program. Their future work will continue along past lines.

International Council for Educational Development (ICED), New York, Started several years ago, the major work of the ICED in developing countries has been in non-formal and higher education. Their budget for international work is under $500,000 per year, and a significant amount of the work is done by consultants. Their last major work - financed by the Bank - was in the area of education for rural development.

University of Sussex, Institute of Development Studies (IDS). This Institute has a research program aiming at exploring the consequences of the qualification/certification orientation of education systems in developing countries on schooling, the labor market and the social fabric at large. The amount of funds invested in this study is believed to be small by international standards but the research effort is well focussed on one of the main problems faced by developing countries in the area of education and employment - see pages 8 and 9, paragraph

"Tracer" Studies Included in Recent Education Projects

Indonesia I	
Oct. 1970	Follow-up of senior technical school graduates during three years after graduation.
Somalia	
May 1971	Technical secondary graduates.
Liberia	
March 1972	Project schools (secondary) and "traditional" schools as control group.
Iraq I	
May 1972	Secondary school students and graduates.
Jordan I	
Jan. 1972	Secondary school students and graduates.
Zambia III	
May 1973	Students and graduates of farmer training programs.
Colombia III	
June 1973	Students and graduates from rural comprehensive schools using "traditional" schools as control group.
Mali	
June 1973	Tracer studies are recommended as a project objective in order to "rationalize evaluation procedures so that efficiency in the operation of the system can be achieved".
Peru	
Oct. 1973	ESEP (upper, technical secondary education) students with other technical schools as control group.
Honduras	
Dec. 1973	Students from project institutions (general secondary, university).

Singapore II	
Jan. 1974	Follow-up of university graduates during five months after graduation.
Mauritius	
April 1974	Project secondary schools.
Brazil II	
Oct. 1974	Secondary school graduates.
Senegal II	
Dec. 1974	Project schools - lower secondary science and technology centers, industrial upgrading, hotel/tourism training centers.
Jordan II	
Feb. 1975	Various secondary and adult education institutions.
Korea III	
March 1975	Project school leavers will be surveyed one month, six months and one year after graduation.
Ecuador	
April 1975	Career development of vocational training students.
Guyana II	
April 1975	Student of pilot community secondary schools will be followed up during schooling and after graduation.

Estimated Total Outlays (Foreign and Local) for Research and Experimentation in Education Projects FY71-75

		US$
Brazil I March 1971	Education Survey.	130,000 (estimates)
Chad April 1971	Study of young farmer training schemes.	15,000
Senegal May 1971	Fisheries training study.	110,000
Zaire November 1971	Management study to identify changes needed for closer control over education enrollments and expenditures in state schools and in those operated by religious groups.	316,000
Liberia March 1972	i) Higher education system development study ii) Wage structure study in both private and public sectors.	670,000 (estimates)
Thailand April 1972	Veterinary and agricultural education and training study.	150,000 (estimates)
Cameroon June 1972	Pre-investment study of technical education and vocational training rquirements.	140,000
Tanzania IV March 1973	Management development study.	80,000
Korea II April 1973	Pre-investment studies to improve management education and to develop all levels of medical and para-medical training.	490,000
Algeria May 1973	Pre-investment study of the Institute of Technology for Light Industries.	340,000

		US$
Zambia III May 1973	An evaluation study of farmer training programs.	40,000
Ethiopia May 1973	Feasibility study of the production of science equipment for schools.	46,000
Mali June 1973	Basic education study.	435,000
Upper Volta June 1973	Feasibility study aimed at designing an appropriate training system for the managers of small and medium-size agricultural development projects.	113,000
Colombia July 1973	Sector survey.	500,000
Mauritania I January 1974	Evaluation of Koranic education.	340,000
Brazil II October 1974	Pre-investment studies and preparation of possible third education project.	500,000
Gabon November 1974	Preparation of an education reform sector work.	256,000
Senegal II December 1974	Pre-investment study of lower cost, more relevant alternatives to formal primary education based on the experimental program of Village Education Centers. Preparation of third education project.	208,000
Greece III May 1975	i) Post-secondary education system development study. ii) Feasibility study on education materials production unit	620,000
Dominican Republic II April 1975	Feasibility study for the development and production of textbooks and teaching aids for primary and secondary education. New education development plan.	260,000

		US$
Guyana II April 1975	Fact finding study on the effectiveness of vocational and technical education and skilled manpower migration in and out of Guyana.	200,000 (estimates)
Ivory Coast April 1975	i) Pre-investment study for education and training needs in rural development zones.	820,000
	ii) Pre-investment study for the introduction of more practical instruction in secondary education.	

Bank Sponsored Publications in Education

Working Papers (Approved)

Ved P. Gandhi	Some Aspects of Public Education Expenditure in Africa WP 100, February 1971
Daniel C. Rogers	The Economic Effects of Various Methods of Education Finance WP 106, May 1971
Jean-Pierre Jallade	The Financing of Education: An Examination of Basic Issues WP 157, July 1973
Manuel Zymelman/ Morris Horowitz / Ernie Herrnstadt/ Alan Woodruff	Cost Effectiveness of Alternative Learning Technologies in Industrial Training - A Study of In-Plant Training and Vocational Schools WP 169, December 1973
John Simmons	The Determinants of Earnings: Towards an Improved Model WP 173, February 1974
John Simmons	Education, Poverty and Development WP 188, February 1974
Jean-Pierre Jallade	Student Loans in Developing Countries: An Evaluation of the Colombian Performance WP 182, June 1974
John Simmons et al	Investment in Education: National Strategy Options for Developing Countries WP 196, February 1975
John Simmons	How Effective is Schooling in Promoting Learning? A Review of the Research WP 200, March 1975
Leigh Alexander/ John Simmons	The Determinants of School Achievement in Developing Countries: The Educational Production Function WP 201, March 1975

Occasional Papers

Hans Heinrich Thias/ Martin Carnoy	Cost-Benefit Analysis in Education - A Case Study of Kenya OP 14, 1972
Jean-Pierre Jallade	Public Expenditures on Education and Income Distribution in Colombia OP 18, 1974.

Books

Philip H. Coombs/ Manzoor Ahmed	Attacking Rural Poverty - How Non-Formal Education Can Help, 1974
Philip H. Coombs/ Manzoor Ahmed (editors)	Education for Rural Development - Case Studies for Planners, 1975

BANK GROUP RESEARCH PROJECTS RELATING TO EDUCATION 1/
FY1970 - FY 1975

		Project Costs US $000
RPO 246	Cost-Effectiveness of Alternative Learning Technologies in Industrial Training (CPS: M. Zymelman	38.0
251	Education and Rural Development	295.0
	Cost-Benefit Analysis of Education (H. Thias, M. Carnoy)	15.0
RPO 242	Professional Manpower in South East Asia (DPS: John Simmons)	22.0
RPO 243	Labor Market in Malaysia (DPS: Dipak Mazumdar)	43.1
RPO 244	Student Loans Schemes and Other Forms of Cost Reallocation (CPS: Jean-Pierre Jallade)	45.5
RPO 245	Labor Force Participation, Income and Unemployment (DPS: Dipak Mazumdar)	55.8
RPO 278	Project Evaluation Methodology: Educat on Attainments (CPS: Mats Hultin and Jacob Maas)	70.3
RPO 290	Labor Market in a Rapidly Growing Economy (DPS: Dipak Mazumdar and A. Sant'Anna)	32.3
RPO 291	The Benefits of Schooling for Workers (DPS: John Simmons)	28.2
RPO 299	Economic Aspects of Household Fertility Behavior and Labor Supply in Northeast Brazil (DPS: Ricard Moran)	53.9
RPO 303	Improving the Usefulness of Household Surveys (DPS: Timothy King and Pravin Visaria)	30.5
RPO 306	Employment Models and Projects (DPS: Raj Kirshna)	39.0

1/ Research Committee funded projects (RPO) started in June 1972.

RPO 307	CAMS Employment Studies (DPS: Larry Westphal)	25.0
RPO 315	Effects of Health and Nutrition Standards on Worker Productivity (CPS: Samir Basta and Inder K. Sud)	15.6
RPO 319	Educational Reform and Economic Development (DPS: John Simmons)	10.0
RPO 3xx	Ability Characteristics as Factors of Production (DPS: Marcelo Selowsky)	19.5
Total		838.7

$$z = x^2 + y$$

$$x = (t+u)$$

$$y = t^2 + u$$

$$z = 2t^2 + 2tu + u^2 + u$$

$$\frac{\partial z}{\partial t} = 4t + 2u \qquad \frac{\partial z}{\partial u} = 2t + 2u + 1$$

$$\frac{\partial x}{\partial t} = 1, \quad \frac{\partial x}{\partial u} = 1$$

$$\frac{\partial z}{\partial x} = 2x \qquad \frac{\partial y}{\partial t} = 2t \qquad \frac{\partial y}{\partial u} = 1$$

$$\frac{\partial z}{\partial y} = 1$$

$$\left.\begin{aligned} \frac{\partial z}{\partial x}\frac{\partial x}{\partial t} &= 2(t+u) \\ \frac{\partial z}{\partial y}\frac{\partial y}{\partial t} &= 2t \end{aligned}\right\} \checkmark$$

$$\left.\begin{aligned} \frac{\partial z}{\partial x}\frac{\partial x}{\partial u} &= 2(t+u) \\ \frac{\partial z}{\partial y}\frac{\partial y}{\partial u} &= 1 \end{aligned}\right\} \checkmark$$