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# EXTERNAL MID-TERM EVALUATION OF BRIDGES

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## **Executive Summary**

The main purposes of the external mid-term evaluation of the Basic Research and Implementation in Developing Education Systems Project (BRIDGES) are to describe and assess the effectiveness of Project design and assumptions, research activities, modeling efforts, dissemination and utilization, organization and management, and sustainability. The overall assessment by the evaluation team of the BRIDGES accomplishments during the first four years of operation is strongly positive. Important new research-based knowledge was generated related to fundamental educational problems in developing countries and high quality technical and research assistance was made available to USAID missions and host countries. The Project has decisively impacted on research capabilities and educational policy decisions in several countries.

### **Project Structure and Design**

BRIDGES is a \$10 million, five year AID project extending from September 30, 1985 until September 30, 1990. The funding of the Project is implemented under a Cooperative Agreement between Harvard University (as prime contractor), the Institute for International Research, Michigan State University, Research Triangle Institute and Texas Southern University. As the project evolved activities were concentrated in the countries of Burundi, Egypt, Indonesia, Pakistan, Sri Lanka and Thailand.

The basic assumptions of BRIDGES are that the continuously growing demand for basic education in developing countries and the persistence of limited resources require new, more cost-effective approaches to educational development. The Project's purpose is to develop comprehensive strategies for future education sector policies. The four main project components are:

1. synthesis of existing research information;
2. completion of new research to fill the gaps of existing knowledge;
3. development of micro-computer based planning and simulation models;
4. dissemination of results by publications and applications of models to developing countries.

Research results are seen as informing major decisions in the policy making, planning and managing of education. The simulation models are expected to integrate new knowledge and

facilitate policy dialogue. The educational variables examined in the project strategy are school facilities, instructional materials, teachers and learning technologies. These are considered key inputs in improving educational efficiency and quality, and are viewed as controllable through educational policy.

Throughout the project BRIDGES leadership has been faced with a number of difficult choices or trade-offs: to focus activities at the country or cross national levels; to interact in host countries with researchers or with policy makers; to concentrate efforts in the central organizations or in grass roots organizations; to maximize collaboration or to increase volume of output; and to maintain international professional standards or to meet demand for immediate solutions to pressing educational problems.

### **Evaluation Process and Limitations**

This mid-term evaluation of BRIDGES was undertaken by a three member team between September 15, 1989 and March 15, 1990. Resources did not permit the team to travel overseas to observe field activities and discuss the project directly with USAID and host country personnel. The data and information providing the basis for the evaluation report were primarily obtained from project documents, interviews with AID and BRIDGES personnel in the U.S. and by means of questionnaires and telephone conversations with knowledgeable people in the host countries.

### **Accomplishments and Problems**

In its conceptualization BRIDGES is primarily a research project. For the period of this assessment a total of six research reports, for development discussion papers and seventy five casual papers were produced. Additionally, six computer-based simulation models were developed, dozens of short-term training and demonstration programs were carried out and significant contributions were made in improvement of education information systems in at least two countries.

BRIDGES is an important, creative approach to an international educational problem of immense proportions. There are however, a number unfulfilled expectations and persistent difficulties in Project operation. The main obstacles to the full realization of purposes and objectives of BRIDGES stem from the Projects ambitious scope, complexity and limited resources of time and money. Problems associated with educational development and change resist complete understanding and educational research does not easily or often result in clear, non-controversial directions for educational policy. Reviewing and interpretive existing research,

successfully carrying out crucial new research, building useful computer-based models, dissemination of new knowledge and skills, and linking these activities to educational policies are exceedingly difficult and time consuming processes. Attempting to generalize about the acquired insights across countries compounds the difficulty.

There is a direct link between the Project's ambitious scope and complexity and the constraints of human and fiscal resources. Initial expectations regarding the necessary time to collaboratively design and carry out research, developmental and tasks were often underestimated. Discrepancies between expected budgets and the lower budgets realized required sub-projects to be redesigned and rescheduled. In spite of creative management, target dates could not always be met.

### **Recommendations**

The evaluation team believes that BRIDGES has made important contributions to educational strategies in developing countries and will continue to do so without adjustments or modifications. The following recommendations are viewed as significant for realization of the full potential of the Project.

#### **Recommendation 1:**

The BRIDGES Project should be extended. The BRIDGES consortium should continue to be supported at some minimum level by S&T/ED and should be permitted to seek buy-ins from interested USAID missions. The evaluation team believes that this action is a good investment for AID for it will allow extension of selected research, training, and development activities. Priorities should be give to: (1) validation and cross national comparisons of research findings, (2) further identification of implications of ongoing or completed research for educational practice, (3) intensification of policy modeling, policy dialogue and the building of knowledge networks, and (4) the continuation of relevant skills development.

#### **Recommendation 2:**

S&T/ED should make an intense effort to coordinate BRIDGES, IEES and ABEL in order to maximize their collective impact. Coordination and collaboration among these projects should include: joint training efforts; joint production of training products; joint knowledge networking, including intensive regional networking among host countries, use of common but adapted software packages; and further dissemination of BRIDGES research and products.

### **Recommendation 3:**

**BRIDGES** in its dissemination planning should develop specific strategies and work plans based on: (a) using a variety of information, research and professional networks, e.g., SERRAG, REDUC, and international agencies, (b) targeting products to specific but overlapping audiences, e.g., research reports to host country and international researchers, simulation models to selected national and international training, planning bodies. Current development work on a computerized policy and planning data base which relates international research findings to policy domains and policy questions (SHARE) can contribute to this process. The roles of USAID missions, host country institutions, and other S&T/ED projects should be identified in the planning strategies.

### **Recommendation 4:**

Dissemination of **BRIDGES** findings should include attempts to strengthen the awareness of appropriate American audiences. Consideration should be given to targeting research findings and other products to U.S. politicians, bureaucrats as well as academics. Particular attention should be focussed on achieving a higher visibility of the activities of **BRIDGES** and other S&T/ED products within the legislative and executive branches of the federal government.

### **Recommendation 5:**

To further the impact of **BRIDGES AID/W** should 1) encourage missions to utilize **BRIDGES** personnel as advisors and consultants in relevant AID supported projects; 2) consider institutions affiliated with **BRIDGES** as sites for the training of host country personnel in educational research and EMIS development.

## TABLE OF CONTENTS

	PAGE
Executive Summary . . . . .	ii
Project Structure and Design . . . . .	ii
Evaluation Process and Limitations . . . . .	iii
Accomplishments and Problems . . . . .	iii
Recommendations . . . . .	iv
1.0 Introduction . . . . .	1
2.0 Project Design, Purpose and Assumptions . . . . .	3
2.1 Project Design and Purpose . . . . .	4
2.2 Project Assumptions . . . . .	5
2.3 Changing Directions in the Development of the Project . . . . .	7
2.4 Expectations of Host Countries and USAID Missions . . . . .	8
3.0 Project Activities and Accomplishments . . . . .	11
3.1 Activities Planned and Accomplished . . . . .	11
3.11 Research Activities . . . . .	12
3.12 Computer Models . . . . .	14
3.13 EMIS Development . . . . .	16
3.14 Training . . . . .	17
3.2 Strategies for Dissemination . . . . .	19
4.0 Organization and Management . . . . .	27
4.1 Organizational Structure . . . . .	27
4.11 Institutional Roles and Relationships . . . . .	28
4.12 Host Countries . . . . .	28
4.13 USAID Missions . . . . .	29
4.2 Project Management . . . . .	29

**TABLE OF CONTENTS continued**

	<b>PAGE</b>
<b>4.3 Co-ordination of BRIDGES, IEES and ABEL . . . . .</b>	<b>33</b>
<b>5.0 Utilization and Impact . . . . .</b>	<b>35</b>
<b>5.1 Utilization as an Objective of BRIDGES . . . . .</b>	<b>35</b>
<b>5.2 Relation of Knowledge and Educational Policy . . .</b>	<b>36</b>
<b>5.3 Utilization of Research, Models and Training . . .</b>	<b>37</b>
<b>6.0 Capability Building and Sustainability . . . . .</b>	<b>42</b>
<b>6.1 Future Sustainability . . . . .</b>	<b>43</b>

**APPENDICES**

<b>Appendix A - Questionnaire for USAID Missions Without BRIDGES Contracts . . . . .</b>	<b>46</b>
<b>Appendix B - Interview Guide for USAID Missions with BRIDGES Contracts . . . . .</b>	<b>50</b>
<b>Appendix C - Questionnaire for Host Country Personnel . . . . .</b>	<b>53</b>
<b>Appendix D - Interview Guide For U.S. BRIDGES Personnel . . . . .</b>	<b>64</b>
<b>Appendix E - Planned and Accomplished Activities .</b>	<b>67</b>
<b>Appendix F - Persons Interviewed . . . . .</b>	<b>76</b>

## **1.0 Introduction**

**This document is the final report of the external, midterm evaluation of the Basic Research and Implementation in Developing Education Systems (BRIDGES) Project. The evaluation team preparing this report is comprised of three members who carried out their work between September 15, 1989 and March 1, 1990. In the Scope of Work the evaluation team was charged with describing and assessing the effectiveness of Project design and assumptions, research activities, modeling efforts, dissemination and utilization, organization and management, and sustainability.**

**In general the assessment of the design and accomplishments of the Project during the first four years of operation is strongly positive. BRIDGES has contributed significantly to the body of knowledge on educational development in third world countries. It has provided high quality researchers for USAID missions and host countries in addressing fundamental educational problems. A number of cases can be documented of BRIDGES research influencing educational policy and change. In addition to such expected consequences there were also favorable unexpected results in some host countries, e.g., contributions to the development of education management information systems. There were, however, some unfulfilled expectations in Project objectives and a few persistent difficulties in Project operations and communication.**

**Data and information were acquired from extensive meetings with AID/Washington officials, from Project documents, through interviews with Project personnel, and by means of questionnaires and telephone interviews with knowledgeable persons in the host countries. Visits were made to Harvard University, Michigan State University, Research Triangle Institute and the International Institute for Research. A telephone interview was conducted with Dean Joseph Jones at Texas Southern University. Resources did not permit overseas travel; however, one member of the evaluation team traveling in Pakistan for other purposes was able to interview Project participants and USAID mission personnel in a face to face setting.**

**Four survey instruments were developed to assist in the evaluation (see Appendix A, B, C, D). A questionnaire was sent to USAID missions that had human resource officers but had no BRIDGES contracts. A second set of questions was faxed to USAID missions with BRIDGES activities (Burundi, Egypt, Indonesia, Pakistan, Sri Lanka, Thailand). These were followed up in depth through telephone discussions. A third instrument was forwarded to each host country and distributed to host country administrators, policy makers and researchers**

who were knowledgeable about or who had participated in BRIDGES activities. An interview guide also was developed and used in U.S. interviews with BRIDGES personnel.

The inability to visit the host countries constituted a severe constraint on the validity of the evaluation. A significant amount of information was received from host countries via questionnaires and telephone conversations but these procedures could not provide the rich insights that would be expected from field visitations. Other constraints included the lack of continuity within the evaluation team, limited funds for U.S. travel and the restrictive number of consulting days.

The body of the evaluation is organized into six sections. This section summarizes the scope of work of the evaluation team and describes the evaluation process. Section 2.0 briefly identifies the design of the Project, its goals, objectives, assumptions and administrative structure. Section 3.0 reviews the major activities and accomplishments of BRIDGES. Section 4.0 examines the organization and management of the Project. Section 5.0 considers the questions and difficulties in clearly demonstrating utilization and impact of the Project on participating institutions in the U.S. and host countries. Section 6.0 discusses the sustainability of the impact of BRIDGES. Six Appendices are included.

## **2.0 Project Design, Purpose and Assumptions**

The BRIDGES Project is a \$10 million, five-year project running from September 30, 1985 until September 30, 1990. BRIDGES is funded through a cooperative agreement between AID S&T/ED and the Harvard Institute for International Development (HIID). Project professional staff are provided by HIID and the Harvard Graduate School of Education, and through subcontracts with the Institute for International Research, Michigan State University, the Research Triangle Institute, and Texas Southern University. Funding for BRIDGES by S&T/ED is supplemented by buy-ins from USAID missions which have requested BRIDGES services.

The Project Paper (PP) for BRIDGES in explaining the Project rationale observes that from 1960 to 1979 the percent of GNP allocated to education in developing countries increased from 2.3% to 4.0%. Yet despite this magnitude of effort, in the mid-1980s nearly 3/4 of a billion children in the less developed countries were not receiving a basic education. Over 25% of the relevant age cohort were not enrolled in primary school. Without much larger allocation of resources or the attainment of greater efficiencies, the widely-held goal of universal primary education remains out of reach in this century for the lower income countries.

Qualitative problems also plague basic education efforts in less developed countries. The expanding enrollments have increased the percentage of unqualified teachers, revised pupil/teacher ratios upward and reduced the amount of funds spent on instructional materials. Given little hope of radically increasing funds allocated for basic education, the question becomes "How can we increase the quantity and improve the quality of schooling within currently available levels of educational investment?"

The basic rationale of BRIDGES is essentially that given limited resources, more effective strategies and cost effective policies are needed to meet the large-scale educational needs of LDCs. The Project Paper argues that the educational innovations in LDCs generally have not resulted in increased efficiencies and improved quality because their effects have not been sufficiently widespread and their magnitude has not brought about the "quantum changes" necessary in LDC education systems. The PP emphasizes the need for a "break-through with wide applications similar to agriculture's green revolution." The BRIDGES Project is thus seen as a major effort to develop educational strategies and workable solutions of wide applicability in LDCs.

## **2.1 Project Design and Purpose**

As stated in the Project Paper, the goal of the BRIDGES Project is to "increase the efficiency and equity of educational systems by enhancing the quality of learning opportunities open to third world children and by strengthening the quality of those experiences." In the same document the stated purpose or objective of the Project is "to develop comprehensive strategies for future education sector initiatives and to provide technical and planning assistance to host countries for formulation of educational models for educational development." The Cooperative Agreement (CA) also notes the need to develop "the research and technical assistance capabilities" of the U.S. institutions associated with BRIDGES.

The Project LOGFRAM identifies the following Project outputs: six cross-national studies conducted, research report series produced and disseminated, research networks strengthened, in-service training conducted, simulation models developed and a functioning research center created.

The language of the BRIDGES documents is generally consistent in its discussion of Project goal and purposes. However, there appear to be some distinct differences in the statements concerning the role of microcomputer-based simulation models. The PP conceptualizes the models as performing an integrative function for the knowledge building exercises, and an interfacing function with planners and policy makers in host countries and international assistance agencies. In the Technical Application (TA) of HIID one finds: "The outcome of this project will be increased use by planners and policy makers in the LDCs of micro-computer-based simulation models for the review and choice among alternative modes for the organization and delivery of educational services." The section of the TA titled "Objectives and Purpose of the Project" is almost completely devoted to discussion of the simulation models. Further within the TA, under the discussion of Project strategy, the following statement is found: "The end objective of this project is to develop a set of computer simulation models that are both 'user friendly' and allow the user to resolve some of the major policy and planning problems that s/he faces." The TA is expected to reflect the preferences of the project bidder and does not necessarily have to be consonant with the PP or the RFP.

Elsewhere, the PP, the CA and other documents, including the yearly work plans, treat the models as one of several outputs of the project of coequal value with research reports or training sessions. For example, the CA refers to development of "comprehensive" strategies for future "education

initiatives" and providing technical assistance in formulation of forecasting models. These models, the CA asserts, "should permit planners to estimate educational demand with unprecedented accuracy."

Interviews with AID personnel and with the BRIDGES group tend to emphasize an important but not exclusively significant role for the simulation models. The four main Project components chosen to achieve the Project purposes as identified in the Cooperative Agreement (three are identified in the PP) include:

- 1) Synthesis of existing research information;
- 2) New research to fill the gaps of existing knowledge;
- 3) Development of micro-computer based simulation models; and
- 4) Dissemination of results by publication and application of models to LDCs.

Research results are seen as informing major decisions in the policy making, planning and managing of education. The educational variables examined in the Project strategy are school facilities, instructional materials, teachers and learning technologies. These are considered key inputs in improving educational efficiency and quality, and are viewed as being controllable through educational policy.

The activities suggested by these components are planned to proceed sequentially, with the research reviews being largely accomplished during the first three years, the original research spanning years 1986 through 1989 and the bulk of the dissemination activities taking place in the last year of the Project.

## 2.2 Project Assumptions

A number of important assumptions are found in the Project Paper, Technical Application and Cooperative Agreement. The major implicit and explicit assumptions are identified below.

1. An educational knowledge base can be built in selected developing countries sufficient to show causal relationships between major educational inputs and outputs. (In identifying the expectations for BRIDGES the PP refers to the need to create "a systematic breakthrough with wide application similar to agriculture's green revolution.")

This clearly is an assumption of crucial importance.

Taken literally the implication is that existing research coupled with new, original research (undertaken within the constraints of time and resources of the Project) will allow the development of general theories of the educational process and of educational system change. The black box of education is opened, the explanatory variables are identified and the interrelations of variables are measured.

2. Comparative research across appropriate groupings of nations will yield generalizable knowledge.

The PP calls for a selection of countries based on such criteria as: level of development, presence of sub populations with relatively low school attendance rates, level of internal efficiency and level of acceptance of innovations. Clusters of countries meeting these criteria are assumed to require similar policies for educational reform.

3. The new or synthesized knowledge can be integrated into a series of computer based models. Early Project thinking as reflected in basic Project documents focused on the potential for creating models useful across countries either in policy and planning simulations or directly in educational decision making.

4. The scholars and policy makers in developing countries are not sufficiently familiar with research based knowledge in education but are interested in learning and using such knowledge. A corollary of this assumption is that in the past new knowledge and technology often have not been disseminated because they have not been marketed properly.

5. The models and the new knowledge base will be utilized in development of more effective educational policies in LDCs. The implications here are (a) the models and knowledge base at minimum illuminate choices in designing efficient and effective schooling and (b) these insights can become part of the policy agenda and be influential in policy formulation. The PP and CA appear at times to go a step further and suggest implementation of policies will result.

These initial assumptions imply Project results which appear to the evaluation team to be overly ambitious. The state of the art of educational research and the potential for generalizing educational insights are overestimated and the constraints of time and fiscal resources are underestimated. In several, if not all, cases counter assumptions could be as easily defended. By way of example:

1. The complexity of education as a process or system is so profound and the current explanatory theory so little developed that research resulting in major generalizations

about the functioning of educational systems (much less a breakthrough similar to agriculture's green revolution) should not be expected in a five-year project.

2. The meaning of comparative research is not clear and the history of attempts at "comparing" education processes across nations and cultures offers few specific or definitive insights for addressing many educational problems in any particular country.

3. Extant knowledge about education, as about other social institutions and processes, although useful in informing policy dialogue, is an inadequate base upon which to build computer based models to facilitate policy choices directly.

4. Major educational policies typically evolve within the idiosyncratic political and cultural processes of a given country. The relation between the amount of research-based knowledge available to policy makers and the choice of policy is neither direct nor predictable.

### 2.3 Changing Directions in the Development of the Project

Although the basic goal and purposes remained the same, a number of changes in the direction and emphasis of the Project took place during its first two years. These changes imply modifications in several of the original assumptions.

1. The importance of Education Management Information System (EMIS) development in host countries emerged after the project was well under way. Although not an original Project objective, attention to improvement of host country information systems could be seen as a logical supporting action to research and model building. EMIS planning has been encouraged by a high level of demand from some host countries and USAID missions and facilitated by a supply of MIS specialists within the BRIDGES consortium. The strong potential linkage between EMIS capabilities and the research activities is still evolving.

2. The idea of comparative research leading to policies with multi-country validity became less important to BRIDGES researchers as the Project proceeded. In like manner the development of computer software focussed increasingly on country-specific conditions. To overstate slightly the dilemma: in order to meet the needs of host country institutions, research and models need to be highly focused and responsive to local characteristics; however, in making such adaptations the cross national validity of those products and activities is reduced. This choice reflects one of several difficult tradeoffs with which BRIDGES has been confronted.

3. In the early stages of the Project, some members of the consortium pursued the idea of development of a general, computer based model valid for educational planning and policy decisions across all developing countries. More recently, faith in a general, deterministic model has been replaced by models adaptive to the needs of particular countries.

4. In the early operational stages of BRIDGES one computer based model (PETS, later designated STEP) was seen as a tool to be used directly in the technical decisions of planning and policy making. Attention to this function continues but the more recent prevailing view is that the educational software being developed is:

- a. Useful in introducing policy makers to the process of policy making and making policy choices; that is, the models are seen as instructional devices.
- b. Useful in developing an interest in use of computers and giving an aura of science to policy analysis.

Some AID/Washington officials have expressed concern over the shifts in Project emphasis and focus. Questions were raised about the "disintegration" and "fragmentation" of BRIDGES into a series of discrete, country-based activities. The core value of BRIDGES was seen to lie in its ability to produce generalizable results and offer AID policy analysts educational strategies valid across developing countries. The evaluation team understands the importance of this concern but tends to take a positive view of Project changes. These modifications and adjustments in Project expectations reflect the ability of competent professionals to reflect upon experience and to redesign the scope and focus of their work. The evaluation team believes the evolving conceptualization will increase the probability of Project influence and impact. Further, the evaluation team sees the possibility of some future Project reintegration, particularly if BRIDGES is extended.

#### 2.4 Expectations of Host Countries and USAID Missions

Questionnaires sent to host countries asked participants to identify personal expectations and governmental or institutional expectations. The responses suggest a somewhat narrower view of the Project purpose and objectives than do the initial Project documents. The responses fall into four basic categories: training, research, the provision of a broader understanding of education, and institutional development. Software development was mentioned as an objective only by respondents from Egypt. The personal expectation mentioned the most frequently was training,

particularly training in research methods and policy related research. The comment of one Thai respondent, while more specific than most, emphasizes a theme common across countries: "BRIDGES will train me how to do basic research to generate policy options:

- 1) how to generate research questions;
- 2) how to design a study;
- 3) how to write a research report; and
- 4) how to disseminate the findings."

The comments received from host country respondents regarding institutional expectations were somewhat similar to those received on individual expectations. Again there was an emphasis on training, research and to some extent MIS development. Egypt's expectations focused exclusively on MIS development. Thailand and Sri Lanka gave a heavy emphasis to policy-relevant research and information. Responses from Pakistan identified both contributions to educational sector development and to improvements in the Academy for Educational Planning and Management (AEPAM). Comments from Burundi focussed on evaluation and reform of basic education.

The expectations of USAID missions focussed on policy related research. Although the more global concerns of BRIDGES were recognized, assessment of the value of the Project was measured by its relevance to the mission's development agenda. Three of the missions with whom telephone conversations were conducted i.e., Burundi, Sri Lanka and Thailand, did not have education portfolios. Yet each concluded that BRIDGES has made an important impact.

#### Recommendation:

The final stage of the BRIDGES Project, whether it is terminated as scheduled or extended, should include S&T/ED support for efforts at reintegration and cross country comparison of acquired knowledge and insights (see Recommendations under 6.0). For example, the research on effective school practices carried out in Thailand, Sri Lanka and Burundi has much in common in its design. Also there are strong possibilities for meaningful cross country comparisons in a number of BRIDGES research efforts in Pakistan and Thailand. Interchanges through multi-country conferences or by other means should be fostered to analyze similarities and differences in research findings and consider policy implications. Similarly general insights from modeling, training and EMIS efforts should be sought and captured in brief publications to BRIDGES clients. Such collaboration and networking should not be restricted to countries whose USAID missions have education portfolios.

The greatest research challenge to BRIDGES in attempts at Project reintegration is to go beyond identification of the input variables which generate significant educational output effects to learn how the combination of input and process variables changes by country or context. The key question is: What are the conditions which give rise to the particular combination of influential inputs?

### **3.0 Project Activities and Accomplishments**

The PP identified three Project actions: 1) study existing information, 2) fill in knowledge gaps and 3) develop planning models. Most of the Project literature refers to four sets of activities or types of outputs: 1) synthesis of existing information, 2) research activities, 3) computer simulation models, 4) dissemination. In some documents training is also discussed as a major activity. The major products of the Project are research papers and reports (reviews or original) and computer based planning and policy models. The CA identifies nine "research and task performance reports".

The evaluation team did not undertake a detailed assessment of the many publications and several software packages produced by BRIDGES. The team had neither the range of specialization nor the time to undertake such a task seriously. The team members were, however, able to review many of the reports, casual papers and some of the software. One member of the team used MIN-PROJ and OPES in a graduate class of international and American students studying educational policy. The team believes it has credible, if incomplete, evidence of the quality of BRIDGES products. Insights have been acquired from the frank and open discussions with BRIDGES professionals involved in designing or carrying out sub-projects. Other important information for the team came from AID officials in Washington and in the field, and from host country personnel knowledgeable about BRIDGES.

### **3.1 Activities Planned and Accomplished**

In order to better understand the flow of the Project the evaluation team made an attempt to link planned activities and accomplishments as identified in the annual work plans. This proved a difficult task. The organization of work plans varied from year to year as did the terminology used to identify particular activities, sometimes making the determination of the status of a particular research development or training activity subject to interpretation.

Annual work plans and interviews reveal that research reviews and original field research frequently did not proceed as scheduled. The evaluation team interprets these "discrepancies" as reflecting at least two conditions. First, the original documents (PP, TA, CA) significantly under-estimated the time necessary to prepare research reports and to initiate and bring to fruition collaborative research and development projects. Second, changes in deadlines and adaptations of activities reflect new insights and new opportunities acquired as the Project evolved and as

such indicate the increased sophistication of Project personnel and leadership.

These characteristics of the Project are identified primarily to illustrate the difficulties in any straight forward evaluation of the relationship between specific original objectives and mid-term accomplishments. The continuously evolving nature of BRIDGES also complicates expectations for and analyses of dissemination.

### 3.11 Research Activities

In its conception and in its design BRIDGES is primarily a research project. As of the writing of this report a total of 6 research reports, 4 development discussion papers and 75 casual papers had been produced. The ongoing research in 6 countries is expected to produce several more research products.

Even without an assessment of individual research undertakings, the data, documents, interviews and questionnaire responses do permit the team a few tentative conclusions. First, there appears to be nearly unanimous agreement among USAID missions and host country participants that BRIDGES researchers in the field were of high quality. Telephone conversations with six USAID missions with BRIDGES buy-ins strongly support this view.

Some questions regarding the quality of the research report series were raised by a few AID/Washington officials in interviews. There appeared, however, to be contrasting positions represented among those who were concerned with this issue. Some thought that the quality was too high, that is, the analyses and language of the research was pitched at too sophisticated a level. Others questioned whether the research (in particular the state-of-the-art research reviews) were produced by available graduate students and faculty and not necessarily by the leading scholars of the field. Neither view, however, was widely held among those interviewed, and questionnaire responses from host country participants give high evaluations of the technical quality of research activities and products. Based on its own limited review of research papers and reports, the evaluation team supports this favorable assessment.

The limited criticism received with respect to research activities tended to focus not on technical quality but on practical application and relevance to host country educational problems. USAID missions in countries with BRIDGES projects were unanimous in the demand for "practical" educational assistance, and BRIDGES research was seen as usually, but not always, meeting this need. The precise

meaning of practical is not fully clear but would seem to be closely associated with localization and immediacy of concern.

Officials from USAID missions associated with BRIDGES pointed out that the concern with developing broad educational strategies and generalizable research did not always mesh with local USAID priorities. This problem of trying to respond to multiple agendas, i.e., those of S&T/ED, USAID missions, and host countries clearly could not be solved in every case to the satisfaction of all parties. The concern for relevance was also voiced by host country participants in their statements of Project expectations, e.g., improvement of local education policies and conditions, and their call for increased training in methods of research and planning. The importance of relevance is highlighted most strongly in the evaluations by host country participants of the various BRIDGES activities. Not surprisingly, in-country research was seen as more nearly achieving the individual and institutional expectations and as being more responsive to changing national needs than other research activities. In-country training, likewise, tended to be viewed as more important than international training in satisfying needs and expectations.

In general, the responses from host country participants and USAID missions were positive regarding the achievements of all research activities. Although in-country research was usually seen as fulfilling expectations and having the highest level of participation in host countries, respondents from Egypt tended to give it somewhat lower ratings. This may be explained by the changes over the last few years in the organization and senior management of the Egyptian Ministry of Education which have inhibited the planning of collaborative research. Moreover the focus of much of BRIDGES activity in Egypt has been on EMIS development.

Some criticism from host country participants was focused on the collaborative process of research. Relatively few criticisms were made regarding the level of involvement in choice of research problems or in research design. A moderate to high level of involvement was also reported, particularly by respondents from Burundi, Sri Lanka and Thailand in all stages of in-country research. However, several host country participants, mostly but not exclusively from Pakistan, believed that there should have been more involvement of host country researchers in the analysis of research findings. More involvement in analysis is seen as increasing the technical skills of researchers and building a sense of ownership of the research results.

## **Recommendation:**

Collaboration between host country and U.S. researchers should include the entire process of research from design to analysis. It can not be assumed that in every case all necessary conditions of time, facilities and personnel are available to undertake analysis of research findings in host countries. The maximum benefits of involvement, however, require shared responsibilities in research design, data collection, analysis, interpretation and dissemination.

### **3.12 Computer Models**

BRIDGES documents, including the PP, TA and CA, describe the development of computerized planning and policy models as a means of integrating research results (see 2.0). Thus the models were seen as following research and being a key mode for dissemination of research findings in order to impact on educational planning and policy decisions. Although BRIDGES research has to some extent informed model building, the amount of influence initially expected and the sequence of relationships have not been realized. Initial work on STEP, for example, was undertaken in response to buy-ins from USAID missions before BRIDGES research efforts were well underway. Moreover, as the Project evolved, the models were increasingly viewed as only one avenue for dissemination.

The computer based models prepared during the first four years of BRIDGES included: The System for Tracking Educational Progress (STEP), the Gender Education and Reporting System (GENDER), Optimizing Policies for Educational Systems (OPES), the Transition Rate Estimator (TREST), the Educational Impacts Model (EIM), Enrollment Projections Package (MIN PROJ), the Education Planning and Policy Game (EPIC). (Neither STEP nor GENDER was prepared specifically for BRIDGES.) These models are all operational; however, work continues on STEP, OPES, and EIM. A recent development has been an attempt to build a computerized policy and planning data base which relates international research findings to policy domains and policy questions. This activity (currently called SHARE) when developed could produce knowledge useful in making policy choices and could be linked to OPES and other simulation models.

The clients of these models include educational planners and policy makers in ministries of education and ministries of planning, USAID missions, international agencies, and possibly international and national non-profit research groups. Several demonstrations and training sessions have been held with these clients (except for the non-profit research groups) in each host country.

The development of these models has primarily involved Research Triangle Institute (RTI) taking the leadership in software preparation with conceptual inputs from individual members of the consortium, especially Harvard University.

Information from both host country participants and USAID missions suggest that the models are neither widely known nor widely used. Those associated with BRIDGES in the field are more familiar with STEP than other models, but its utility in its present form generally does not receive high marks. However, STEP and GENDER in modified versions have been used successfully by USAID missions and a number of international agencies. The simulation models such as OPES, seen by RTI as representing an important trend, are not well known at this time. Moreover, the computer models were rated lower than research activities by host country respondents in the fulfillment of personal and institutional expectations.

In sum, host country respondents generally lack familiarity with the computer models and claim little or no involvement in the design or development of the models. Respondents from Egypt were most familiar with STEP; however, they gave it low marks in its fulfillment of expectations.

Discussions with RTI personnel suggest that a number of important learnings have evolved in the process of development and dissemination of computerized planning and policy models. At the risk of oversimplification the following lessons are worthy of consideration:

- 1) A major purpose (often the major purpose) of models is to educate rather than to solve problems or specify optimal decisions. In light of this insight, models such as OPES and EIM which facilitate policy dialogue become "the wave of the future."

- 2) For many developing countries, models that operate from rudimentary data bases are required.

- 3) Those persons most receptive to use of computerized models may be found in planning and policy offices outside the education ministries. Activities in model development and training should include those ministries and departments most responsive to the new technology.

- 4) Software cannot be disseminated. To maximize the dissemination and utilization of models, host country personnel need to be deeply involved in the design of the models and not merely be viewed as consumers. Yet this approach may place exceedingly high demands on the time of technical advisors.

5) To maximize their practical value, computer models must be adapted to each country in which they will be used. However, the building of more generic models contributes to education theory building and may lay the foundation for development of applied models.

6) The extent of use of the models by planners and policy makers is in direct proportion to their simplicity of use. When feasible, a goal should be the elimination of the necessity for technical manuals to guide operations.

7) Train, Train, Train! All development and applications of software should include extensive periods of training for potential host country users. The extensive and continuous training requirement means that more time must be spent in a country by those providing technical leadership.

**Recommendation:**

BRIDGES should continue to refine the computer models and games, emphasizing their utility as tools for policy dialogue in specific countries. RTI personnel should be included with other institutional members of BRIDGES in discussions to further conceptualize and operationalize linkages between research, EMIS and modeling activities. To some extent this recommendation implies a shift in the emphasis of RTI's work from programming to conceptualization.

**Recommendation:**

The development of SHARE should continue and its linkage to policy simulation models such as OPES should be explored. This software makes use of the numerous research reports and papers generated by BRIDGES and, when fully developed, will allow the user to review quickly extant research related to any of several basic policy areas in education. A long term plan for the financial support, continued development, and internationalization of SHARE's data base should be encouraged by S&T/ED.

**3.13 EMIS Development**

The original design of BRIDGES, while recognizing information needs of third world countries, gave little attention to Educational Management Information System development. The discussion of the research component did not directly consider EMIS, and the initial objectives of computer related activities focused on the development of planning models and data base applications and provision of associated training needs. Research and model building efforts continue to be major thrusts of BRIDGES. However, BRIDGES has also begun, particularly in Egypt and Pakistan,

to respond to requests for assistance in building a comprehensive EMIS.

Attention to EMIS development can easily be seen as congruent with BRIDGES objectives to improve the data and information base of planning and policy making. The limited feedback from BRIDGES MIS involvements received by the evaluation team is positive. In the Egypt case significant progress has already been reported in adjusting data collection to enrich policy dialogue. However, attempts to respond to demands from host countries and USAID missions for assistance in EMIS development introduces the need for serious additional fiscal and human resources. If the BRIDGES project is continued, the following recommendation is offered for consideration.

#### **Recommendation:**

An attempt should be made to build closer linkages between work in EMIS, research, and model building (see recommendations under 3.12 and 6.0). The contributions of existing BRIDGES research to the definition of useful educational information should be explored and the ways in which EMIS can respond to researchers as clients should be identified. Additionally, the need for periodic policy related research as a supplement to regularly collected data by the EMIS needs recognition, and the planning of such research should be coordinated with EMIS development. A data base for cost analysis is crucial to the utility of EMIS. The objective in further information systems development should be to design an active EMIS to serve a variety of clients and purposes. Computer based simulation models can contribute to the dynamism of this coordinated effort by utilizing outputs of EMIS and research activities and in turn enriching the policy dialogue by demonstrating implications of policy alternatives.

#### **3.14 Training**

Training has become an increasing concern in the evolution of BRIDGES. The Project recognized early that training should be associated with any research activity and with dissemination of research findings and computer models. However, in the initial documents, e.g., PP and CA, there appears to have been an underestimation of the time, resources and effort necessary to devote to training to make host country participants full partners in undertaking collaborative research and utilizing computer software for planning and policy analyses.

The evaluation team does not have sufficient evidence to make a blanket assessment of the wide variety of formal and

informal training which has taken place under BRIDGES. Responses from questionnaires to host country participants and telephone conversations to USAID missions generally have been positive as to the quality of workshops and training seminars. Criticisms from host countries have tended to focus on the need for more training and skill development in research techniques and computer use.

BRIDGES conducted evaluations of its 1987 and 1988 summer workshops at Harvard University. The content of these workshops focussed on educational planning and policy making and drew participants from all host countries. The workshops ran for four weeks each and served a total of 40 participants. Since the content of the two workshops varied somewhat and the evaluations undertaken by the sponsors used different formats, qualitative comparison between the two training efforts is not possible.

An overwhelming majority of participants in both workshops believed that the pace and clarity of the workshops were "just right" and that the level of complexity was not too high. The interpretations and analyses of the participants appear to reinforce other insights acquired by the evaluation team regarding preferences and needs of host country participants for practical skills and knowledge. For example:

- 1) both in 1987 and 1988 there was a stated preference for more instructional time allotted to hands-on activities and demonstrations;

- 2) the 1987 workshop participants chose R-Base and Lotus software packages ahead of HOST-STEP in terms of usefulness in their countries; and

- 3) while virtually all the instructional materials (discussions of educational planning and goals/strategies/policies, algorithmic modeling, heuristic modeling, population forecasting, enrolment forecasting and manpower planning) were seen as relevant, the participants ranked their own understanding of the algorithmic and heuristic models as incomplete and less than their understanding of the other materials.

Information received from host countries suggest that both international and in-country training are well received. Although international training is generally welcomed (however, respondents from Egypt indicated low satisfaction), in-country training also received highest evaluations by host country persons knowledgeable about BRIDGES. A belief in the importance of in-country training is shared by all of those involved in BRIDGES. Moreover, host country participants

describe a moderate to high level of involvement in the design and operation of in-country training with somewhat lower level of involvement in international training.

**Recommendation:**

If BRIDGES is extended beyond its scheduled termination, a training plan should be developed which links, on a priority basis, training needs to the current status of in-country research and modeling efforts. In some cases additional training may be the key to successful utilization of BRIDGES outputs and sustainability of policy impact. If funding is available training should include the opportunities for host country staff to visit and participate in training experiences in other countries with successful BRIDGES activities.

Taking a long-term view of training, consideration should be given by AID to facilitating the institutionalization of research training in education for host country personnel through multi-year contracts with selected U.S. institutions. For example, Harvard University and Michigan State University now have the staff and resources to conduct such training on their campuses or in the field.

**Recommendation:**

BRIDGES should collect, refine as necessary and disseminate to S&T/ED, IEES and ABEL the various training products it has developed for workshops and other training purposes. These along with complementary and supplementary materials produced by IEES, ABEL and other projects should give USAID missions and host countries many potentially valuable tools for the training of planners and researchers. It should be recognized that, fundamentally, professional training is a participatory, interactive process. Training monographs, technical summaries, etc. acquire full meaning only within such context.

**Recommendation:**

Training in educational research, policy and planning is an area worthy of further exploration between S&T/ED and all USAID missions. Although the missions may not want to invest significantly in the education sector, they might support basic education training as important to the sustainability of changes in other sectors.

### **3.2 Strategies for Dissemination**

The idea of dissemination appears to be conceptualized in a variety of ways in the social sciences. A weak version

of dissemination associates the process only with informing. A stronger version includes utilization as part of the process. The Technical Application proposes to link dissemination activities to existing international networks of "research communication, discussion and application." In addition, a variety of publications, participant exchanges, conferences, workshops and seminars are proposed. The dissemination of models is treated in some length, emphasizes collaboration with clients and includes a variety of seminars, demonstrations and briefings. A data base and documentation center is proposed for Harvard University.

The PP says little directly about expectations for dissemination. It does note that "the simulation models will be demonstrated at the Ministry level to all AID countries interested in its application." The work plans, although not fully consistent, appear to include utilization as part of dissemination.

A general picture of the level of dissemination activity may be obtained from a review of successive annual work plans. However, in these documents distinctions between types of activity e.g., conferences, meetings and seminars are not always clear. Table 1 (Appendix E), prepared by the evaluation team, represents an attempt to capture the flow of dissemination activities.

Accepting the possibility of considerable inaccuracy, Table 1 suggests discrepancies between planned and accomplished dissemination activities. There were activities that were not planned (that is, did not appear in a work plan as a future action) which were accomplished. There were activities which were planned (that is, appeared in a work plan as forthcoming) which were not accomplished. From Table 1 the conclusion can also be drawn that dissemination has been a serious consideration of BRIDGES since its initiation.

The work plan for fiscal year 1990 detailed a five step dissemination plan for the Project. This plan, adjusted as requested by S&T/ED for a budget reduction, was submitted to AID in August 1989. As of 1 March, 1990 no formal response from S&T/ED had been forthcoming. The dissemination plan includes:

1. **Publications**

This strategy calls for continuation of the BRIDGES Research Report series, the Development Discussion Papers and the Forum.

## **2. A New Version of the Forum**

To reach a "select audience of educational policy makers and administrators" there is a plan to produce the Forum in non-technical English. Each issue of the new Forum will focus on a policy research domain e.g., instructional materials, teacher training, and will present arguments for and against adapting policy options which had been identified by BRIDGES researchers. Under consideration is an extension of the present level of production from 150 copies to 2,000 copies.

## **3. Computer Software and Model Training and Dissemination**

Software training workshops for USAID mission Education Officers and host country planners will be carried out in Thailand, Sri Lanka and Indonesia on the use of STEP, GENDER, OPES and EIM.

## **4. Regional Seminars/Workshops**

A series of regional workshops for "policy makers and senior managers" is being collaboratively planned with USAID missions in LAC, AFRICA and the MIDEAST. The objectives of the workshops include: dissemination of findings and products of BRIDGES; information presentations to educational policy makers of the resources available to assist in making education decisions, demonstrations of the use of BRIDGES software and publications in solving educational problems and informing USAID HRD officers as to the skills and experience available to them through the various S&T/Ed education sponsored projects.

## **5. Other International Workshops and Meetings**

At least five additional workshops and conference participations are planned. These will include presentations at annual meetings of appropriate international conferences and seminars at universities and research institutions which have strong international involvements in education.

By design much of the attention to dissemination was scheduled for the final year of the Project. Since many of the dissemination activities are scheduled for FY 90, evaluation at this time is somewhat premature. Nevertheless the evaluation team believes that some useful analysis and recommendations can be offered.

As BRIDGES personnel have recognized, concern for dissemination should begin with the project design. This concern is relevant in two areas: provision of information about the Project to missions which may choose to buy in and the influence of the choice of research problems and process on dissemination of the finished product.

In an attempt to identify the relevance or potential relevance of BRIDGES to developing countries outside the Project, brief questionnaires were distributed by S&T/ED on behalf of the evaluation team to 14 USAID missions with education sections but with no BRIDGES buy-ins. (See Appendix A). Responses were received from eight missions. Of these eight, only four reported having any familiarity with BRIDGES. The response rate and level of familiarity suggest that rapid turn-over of staff in USAID missions reduces the effectiveness of communication from S&T/ED. Although every BRIDGES publication series is forwarded to all USAID missions, S&T/ED apparently needs to be more aggressive in monitoring the dissemination process. Given that buy-ins were critical to the successful implementation of the project, it would seem that leadership in the missions would at least have had some knowledge of the existence of the Project; one respondent reported not being familiar with services through buy-ins.

Among the four missions with some familiarity of the Project, BRIDGES was best known through the software STEP and GENDER; one respondent knew of the Project through Forum. Suggestions offered by missions for future BRIDGES activities, which would either enhance the possibility of buy-ins or benefit the efforts of the missions generally, focused primarily on provision of information about the Project through news-letters and research reports, with attention given to its relevance to geographic areas outside the current BRIDGES network.

The most visible success in dissemination of BRIDGES research, and possibly also of models, thus far, has been within the international academic and professional community concerned with education in developing countries. BRIDGES personnel have participated in a number of academic conferences, offered dozens of demonstrations and published research findings and modeling analyses in several prominent inter-national journals. The long term effects of such effort could be considerable.

Reaching other audiences, particularly those involved in educational policy making and management is of course crucial to the achievement of BRIDGES objectives. At this stage the success of dissemination within host countries and throughout AID is less clear. The culminating implementation plan is

not yet fully underway. Information received from host country respondents offers few insights as to ways of improving dissemination. The respondents indicated high familiarity with in-country research and the Research Report Series. The extent of familiarity with training and development activities which supported dissemination varied, but generally was significant across all host countries. With the exception of STEP, there was little acquaintance with computer models.

Host country respondents from Burundi, Pakistan, Sri Lanka and Thailand (no responses for these questions were received from Egypt) gave high ratings to all of those BRIDGES dissemination activities being planned. Publications, computer models, seminars and workshops were all viewed as important dissemination activities. No new modes of dissemination were recommended. In terms of priorities for future BRIDGES activities, both dissemination activities and continuation and conclusion of ongoing research were seen as important.

Because of the number of research activities coming to closure in FY 1989, a major focus of dissemination for FY 1990 will be on ways to communicate the results of such studies. All BRIDGES research reports will include a summary statement of policy implications. In Pakistan, for example, summary reports on the school sample survey are being prepared which not only suggest areas in which policy action is needed but also suggests ways of carrying out such actions. The extended interaction of BRIDGES researchers in Pakistan with participants and policy makers provided a wealth of suggestions on dissemination strategy, some of which may be generalizable to other countries. One key idea is the need to identify which particular groups are concerned with a specific set of research findings and to design a strategy to communicate to that audience. The importance of understanding in detail the relationship of the educational policy and decision making process to the implementation of such a strategy is readily apparent.

The experience of BRIDGES reinforces the international literature which suggests that successful dissemination requires adjustment to context, problem and ownership of "product". The relevant institutions and acceptable communication channels vary according to the content of information and from country to country. By way of illustration, researchers in Thailand appear to have closer relationships to policy makers than do researchers in Egypt. And the role of the central government in implementing educational policy is less important in Pakistan than in Burundi.

In terms of the choice of research problems BRIDGES clearly attempted to examine and respond to the concerns of host countries. The question "What is of concern to you?" always preceded the question "What should be studied?"

In terms of process, the work plans, trip reports and other documentation provide ample evidence that BRIDGES subscribed to, and to a considerable degree implemented, the collaborative mode of working within host countries. Although variation across countries does exist in levels and kinds of involvement by various actors, research efforts were by and large joint efforts by researchers from the BRIDGES consortium and the host country.

Yet even given early recognition of the importance of dissemination and a continued fostering of collaboration, the groundwork laid for dissemination was not fully satisfactory. The complex design of the Project with many activities competing for attention, the constraints of distance, budget and the severe limitations of time which inevitably reduced the quality and intensity of collaboration, the limited effectiveness of the internal AID network of information exchange and the limited experience within BRIDGES with the range of dissemination tools and processes all combined to frustrate the ideal conditions for dissemination.

**Recommendation:**

S&T/ED should immediately respond to the proposed dissemination plan submitted by BRIDGES. The evaluation team recommends approval and that the plan be supplemented with suggestions found in this report. In implementing the plan as identified in the work plan for 1990, attention should be given to the dissemination strategy developed in each host country.

**Recommendation:**

Dissemination efforts, depending on the content of what is being disseminated, should include attempts to reach groups with central authority and also administrators and teachers at the grassroots level. The format and language for dissemination may need to vary greatly between groups. For example, at the national level a well publicized, prestigious conference focussing on major reforms and having as one of its outcomes a widely distributed book or monograph may provide benchmarks for years to come for educational objectives and substance for long term educational debate. Even though BRIDGES is a research oriented project the importance of training should be recognized. Continued training as needed should be carried out by the BRIDGES institutions most closely associated with the activity in

question. At the grassroots level, dissemination generally should be associated with an extended period of training. Continued training as needed should be carried out by the BRIDGES institution most closely associated with the activity in question. Use of local language and adherence to prescribed local processes for considering educational change are a necessity. There is no substitute for detailed research on the receptivity of local educators to new knowledge. The five dimensions or frames of reference identified by Weiss and Bucavalas<sup>\*</sup> provide one potential guiding structure for such research.

**Recommendation:**

BRIDGES or any subsequent disseminator of BRIDGES outputs, in order to be successful, must understand the policy, planning and implementation process followed by the country in question. The BRIDGES study of implementation in Pakistan, for example, is viewed by the evaluation team as contributing significantly to the planning of dissemination for that country.

**Recommendation:**

Research reports, instruction manuals and other Project literature should be prepared in or translated into the language(s) of the host country. The importance of this principle varies from one country to another but is valid for all host countries. Such translation is an expensive, difficult and time consuming process. There is, moreover, a trade-off between producing many different research products in English and a fewer number of products in a local language.

**Recommendation:**

More coordination and collaboration with international organizations which are engaged in similar activities and producing similar products e.g., WB, IDRC, should be undertaken in planning dissemination. Consideration should be given, for example to the ways in which BRIDGES reports complement publications of the World Bank, e.g., Marlaine Lockheed, Implementing Primary Education in Developing Countries (Draft), Washington World Bank, 1990.

<sup>\*</sup>Weiss, Carol H. and Michael Bucavalas, Social Science Research and Decision-Making, New York, Columbia University Press, 1980.

**Recommendation:**

ABEL, as a new project built partly on lessons learned from IEES and BRIDGES, should have a major dissemination responsibility. This implies that AED, the prime contractor for ABEL, should become knowledgeable about these projects and provide leadership in the coordination of planning among them.

**Recommendation:**

BRIDGES should promote the idea and process of international exchange of information and research findings through existing regional networks e.g., SERRAG, REDUC. It should downplay efforts to achieve global strategies for educational development. Networking between countries often in the same region which share similar problems, while rarely offering the transfer of useful knowledge directly, may offer each country new insights and new perspectives.

**Recommendation:**

Dissemination of BRIDGES research findings and information on the utilization of such findings should include attempts to strengthen the awareness of appropriate American audiences. Consideration should be given to targeting BRIDGES products to U.S. politicians and bureaucrats as well as academics. Particular attention should be focussed on achieving a higher visibility of the activities of BRIDGES and other S&T/ED products within the legislative and executive branches of the federal government.

## **4.0 Organization and Management**

BRIDGES is a large, complex, somewhat amorphous Project involving numerous sub-projects, many institutions, governments and individuals. The sheer complexity of the Project involving over ten research and planning institutions in different parts of the world, dozens of major actors and several national governments, inhibits efficiency and leads to multiple management problems. Each new buy-in from a USAID mission, in effect, adds a new sub-project with its own structure of roles and relationships, thus further complicating efforts at coordination and communication. Because of the different needs of the cooperating countries and the varying focii of the sub-projects, maintaining the integrity of BRIDGES as a single, integrated research and dissemination effort has been difficult.

### **4.1 Organizational Structure**

Harvard Institute for International Development is the primary unit responsible to AID for coordination, planning, and delivery of the BRIDGES services. As the manager of the BRIDGES project, HIID has coordinated the relationship between its many participant components. As originally conceived, the Project was to be guided by a General Policy Committee consisting of the Dean of the Harvard Graduate School of Education (HGSE), the Director of HIID, and world leaders in education. The purpose of the proposed committee was to review Project goals, progress, findings, and relevance to needs. This committee was never created.

HIID as prime contractor reports to a designated Cognizant Technical Officer (CTO) within AID, S&T/ED whose participation in the Project under the Cooperative Agreement is that of a partner in design, development and review. The CTO's responsibilities include, when appropriate, approval of work plans, assignments, travel, products, etc. This arrangement suggests limited autonomy for HIID in most matters. The primary liaison to AID throughout the Project has been Noel McGinn, the Principal Investigator of the Project and HIID fellow and professor in HGSE. His responsibilities include planning, design, task assignments, and Project product evaluation. The intellectual and professional leadership of the Project rests with the Principal Investigator. The Project Manager has overall responsibility for planning personnel management and contractual processes. The Project is also assisted by an advisory committee which includes research team leaders and is chaired by the Principal Investigator. This committee plans research activities, contributes to development and critiques research findings. In general, the committee

assists with the development and dissemination of the activities and outputs of the Project.

#### 4.11 Institutional Roles and Relationships

The U.S. institutions which make up the core of the BRIDGES Project include the Harvard Institute for International Research, Harvard Graduate School of Education, Michigan State University, Research Triangle Institute, and Texas Southern University. Each Project member has specific functions: HIID is the primary unit responsible for Project direction, management and relationship with AID, S&T/ED. Faculty from the Harvard Graduate School of Education supplement staff of HIID in a variety of professional roles. In addition to overall Project responsibilities, the Harvard contributions include leadership in a number of research activities, MIS development, and design of simulation and policy models. The Institute for International Research primarily provides support in the form of research team leaders with emphasis on learning technologies and teacher training. Michigan State University, through its College of Education, provides expertise particularly in school effectiveness, school management and educational cost analysis. The Research Triangle Institute, a not-for-profit contract research organization, assists in the development of computer based planning and policy models. The role of Texas Southern University is to participate in research related to access to education and instructional management.

#### 4.12 Host Countries

In principle the choice of host countries was based on their comparability and their fit with criteria identified in the Project Paper (see 2.2 above). In practice a rigorous application of these criteria was not enforced. The willingness of USAID missions to buy in and the level of interest of the prospective host countries became influencing factors. The constraints on the choice of host country sometimes meant that selection of ideal countries (in terms of BRIDGES criteria) was made difficult because the USAID missions in these countries often did not have educational portfolios. In other cases USAID missions were reluctant to complicate further their educational programs with an S&T/ED project. The countries which became a continuing part of the BRIDGES project included: Burundi, Egypt, Indonesia, Pakistan, Sri Lanka and Thailand. The variability among the countries chosen and their idiosyncratic concerns tended to modify and extend original Project objectives.

Relationships with the chosen host country institutions and individuals were determined by the BRIDGES Principal Investigator and the CTO, with participation by country USAID

missions. BRIDGES' relationships with host countries were the responsibility of HIID but subject to approval by AID. Host country participation varied depending on the sub-project but included some level of participation in the research design, data gathering, analysis and training components of research related activities.

#### **4.13 USAID Missions**

BRIDGES, although supported by central (S&T/ED) funding, can succeed best with S&T/ED working in concert with USAID missions. For example, USAID missions exercise a level of control over all field projects and thus limit Project options. They are, in effect, gatekeepers, since any new AID financed educational effort must fit with the portfolio of the USAID mission. Secondly, for BRIDGES to achieve the desired size and influence, mission buy-ins are necessary to supplement core S&T/ED funding.

The responsibility of USAID missions during the life of BRIDGES field activities includes, at minimum, some level of monitoring. The authority for management and for implementation is shared between the mission, S&T/ED and the contractor. Given these multiple actors and layers of overlapping responsibilities, planning becomes extremely difficult. By way of illustration, decentralization of funding authority to the mission level could greatly facilitate designing, scheduling and monitoring of BRIDGES field work. The understanding of the evaluation team is that AID regulations do not permit such an adjustment. Thus by implication, flexibility of actions in the field has been partly traded for central management control.

#### **Recommendation:**

To increase the effectiveness of future centrally controlled projects, S&T/ED should review its BRIDGES experience, particularly the implications of the Cooperative Agreement and clarify, as necessary, lines of communication, decision processes, and location of control in Project management. If the BRIDGES Project is extended, memoranda of understanding specifying tasks, decision points and persons responsible should be prepared, becoming, in effect, the rules of the game for all players.

#### **4.2 Project Management**

The human and financial resources necessary for the continued development and implementation of the BRIDGES project are significant and often in flux. Assessing, coordinating and allocating these resources is a challenging task. The meaning of the CA appears not to have been

immediately understood by HIID and the subcontractors. HIID, although highly experienced with international contracts, did not at the initiation of BRIDGES have the necessary staff in place to manage the Project. A person with sufficient breadth and experience in management of international projects and with appropriate professional expertise needed to be found to assume the role of Project Manager. A publications unit needed to be created and staffed. A dissemination plan for BRIDGES publications and other products had to be developed. Sub-contracting and budget processes had to be established and put into practice. Staff in these various roles needed training and, in the absence of models from past experience, often learned on the job through reflection and analysis of their own experience.

Crucial to the operation of the Project has been an element of what might be termed inter-institutional trust which allowed sub-contractors to proceed in their tasks often before legal processes were complete and budgets had been allocated. Institutions were often forced to risk their own capital to sub-projects underway and gamble that forthcoming budgets would be sufficient to cover costs incurred.

As to be expected in a project creating much of its own administrative structure from scratch and dealing with a number of different institutions and bureaucracies, a number of personnel issues have surfaced. The reporting system between the prime contractor and S&T/ED was not always efficient and on schedule. Operational delays in financial reporting, for example, created planning problems on the part of S&T/ED and USAID missions. Individual and institutional styles within the consortium resulted in some variation in the form and content of trip reports, work plans and other Project documentation.

The evaluation team concludes that BRIDGES has been highly successful in recruiting and fielding high quality personnel for research and other professional responsibilities. Much praise from all sources was directed to the quality of technical work done in the field. The recruitment to staff positions for management, although subject to some delays and staff turnover, resulted in a high quality, but not always highly experienced, central staff.

Personnel problems in the field centered on identification of cooperating institutions and recruitment of competent researchers. The choice of counterpart participants and institutions from host countries was clearly crucial to BRIDGES success in conducting fieldwork, disseminating new knowledge and influencing policy. This choice was made in a number of ways but always with central government approval. In only one case, Burundi, was an RFP procedure used.

Development of collaborative relationships is complicated by the need to interact with both good researchers and powerful policy makers. These groups often represent two distinct communities with limited intercommunication. BRIDGES, thus to some extent was faced with a trade-off between associating most closely with researchers or with policy makers. Nevertheless, with the possible exception of one case, Pakistan, the choices of counterpart institutions appear to have worked out reasonably well. The major collaborating institutions include: The Centre de Perfectionement et de Formation En Cours ' emploi (CPF) in Burundi, the Planning and Statistics Units of the Ministry of Education in Egypt, the Open University in Indonesia, the Academy of Educational Planning and Management (AEPAM) in Pakistan, the National Institute of Education in Sri Lanka and the National Education Commission in Thailand. The dedication and commitment of host country participants is a story repeated by nearly all BRIDGES research team leaders.

The most serious counterpart problems surfaced in Pakistan. BRIDGES worked successfully with a number of different institutions in Pakistan including: AEPAM, the education section of the federal Ministry of Planning and Development and the education departments in the provinces of Sindh, Balochistan and NWFP. The early relationships with AEPAM, however, did not proceed smoothly. Because of its importance and the possible lessons the case may provide in further collaborative relationships in other countries, this experience is briefly described below.

AEPAM was established as a major counterpart institution for BRIDGES at the request of the Pakistan Federal Ministry of Education. In the development and execution of research activities both parties at times expressed dissatisfaction. The commitment of the leadership of AEPAM to facilitate and reward research was questioned. The commitment of BRIDGES to a fully collaborative partnership in its approach to research was also questioned.

Some members of AEPAM believed that they were in a position to conduct the necessary research if given financial support and minimum technical assistance as requested. U.S. members of BRIDGES research teams, concerned with quality control, sought the maintenance of research standards perceived as necessary to produce valid and useful research results.

It is important to point out that in spite of difficulties, BRIDGES supported research has proceeded in Pakistan, including a survey of classroom practices, a study of school access for girls and a sample survey of primary schools. For the first time in Pakistan detailed data will

be available at the classroom level in two provinces and at the school level in all four provinces. Analyses of these data will at least be suggestive of a wide range of reforms reaching throughout the educational system.

A number of conditions in Pakistan may have contributed to the difficulties in achieving the level and quality of collaborative relationships desirable between BRIDGES and AEPAM. There were three changes in the top leadership of AEPAM during the first four years of the BRIDGES Project. In a broader context in Pakistan the value of research in formulating and implementing educational policies has not been widely recognized. The low quality of much of the existing research has reinforced the belief among many educational policy makers and officials that research offers little to educational practice. Current educational data are poor and there appears to be little incentive to make the effort to improve validity because analysis of data is not central to educational decisions." Lack of status for research activities may have contributed to the unwillingness or inability of AEPAM to assign individuals as counterparts to work on BRIDGES research. Clearly these are not ideal conditions for a research project. However, such conditions may be found in many developing countries.

Some of the difficulties may be attributed to the constraints of the design of the BRIDGES Project which might have been anticipated with better initial planning. In hindsight, the capabilities and expectations of AEPAM could have been discussed at greater length and other counterpart arrangements could have been considered. Given that the control of much of education reform in Pakistan is at the provincial level one possible choice could have been universities or other bodies in the provinces. However, even if such arrangements had been acceptable to Pakistan authorities the quality of the forthcoming counterpart support is questionable. Additionally, AEPAM as a federally related institution does have the advantage of being in a position to influence educational reform directly at the federal level and indirectly at the provincial level.

Recently there have been significant improvements in collaboration with AEPAM. BRIDGES funds brought two AEPAM staff members to Harvard University to upgrade research

"For further observations on the relation of data to educational policies, see Carol H. Weiss, Perceptions of the Usefulness of Analysis in the Pakistani Educational System. Paper presented at the Annual Meeting of the Association for Public Policy Analysis and Management, Arlington, VA, November 3, 1989.

skills and prepare Pakistan survey data for analysis. A highly successful five weeks, hands-on seminar focussed on analysis of survey findings was held in Pakistan in January, 1989. The participants from AEPAM and the provinces, prepared policy analysis papers by bringing results of data analysis to bear on educational problems which they defined as important to Pakistan. The quality and relevance of the seminar received high praise from all participants and from the leadership of AEPAM.

The broader issue of the meaning and implications of a "collaborative mode" needs to be addressed and is itself worthy of BRIDGES review. What does collaboration mean if different levels of skills exist among the partners? Are there some situations where research of even modest technical level can not be collaboratively undertaken? What are the implications of collaboration for time, budget, expected product? How are choices made regarding acceptable standards of research? Among collaborators who has ownership? What process is acceptable for reconciling differences and making decisions? The process of choosing counterparts and operationalizing the concept of collaboration requires planning, negotiation and compromise. Crucial to the success of BRIDGES-type projects is the opportunity to reconsider periodically the consequences of actions already taken and if necessary, proceed differently.

#### 4.3 Co-ordination of BRIDGES, IEES and ABEL

Time did not permit a detailed examination of the commonalities of these projects and the potential for collaboration and coordination. Some points, however, should be emphasized. All of these important projects are the creation of S&T/ED and share an historic relationship. IEES was created in 1984 to improve the efficiency and performance of education and training systems in developing countries. BRIDGES, whose Cooperative Agreement was initiated in 1985, with its focus on research, was seen partly as a supplement to IEES. ABEL, initiated in 1989, with its focus on dissemination and its direct attention to management and instructional concerns, again was viewed as applying the results of BRIDGES and supplementing the efficiency concerns of IEES.

The projects in several respects are very different, yet they share the goal of improving the efficiency and quality of education systems in developing countries. There have been useful interactions between IEES and BRIDGES. Information has been exchanged and some joint meetings have been held, although probably more coordination of efforts would have been worthwhile.

ABEL begins its activities as BRIDGES enters its final contract year and as IEES completes its first year of a second five-year contract. Unless its life is extended, BRIDGES will not be able to complete all of its research to its satisfaction. Only the initial and perhaps not its most profound influence on the institutions and policies of host countries will be observable. IEES is continuing several old projects and entertaining requests for new involvements. With its attention to EMIS and development of instructional materials, IEES clearly has common ground with ABEL.

**Recommendation:**

S&T/ED should make an intense effort to coordinate IEES, BRIDGES and ABEL in order to maximize their collective impact (see recommendation under 3.2). Since ABEL is the newest of the projects, the ABEL contractor could play a key role in this coordination. If S&T/ED establishes an external, formative evaluation team early in the life of ABEL this action would be supportive. Coordination and collaboration among these projects could include: joint training efforts; joint production of training products; joint knowledge networking, including intensive regional networking among cooperating countries; use of common but adapted software packages; further dissemination of BRIDGES research and projects, etc.

**Recommendation:**

With the new project ABEL, continuation of IEES (and potential continuation of BRIDGES) and with changes in personnel within S&T/ED, a review should be undertaken by the S&T/ED leadership of the management and decision structure of S&T/ED with regard to BRIDGES, IEES and ABEL. Project managers and principal investigators from the three projects should be involved. Issues to be addressed should include contractor autonomy, degrees of freedom in reporting and communication procedures, and internal evaluation processes.

## **5.0 Utilization and Impact**

In the organization of this report a distinction is made between dissemination and utilization. Dissemination has been treated (3.0) as one of several discrete Project activities. As planned, most formal dissemination activities are scheduled to take place during the final two Project years. Utilization and impact refer to the discernible influences and effects of BRIDGES on individuals, institutions and processes. Such effects may have resulted from activities at any stage in the Project's development and, of course, may be discernible only at some time in the future.

Dissemination as a process of distributing and informing would, of course, be a major channel for influencing policy decisions and in creating educational changes. However, new information levels do not necessarily lead to policy actions. Furthermore, new knowledge and additional information may be acquired in a variety of ways other than through formal dissemination modes.

### **5.1 Utilization as an Objective of BRIDGES**

The language of the early BRIDGES documents is not fully clear as to the expectations for utilization and impact. The importance of dissemination, however, has been acknowledged throughout the Project, although it appears to have received increased attention during the later stages. Moreover, dissemination has been variously conceptualized as distribution, e.g., making information available, and also as influencing target audiences. The CA, for example, identifies one Project task as helping the host country "to apply research findings to the development of sound educational development strategies." The PP implies the importance of utilization and impact when it states that one question to be asked in the selection of research topics is: "will the research results contribute directly to improvement in the efficiency and effectiveness of implementing achievement-related educational objectives?" On the other hand, the Logical Framework appears to emphasize discrete Project products and the importance of information distribution to policy makers and planners.

Although the documents are somewhat ambivalent with respect to the Project's direct obligations in promoting utilization of the knowledge and skills produced, discussions with AID staff and BRIDGES personnel lead the evaluation team to conclude that utilization is an important desired Project outcome.

## **5.2 Relation of Knowledge and Educational Policy**

The relationship between knowledge and research and policy making has been the subject for debate among social scientists for decades. Early linear models assuming a direct and sequential linkage between basic research, applied research, development and application have proved untrustworthy in explaining educational change. New knowledge and research findings may influence educational decisions but often do so in an indirect, intermittent or "percolating" manner. Moreover, the timelines of new insights is crucial. As several observers have noted, the need by policy makers for information tends to be acute rather than chronic.

International literature suggests that both producers, e.g., researchers, and consumers, e.g., politicians and senior administrators, have been frustrated by the lack of inter-change. Conferences bringing together these two groups have explored possible reasons for the problem and have offered recommendations. Analyses of why research is not used more in decision making tend to emphasize the "cultural" differences, e.g., values, language, reward systems, between researchers and policy makers. Researchers, with their specialized interests, independence and seemingly unlimited time, present a contrast to politicians and administrators who must work on focused agendas and often have severe time constraints.

Recommendations for promoting more exchange and facilitating the utilization of research-based knowledge have stressed such points as:

- 1) More active and effective communication;
- 2) Involvement of users throughout the process of knowledge development and analysis;
- 3) Translation of research knowledge into formats acceptable to users.

In the complex, ill understood education sector the problems and constraints in linking research to educational decisions are severe. Achieving information and research-informed educational policies, while a long-standing goal of academics and professionals, is a condition often not satisfactorily achieved even in relatively data rich and technologically advanced countries.

The linkage assumes availability of accurate, relevant and valid research and a process where:

- 1) the decision makers recognize the importance of research-based knowledge;

2) quantitative and qualitative research findings can be adapted for use in formulation and implementation of educational policies;

3) training is available and utilized to ensure that officials, administrators and teachers responsible for implementation have the necessary skills. The likelihood of all of these conditions being present in a given situation is not high.

### **5.3 Utilization of Research, Models and Training**

A high percentage of the respondents to questionnaires sent to host countries reported having made use of BRIDGES in-country research and skills acquired through BRIDGES training in their work as researchers, administrators and planners. The only responses received regarding software were for STEP. Egypt indicated very strong use, while Burundi, Pakistan and Thailand indicated low use. Several participants also responded that the Research Reports Series was useful.

Respondents from Burundi, Sri Lanka and Thailand, and to less extent those from Pakistan, believed that their country's research network and institutions were improved as a result of BRIDGES research and training activities. All of these countries pointed to increased skills in designing research instruments and in data collection. Burundi respondents provided a long list of examples emphasizing the improvements in the CPF. Little impact was reported as directly resulting from development of computer models. Responses regarding probable impact on educational policies were mixed, with those from Burundi, Thailand and Sri Lanka indicating moderate or high expectations, particularly from in-country research. Again, Burundi provided an extensive list of specific BRIDGES influences including improvements in school management, efficiencies (e.g., controlling repetitions) in primary schools, language reform and strategies for teaching science.

The most consistently highly valued of BRIDGES activities by the full range of host country respondents were the in-country training, research and development efforts. By way of example, Egyptian respondents commented on the benefits expected from the development of its educational information system; and Thai respondents emphasized the improved quality of information on primary education resulting from research. Perhaps a comment of the Minister of Primary and Secondary Education in Burundi captures a distinctively welcomed quality of BRIDGES:

What we particularly appreciate about the BRIDGES project is that it has a scientific basis. You have gone into our schools and told us what they are truly like. Unfortunately that often does not happen with expert consultants (translation from notes on French original).<sup>\*\*\*</sup>

Although respondents from host countries believed that BRIDGES had been responsive to the changing needs of their governments, suggestions for modifications were made. The most common recommendation was that continuation of research projects should be supported until their full implications for practice were clear. Also suggested was that, in any future BRIDGES activities participation at the regional and local levels should be increased. Some respondents from Pakistan recommended more involvement in the analysis of research findings.

Several specific cases of utilization of BRIDGES outputs can be cited. The following examples are illustrative:

1) New skills acquired through training programs in all host countries were reported by participants as relevant to their work;

2) In Sri Lanka BRIDGES contributed significantly to the establishment of the National Institute of Education (NIE) which has become deeply involved in curriculum development, teacher education, management training and research. NIE now produces its own Forum to disseminate information on its activities and research;

3) In Egypt BRIDGES contributed to the demystification of the use of computers in identification of policy implications of existing data. By way of illustration, a computer based model was used to examine the cost effectiveness of operating double shifts of primary schools.

In terms of clear evidence of policy impact, the future will be a much better test than the present. However, cases of BRIDGES research informing the policy dialogue are observable at this time. The several possible examples include the following cases:

1) In Burundi the policy to require French language instruction from grade one instead of from grade three is widely viewed as being strongly influenced by BRIDGES

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<sup>\*\*\*</sup>Memorandum from Jack Schwille to Noel McGinn, January 3, 1990. Subject: Report on final BRIDGES Burundi Seminar and Trip, 24 October-1 November 1989.

research. Also in Burundi government officials have requested BRIDGES help in an effort to develop coordinated information systems across several ministries to improve planning and policy making.

2) In Thailand the results of case studies of schools conducted by BRIDGES have been incorporated into curricula for in-service training for teachers by ONPEC (the controlling agency). Similarly, research on classroom practices in Pakistan has already influenced the content of in-service training of education personnel.

3) In Indonesia the choice of policy options for programs of teacher training have been illuminated by BRIDGES research.

4) In Egypt BRIDGES' work in information system development, contributions to the 1989 Education Reform Conference in Cairo and extensive participation in policy dialogue with senior Egyptian policy makers appear to have catalyzed serious consideration of major national educational reforms.

In general, information from host countries supports the view that in the long term BRIDGES activities will influence educational policies. However, there appears to be conflicting opinion among USAID missions as to the strengths and weaknesses of the "in and out" nature of BRIDGES professional training and research leadership. One view favors the short term use of specialists and the forced reliance on host country personnel to continue the necessary work. A second view is that significant educational reform and successful educational research require long term resident technical experts. It would seem that the validity of either position depends on the country in question.

In some contexts the impact of BRIDGES may be largely in helping to create a context within which other technical assistance efforts can succeed. In any final assessment of BRIDGES this kind of indirect but crucial influence should not be ignored. In Egypt, for example, BRIDGES is credited with sensitizing policy makers to the importance of information and research based knowledge for educational decision making. The acceptance of a USAID proposal for a long term technical assistance team to work with the Egyptian NOE was due partly to the positive Egyptian response to BRIDGES activities.

In reviewing the first four years of the BRIDGES project the evaluation team concludes that there are a few tentative, simple lessons learned with regard to utilization and impact:

1) The status and influence of counterpart institutions are crucial to maximization of policy impact. These institutions can encourage informal and formal networking of researchers and policy makers, market policy recommendations and critique ongoing policy.

2) USAID missions can play an important future role in monitoring and assisting efforts at utilization and impact initiated by BRIDGES.

3) Success in collaborative research, use of models, and development of information systems is especially effective when accompanied by the appropriate amount and kind of training.

4) The status of the U.S. institutions involved and the demonstrated expertise of BRIDGES consultants are important in legitimating the significance and validity of BRIDGES activities.

Questions persist in trying to assess utilization and impact.

1. Did BRIDGES strike the right balance between a single country and multi country focus? To maximize impact BRIDGES must work on country specific problems. The Project has been skewed in that direction. But this emphasis is given at the expense of finding solutions generalizable across countries.

2. Has BRIDGES been too circumscribed by AID traditions which place much emphasis on working through central government ministries, particularly ministries of education? Typically, many central and provincial bodies are involved in educational decisions.

3. What is sufficient time to expect identifiable impact of research? Should successful influence be measured in terms of months, years or decades? A history of the life and impact of selected BRIDGES projects from, say, 1986 through 1995 might prove enlightening.

4. Given the present state of educational theory and the complexity of educational change, what are reasonable expectations for single, relatively short term research efforts resulting in unequivocal policy choices? That is, perhaps the initial expectations for measurable impact from particular BRIDGES activities has been too great. Yet, with follow through support of S&T/ED in dissemination and utilization, the long term impact of the Project as a whole in direct and indirect ways may affect educational policies for many years to come.

**Recommendation:**

During FY 1990 BRIDGES should review in detail 3-5 cases of "successes" and "failures" in the utilization and impact of Project activities and products. Particular focus should be given to the points of interface between research- or knowledge-generating processes and the policy process. When and how, for example, do researchers give up ownership of their work and the policy makers assume responsibility for giving meaning to the research? When and how do research documents become policy documents? When and how do information and analysis validated in research become validated in policy formulation and implementation.

**Recommendation:**

USAID missions should assist further utilization by linking the results of BRIDGES activities to other ongoing or planned educational projects. Within the limits of contractual feasibility, AID/W should encourage missions to utilize as appropriate BRIDGES personnel as advisors and consultants. As one specific action S&T/ED should forward lists of key BRIDGES consortium members and their specializations to all USAID missions. Examples of forthcoming AID supported projects that could benefit from knowledge generated by BRIDGES are the Primary Education Development Project in Pakistan, the IEES teacher training research follow-up project in Indonesia and the educational planning project in Egypt. As a further example (assuming the extension of BRIDGES) S&T/ED should consider negotiating with BRIDGES to undertake a detailed, cross-national study of the processes by which various S&T/ED projects, e.g., IEES, Radio Learning Project, have influenced policy or policy dialogue.

## **6.0 Capability Building and Sustainability**

The Cooperative Agreement states that "This project seeks to develop/enhance the research technical capabilities of the recipient institution. AID recognizes the importance of strengthening the capacities of U.S. universities and educational institutions to provide theoretical and empirical guidance to Third World educators and planners and to work in close collaboration with them in designing short and long-term strategies to overcome barriers to educational development."

The importance of capacity building recognized in the CA appears to be highly appropriate. The graduate programs in U.S. universities which emphasize studies in education and development have declined significantly in number and quality over the last decade. Several strong programs have been eliminated and others down graded. Only a handful of universities now offer advanced, research-oriented programs in this area.

BRIDGES has had a significant impact on building capacity in at least three of the institutions of the consortium. By way of example, Harvard University has added two new faculty members with research experience in the third world. HIID is currently seeking new personnel with educational qualifications. Linkages between the Harvard Graduate School of Education and HIID have been strengthened through their joint and collaborative involvement in the Project. BRIDGES has been critical in mobilizing and revitalizing Harvard University's international effort in education.

Michigan State University has also gained faculty strength in international education as a direct result of BRIDGE . Although MSU has had a distinguished tradition, only a few of its current senior faculty in education had had extensive third world experience prior to BRIDGES involvement. BRIDGES has provided important international research opportunities for faculty which are influencing the content of both domestic teacher training and graduate programs in educational policy. A recently approved linkage grant between MSU and Chula Long Korn University in Thailand promises fruitful future interchange between the two institutions.

Texas Southern University was not involved in the BRIDGES proposal preparation and there was difficulty in determining its peculiar niche. When TSU agreed to participate, its administration anticipated more extensive involvement than that which actually took place. Nevertheless the experience in BRIDGES is seen by the TSU administration as being useful and as contributing in a limited way to the international expertise of faculty.

Prior to BRIDGES, the Research Triangle Institute had limited experience in the development of computer based educational models for third world countries. It now has a department with four professionals who devote most of their time to building educational software. As a direct result of BRIDGES, RTI has become a major international actor in the design of software for educational policy analysis.

There also has been capacity building in the institutions of the host countries. Host countries respondents to questionnaires generally concluded that BRIDGES research activities, i.e., research reports, and particularly in-country research, had a positive impact on building research networks and capabilities. Both Thailand and Sri Lanka gave BRIDGES activities very high ratings in their impact on local institutions. Little information was acquired by the evaluation team on the institutional impact of the software models.

The importance of capacity-building as a result of BRIDGES should be emphasized. The study of education in the process of third world development has become seriously neglected in the United States and is not well established in developing countries. In this regard, U.S. universities in particular remain parochial in commitment and programs. The recognition of this condition by AID, S&T/ED is to be commended.

## 6.1 Future Sustainability

Concern for sustainability raises such questions as: What can and should be sustained? What financial and other conditions are necessary to support sustainability? New research capacities and technologies bring new direct and indirect costs. New institutional roles and relationships, specialized facilities and organizations requiring increases in capital and recurrent budgets may be necessary. Will adequately financed, professional, political and administrative support continue for the U.S. and host country institution to sustain new programs and processes introduced by BRIDGES?

Although the initial conceptualization of BRIDGES has been earlier criticized as being overambitious, there is room for optimism with respect to sustainability of some of its research, MIS and model development initiatives. As mentioned earlier, U.S. institutions have already committed new funds for personnel with international expertise. In several of the host countries recent institutional and national budgets have been increased at least partly as a result of BRIDGES. Participation in BRIDGES activities by significant numbers of host country professionals potentially contributes to the future support of educational research and policy endeavors.

As noted, however, in some host countries criticism has been forthcoming regarding the perceived inadequate level of participation in analysis of research findings. The evaluation team believes that time constraints, the in and out nature of BRIDGES/host country interactions, the need to respond to multiple agendas, and the desire to maintain high professional standards have combined to limit the potential level of collaboration and participation. Nevertheless, the experience of the evaluation team with AID projects over a number of years suggests that BRIDGES, in the context of AID's educational experience, achieved an unusually high level of participation in some cooperating countries. As previously mentioned, in Sri Lanka BRIDGES and host country collaboration led to the establishment of research capabilities in a major new educational institution, the National Institute of Education. Within the U.S., attempts were made at both Harvard University and Michigan State University through seminars and lectures to inform and interact with U.S. and international students and faculty about BRIDGES activities and to incorporate knowledge acquired through BRIDGES activities into the curriculum.

The development of EMIS in host countries with or without BRIDGES support should contribute to the sustainability of increased skills in research and policy analysis. The monitoring and evaluation of the impact of policies and programs evolving from research can be built, particularly with modest continued external support, into a routine but dynamic information system.

**Recommendation:**

The BRIDGES project should be extended. The BRIDGES consortium should continue to be supported at some minimum level by S&T/ED and should be permitted to seek buy-ins from interested USAID missions. Institutional sub contracts should be renegotiated as necessary by the prime contractor. The evaluation team believes that this action is a good investment for AID, for it will allow the extension of certain research, development, dissemination and institution building efforts already underway. Time also is needed to explore long-term relationships between BRIDGES institutions and host country institutions, and in some cases to assist participants in finding alternative, post BRIDGES financial support.

**Recommendation:**

If BRIDGES is extended, a work plan establishing priorities should be developed for the remainder of the Project. High priority should be given to:

1) extension of research analyses cross-nationally to examine policy-related hypotheses (Included should be a review of findings on such gender issues as retention of female teachers and students, a secondary analysis of school survey data from Pakistan and Thailand, evaluation of alternative teacher training approaches in Sri Lanka and Indonesia, and role analysis of school managers in Pakistan, Sri Lanka and Thailand);

2) further examination of how to collect cost data and analyze cost effectiveness of given policy options e.g., Burundi, ongoing studies in Thailand and Pakistan;

3) continued definition and generation (in collaboration with IEES) of non-traditional research-based information of most utility in EMIS development e.g., Egypt. Particular emphasis should be focussed on reviewing existing data bases and designing processes for routinely collecting more powerful policy-related data;

4) further development of "policy modeling" efforts and host country dialogues between researchers and policy-makers. The BRIDGES role will include assistance in examining the relevance of existing data bases, costing out alternative educational choices and designing needed new research.

**Recommendation:**

With or without extension, BRIDGES should attempt to continue at least minimum linkages with the host countries' collaborative institutions. The major function of such linkage should be exchange of educational research results and simulation models which have policy implications.

**Recommendation:**

If a decision is made to extend BRIDGES beyond 1990, a plan for external evaluation should be formulated as soon as possible. A collaborative evaluation design should be developed with the involvement of major Project actors. The evaluation process should proceed throughout the remaining life of the Project.

## **APPENDIX A**

### **Questionnaire for USAID Missions Without BRIDGES Contracts**

**This letter and questionnaire was sent to 14 USAID Missions. The eight responses received were from Barbados, Lesotho, Swaziland, Dominican Republic, Botswana, Guatemala, Kenya, and Honduras.**

**DATE:** October , 1989

**TO:**

**FROM:** Dr. Donald K. Adams

**RE:** BRIDGES Mid-term Evaluation

The Basic Research and Implementation in Developing Education Systems (BRIDGES) project mid-term evaluation team is collecting information from USAID missions in those countries where there have been BRIDGES activities and also in those countries with no BRIDGES involvement. It is our understanding that the BRIDGES project has not been active in (country).

Please respond as appropriate to the following questions and mail or FAX your completed response to:

Dr. Donald K. Adams  
5M36 Forbes Quadrangle  
University of Pittsburgh  
Pittsburgh, PA 15260 USA  
FAX: 412 648 5911

Thank you for your prompt reply to this request for information.

**BRIDGES Mid-term Evaluation Response Form**

1. Are you familiar with the BRIDGES Project?

YES \_\_\_\_\_ NO \_\_\_\_\_

(If no, do not respond to the subsequent questions)

If yes, with what BRIDGES activities are you familiar?

**Research:**

**Software models:**

BRIDGES Research Report Series [ ] GENDER [ ]

BRIDGES Forum (newsletter) [ ] STEP [ ]

Research in your country [ ] OPES [ ]

Other [ ]

(Specify) \_\_\_\_\_

**Training, Seminar & Conference Activities:**

In-country [ ]

International [ ]

Other [ ] (Specify) \_\_\_\_\_

2. How have you benefited from the BRIDGES products and activities?

3. Has your USAID Mission ever considered a BRIDGES buy-in?

YES \_\_\_\_\_ NO \_\_\_\_\_

If no, why not?

If yes, what was it about BRIDGES that the Mission found attractive?

4. If BRIDGES were to be extended, what changes in the BRIDGES project would enhance the chances for a BRIDGES buy-in by your Mission in the future?

5. Whether or not you are considering a buy-in, how could the BRIDGES products and activities be of benefit to you in the future?

6. Would it be useful for you to have a telephone conversation with a member of the evaluation team in order to elaborate further on the above questions?

YES \_\_\_\_\_ NO \_\_\_\_\_

If yes:

Phone number(s) \_\_\_\_\_

Hour(s) available (local time) \_\_\_\_\_

Please return your completed questionnaire to:

Dr. Donald K. Adams  
5M36 Forbes Quadrangle  
University of Pittsburgh  
Pittsburgh, PA 15260 USA  
FAX: 412 648 5911

## **APPENDIX B**

### **Interview Guide for USAID Missions with BRIDGES Contracts**

The letter and interview questions were forwarded to USAID Missions in Burundi, Egypt, Indonesia, Pakistan, Sri Lanka and Thailand. Telephone interviews were subsequently conducted with at least one representative from each mission.

**DATE:** November 3, 1989  
**TO:** Mission Director  
**FROM:** Dr. Donald K. Adams  
**RE:** BRIDGES Mid-term Evaluation

In lieu of country visits, the Basic Research and Implementation in Developing Education Systems (BRIDGES) project mid-term evaluation team is collecting information from USAID missions by mail and telephone. The attached questionnaire presents issues which we look forward to discussing with you by phone. One or more members of the team, identified below, will be calling you within the next several weeks. Please note that it is not necessary to return the completed questionnaire. The attached questions are meant to provide the guidelines for an extended telephone conversation.

Thank you for your assistance.

Dr. Donald K. Adams  
Dr. Alan Hurwitz  
Dr. James Terry

## INTERVIEW QUESTIONS FROM BRIDGES EVALUATION TEAM

1. Name and Position of Respondent.
2. What kind of involvement have you had with BRIDGES?
3. What benefits did the USAID Mission initially expect from the BRIDGES project?
4. In which ways have BRIDGES activities lived up to your expectations and in which ways have they not?
5. How could BRIDGES be of more help to USAID in the future?
6. How responsive have the BRIDGES project activities been to the needs expressed by the MOE or other government agencies?
7. What host country networks or institutions have been strengthened as an outgrowth of the BRIDGES project?
8. How important has the counterpart contribution been to the BRIDGES activities?
9. How are BRIDGES projects chosen and developed?
10. What is your impression of the overall technical quality of the BRIDGES research products? Computer models?
11. What have been the advantages and disadvantages of structuring the BRIDGES project under a Cooperative Agreement?
12. How would you describe relations between BRIDGES, S&T/W, and the USAID Mission?
13. How satisfied have you been with the BRIDGES information provided to the Mission by S&T/ED? By BRIDGES?
14. What changes or additions in BRIDGES dissemination activities would be useful for the remainder of the project?
15. In what ways have host country educational policies or decisions been influenced by BRIDGES activities?
16. Can you recommend other people in-country who are familiar with BRIDGES and that we should contact?

## APPENDIX C

### Questionnaire for Host Country Personnel

The letter and questionnaire were sent to a coordinator in each of the six host countries along with a suggested list of persons associated with or knowledgeable about BRIDGES. Each coordinator had the option of seeking additional respondents. A total of 40 questionnaires were returned: 12 for Burundi; 6 from Egypt; 0 from Indonesia; 10 from Pakistan; 6 from Sri Lanka; and 6 from Thailand.

Although the information received is considered by the evaluation team to be valuable, there are severe limitations in interpretation: (1) The precise number of questionnaires distributed in each country is not known. (2) Several of the completed questionnaires contained conflicting data. For example, some respondents checked the "Don't Know" column as well as giving a rating to the item. (3) The completion of the questionnaires appears to have been a group project in at least one country. (4) In retrospect the wording of several of the items could have been improved. (5) Time constraints did not allow follow up telephone discussions to clarify and extend the views of respondents.

**DATE:** November 20, 1989  
**TO:** Host Country Participants  
**FROM:** Dr. Donald K. Adams  
**RE:** BRIDGES Mid-term Evaluation

The Basic Research and Implementation in Developing Education Systems (BRIDGES) project mid-term evaluation team is collecting information from persons familiar with BRIDGES. In lieu of country visits, the evaluation team is utilizing the attached questionnaire. Your responses to the following questions will provide the project with important insights that will be incorporated in the final report.

Please respond to the following questions and FAX your completed response to:

Dr. Donald K. Adams

FAX: (in the U.S.A.) 412 648-5911

OK

return to your country questionnaire coordinator as indicated:  
Thank you for your assistance.

**BRIDGES Mid-term Evaluation**

**Questionnaire**

1. **Name:** \_\_\_\_\_

2. **Title:** \_\_\_\_\_

3. **With which of the following BRIDGES activities are you familiar?**

**Research:**

**Software models:**

Bridges Research Report Series	[ ]	GENDER	[ ]
BRIDGES Forum	[ ]	STEP	[ ]
Research in your country	[ ]	OPES	[ ]
Other (Specify) _____		Other (Specify) _____	

**Training, Seminar & Conference Activities**

In-Country	[ ]
International	[ ]
Other (Specify) _____	

4. **Which of the following BRIDGES activities have you used?**

**Research:**

**Software models:**

Bridges Research Report Series	[ ]	GENDER	[ ]
BRIDGES Forum	[ ]	STEP	[ ]
Research in your country	[ ]	OPES	[ ]
Other (Specify) _____		Other (Specify) _____	

**Training, Seminar & Conference Activities**

In-Country	[ ]
International	[ ]
Other (Specify) _____	

5. **Which of the following BRIDGES activities have you helped to design?**

**Research:**

**Software models:**

Bridges Research Report Series	[ ]	GENDER	[ ]
BRIDGES Forum	[ ]	STEP	[ ]
Research in your country	[ ]	OPES	[ ]
Other (Specify) _____		Other (Specify) _____	

**Training, Seminar & Conference Activities**

In-Country [ ]  
 International [ ]  
 Other (Specify) \_\_\_\_\_

6. What were your most important initial expectations of BRIDGES? (Please be brief.)

PLEASE RESPOND TO QUESTIONS 7, AND 9 THROUGH 14 BY RATING EACH ON A SCALE OF 1 THROUGH 4 WITH 4 BEING THE HIGHEST. CIRCLE THE NUMBER CHOSEN. IF YOU DON'T KNOW, CHECK THE APPROPRIATE BOX.

7. To what degree have the following components of the BRIDGES project fulfilled your initial personal expectations [1 = lowest, 4 = highest].

<u>ACTIVITY</u>	<u>RATING</u>	<u>DON'T KNOW</u>
-----------------	---------------	-------------------

**Research:**

Research Reports	1	2	3	4	[ ]
BRIDGES Forum	1	2	3	4	[ ]
Research in your country	1	2	3	4	[ ]

**Software models:**

GENDER	1	2	3	4	[ ]
STEP	1	2	3	4	[ ]
OPES	1	2	3	4	[ ]

**Training, Seminar & Conference Activities:**

In-country	1	2	3	4	[ ]
International	1	2	3	4	[ ]

**Other:**

(Specify) \_\_\_\_\_

**Remarks:**

8. In your opinion what were the initial expectations of your government or institution regarding the BRIDGES project?

9. To what degree have the following components of the BRIDGES project fulfilled the initial expectations of your government or institution? [1 = lowest, 4 = highest].

**ACTIVITY** **RATING** **DON'T KNOW**

**Research:**

Research Reports	1	2	3	4	[ ]
BRIDGES Forum	1	2	3	4	[ ]
Research in your country	1	2	3	4	[ ]

**Software models:**

GENDER	1	2	3	4	[ ]
STEP	1	2	3	4	[ ]
OPES	1	2	3	4	[ ]

**Training, Seminar & Conference Activities:**

In-country	1	2	3	4	[ ]
International	1	2	3	4	[ ]

**Other:**

(Specify) \_\_\_\_\_

**Remarks:**



11. To what extent have the following BRIDGES components improved your country's research networks or institutions? [1 = lowest, 4 = highest].

ACTIVITY	RATING				DON'T KNOW
----------	--------	--	--	--	------------

**Research:**

Research Reports	1	2	3	4	[ ]
BRIDGES Forum	1	2	3	4	[ ]
Research in your country	1	2	3	4	[ ]

**Software models:**

GENDER	1	2	3	4	[ ]
STEP	1	2	3	4	[ ]
OPES	1	2	3	4	[ ]

**Training, Seminar & Conference Activities:**

In-country	1	2	3	4	[ ]
International	1	2	3	4	[ ]

**Other:**

(Specify) \_\_\_\_\_

Please provide examples:

12. Please rate the degree of your country's involvement in the design of each of the following BRIDGES components. [1 = lowest, 4 = highest].

ACTIVITY	RATING				DON'T KNOW
<b>Research:</b>					[ ]
Research Reports	1	2	3	4	[ ]
BRIDGES Forum	1	2	3	4	[ ]
Research in your country	1	2	3	4	[ ]
<b>Software models:</b>					[ ]
GENDER	1	2	3	4	[ ]
STEP	1	2	3	4	[ ]
OPES	1	2	3	4	[ ]
<b>Training, Seminar &amp; Conference Activities:</b>					[ ]
In-country	1	2	3	4	[ ]
International	1	2	3	4	[ ]

Other:

(Specify) \_\_\_\_\_

Remarks:

13. What is your opinion of the overall technical quality of the following BRIDGES products? [1 = lowest, 4 = highest].

ACTIVITY	RATING				DON'T KNOW
<b>Research:</b>					[ ]
Research Reports	1	2	3	4	[ ]
BRIDGES Forum	1	2	3	4	[ ]
Research in your country	1	2	3	4	[ ]
<b>Software models:</b>					[ ]
GENDER	1	2	3	4	[ ]
STEP	1	2	3	4	[ ]
OPES	1	2	3	4	[ ]

Remarks:

14. Please rate the degree to which each of the following BRIDGES components has influenced, or seems likely to influence in the future, host country educational policies or decisions. [1 = lowest, 4 = highest].

<u>ACTIVITY</u>	<u>RATING</u>				<u>DON'T KNOW</u>
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**Research:**

Research Reports	1	2	3	4	[ ]
BRIDGES Forum	1	2	3	4	[ ]
Research in your country	1	2	3	4	[ ]

**Software models:**

GENDER	1	2	3	4	[ ]
STEP	1	2	3	4	[ ]
OPES	1	2	3	4	[ ]

**Training, Seminar & Conference Activities:**

In-country	1	2	3	4	[ ]
International	1	2	3	4	[ ]

**Other:**

(Specify) \_\_\_\_\_

**Please provide examples:**

15. Please rate the degree to which the following dissemination activities should be emphasized in future BRIDGES activities. [1 = lowest, 4 = highest].

ACTIVITY	RATING				DON'T KNOW
Publications	1	2	3	4	[ ]
The Forum	1	2	3	4	[ ]
Computer-Based Models	1	2	3	4	[ ]
Regional Seminars and Workshops	1	2	3	4	[ ]
International Workshops and Meetings	1	2	3	4	[ ]
O t h e r	S u g g e s t i o n s				

Activities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

16. Given limited resources, rate the importance of the following as the priority for future BRIDGES activities. [1 = lowest, 4 = highest].

ACTIVITY	RATING				DON'T KNOW
Dissemination activities (see question 15)	1	2	3	4	[ ]
Continuation and Conclusion of Research Activities	1	2	3	4	[ ]

17. What modifications of project activities would you suggest which would make BRIDGES more effective in the future?

18. Can you recommend other persons in-country familiar with BRIDGES whom we should contact?

19. Would you like to have a telephone conversation with a member of the evaluation team in order to elaborate further on the questions?

Yes \_\_\_\_\_ No \_\_\_\_\_

If Yes:

Phone number(s)                      Hour(s) available (local time)

\_\_\_\_\_

## APPENDIX D

### Interview Guide For U.S. BRIDGES Personnel

The Interview Guide was developed by the team on the basis of topics or concerns identified in the Scope of Work, the Project Paper and other basic BRIDGES documents. The instrument was used primarily in interviewing persons in the U.S. associated with BRIDGES or knowledgeable about BRIDGES. It was adapted as necessary to the role and expertise of the selected interviewees. The Interview Guide thus provided a means to initiate discussion but did not limit the range and depth of the interviews.

#### 1.0 Project Design and Assumptions

- 1.1 What is the central purpose of BRIDGES? (Distribute products, inform decision makers, influence decision makers, influence education change, etc.).
- 1.2 What are the more specific objectives? Do these tend to be country-specific?
- 1.3 To what extent do you believe that the purpose or any of the objectives is unrealistic or unobtainable?
- 1.4 At what levels, e.g., national regional, have there been BRIDGES "interventions"? With which institutions and agencies?
- 1.5 What is your conceptualization of the role of computer-based models? (Are the models a mechanism for integrating research knowledge in order to make planning decisions? Or are they heuristic devices to motivate the building of country specific models? (Discuss each model).
- 1.6 Should computerized models be the main foci for dissemination?
- 1.7 Who are the main clients? (Discuss each product.)
- 1.8 How was the choice of participating countries made? (Were the criteria found in the PP used?).
- 1.9 Have expectations for BRIDGES changed since its initiation? If so, How? (The PP doesn't appear to give great emphasis to dissemination.)

## **2.0 Project Activities and Accomplishments**

- 2.1 How were the three main activities chosen? (State of the art reviews, original research, and models).**
- 2.2 How were the authors of the research reviews chosen? Are there alternative procedures of selection which might have produced better results?**
- 2.3 How were the four components or sets of variables (facilities, materials, teachers, learning technologies) chosen? To what extent were the needs of policy makers and other users considered?**
- 2.4 What is your conceptualization of the dissemination process?**
- 2.5 To whom should the research products be disseminated? The models? (How will models be packaged and marketed?)**
- 2.6 In its planning for dissemination has BRIDGES attempted to use existing networks created by international agencies and third world countries. (IEES network, REDUC in Chile, etc.)**
- 2.7 Which dissemination activities have been successful? (Multi-country seminars, world wide conferences, in-country seminars, one on one explanations, specific training sessions, etc.)**
- 2.8 What changes or additions in BRIDGES dissemination activities would you recommend?**
- 2.9 Are there cases of BRIDGES models not being used but stimulating the host country to generate their own models?**

## **3.0 Organization and Management**

- 3.1 How would you describe relationships between BRIDGES, S&T/W and USAID missions? (Were management and administrative controls inhibitive or supportive?) (Were internal communication channels efficient?) (Do BRIDGES subcontractors tend to develop and emphasize their own sub goals.)**
- 3.2 In what ways, if any, have mission buy-ins skewed the focus of BRIDGES? (What was the process by which buy-ins were approved or rejected?)**

3.3 Why was the decision made to utilize a Cooperative Agreement? (What are implications of CA for roles of S&T/ED?) (For Consortium?)

3.4 Was capacity building an important early objective of BRIDGES? Is it now?

#### 4.0 Utilization and Impact

4.1 What kinds of impact are anticipated? On policies? On research capabilities? On making schools more effective? (Discuss each product and activity. Give examples.)

4.2 What kinds of impact were realized?

4.3 What is the relationship between BRIDGES activities e.g., research reviews, original research, computer-based models and dissemination, and utilization?

4.4 What activities or actions over the final years of BRIDGES could increase the impact of BRIDGES on host country educational decisions? On decisions of AID agencies?

4.5 What specific impacts can you identify? On host countries? USAID missions? S&T? WB? Does impact vary by country? (Give examples.)

#### 5.0 Sustainability

5.1 What has been the impact on Harvard University? M.S.U.? IIR? TSU? (Indicators of capacity building might include new or expanded international research programs, new courses, new informal structures, e.g., international committees, new book and periodical purchases, publications, etc.)

5.1 What has been the impact on host country institutions?

**Appendix E  
Planned and Accomplished Activities**

<b>FY YEAR</b>	<b>ACTIVITIES</b>	<b>PLANS</b>	<b>ACCOMPLISHMENTS</b>
<b>1986</b>	<b>Conferences &amp; Meetings</b>		
	<b>Workshops &amp; Training</b>		(DU) Graduate training provided by USAID mission.
	<b>Seminars</b>		A weekly seminar at Harvard to present research and software development plan.
	<b>Model Demonstration and Training</b>	<b>Working Version of promotional software.</b>	Review of 32 software packages. Monograph on use of software packages in Third World. Development of POWER2 Software PETS software development demonstration in Washington.  (DC) Model software development.  (ID) Development and dissemination of computer based models.
	<b>Publications</b>	Ten drafts of State-of-the-Art Reviews Project Brochure Project Research Display Project Newsletter	Six reviews completed. Five reviews were completed, translated from Spanish. 250 research abstracts in Spanish 100 research abstracts in English

**BU: Burundi, BU: Burma, ID: Indonesia, PA: Pakistan, SL: Sri Lanka, TH: Thailand, YR: Yemen**

FY YEAR	ACTIVITIES	PLANS	ACCOMPLISHMENTS
1987	Conferences & Meetings		
	Workshops & Training	Four-week summer workshop at Harvard	BRIDGES workshop at Cambridge, 8/87
		(BO) Training staff of Min Ed on basic modeling for educational planning.	(BO) Training in data collection
		(IH) Workshop on distance education.	(IH) Long range research program on teacher training by distance methods, 2/87.
		(PA) Training and Workshops.	
		(SL) Five-day training workshop. Workshops to carry out research.	(SL) Workshop on writing research proposals, 10/87 Short course on data input and analysis, 4/87 Workshop on development of attitude scales, 3 days, 7 persons. Extensive training field study observations and analysis, 3 people, 10 days.
		(TH) Training of research associates in case study field research methods and design of a pilot study.	(TH) Follow-up training for fall '87 pilot case study of an effective school cluster.
		(TE) Training in the definition of research based information needs.	(TE) Training in qualitative research methods in social science research.
		(BU) Training of Min Ed staff.	(TE) Training in data collection.
	Seminars		
	Model Demonstrations and Training	CIES Annual Meeting PET Demonstration	CIES Annual Meeting Demonstrations
		Training operators to use and maintain the PET software program.	
		BRIDGES development of software.	PETS development continued Cost module developed -- PETS renamed STEP
		The PETS software was installed in four Ministries of Education and missions in Central America.	Initial development of educational planning and policy game.
		(BO) PETS adaptation	(SL) Short course on micro-computer data analysis software.
	Data Base	Bibliographic data base development at Harvard.	

FY YEAR	ACTIVITIES	PLANS	ACCOMPLISHMENTS
1987 cont.	Publications	Four of the 12 State-of-the-Art-Reviews First publication of 10 Research Reports Three issues -- Project Research Digest	Twenty-seven reviews of research completed (1986-87). Eleven papers and manuals

FY YEAR	ACTIVITIES	PLANS	ACCOMPLISHMENTS
1988	Conferences & Meetings	<p>First BRIDGES Annual Meeting</p> <p>Meeting in Cambridge to discuss how the various research topics fit together for field study, 11/87.</p> <p>(PA) Annual meeting to review progress on work in country.</p>	<p>First Annual Meeting (WTI, North Carolina)</p> <p>Authors Meeting (Santiago)</p>
	Workshops & Training	<p>Training programs in the U.S., and other countries will be finished.</p> <p>Second BRIDGES summer workshop</p> <p>(DU) Training of data collectors (between 2-6/88)</p> <p>(IU) Workshop conducted on the emerging Open University.</p> <p>(PA) First version of the training seminars in Pakistan to be completed.</p> <p>(TU) Short training workshop on field survey skills.</p> <p>(TE) Workshop with teachers, supervisors and Min. officials to improve teacher and school effectiveness.</p> <ul style="list-style-type: none"> <li>• Workshop to review analytical reports and design next phase of research concerned with teacher performance;</li> <li>• In-country training linked to research activities (data analysis &amp; report writing);</li> <li>• Two week training visit to Egypt of 2 members;</li> </ul>	<p>Second BRIDGES summer workshop, Harvard, 8/88.</p> <p>(DU) One week training workshop for RA's.</p> <ul style="list-style-type: none"> <li>• Extensive informal training for GPP and the Ministry of Education.</li> </ul> <p>(IU) Workshop on institutional costs of UT teacher training. 7/88.</p> <ul style="list-style-type: none"> <li>• Workshop on variable specification, research design and program characteristics for Phase II.</li> <li>• Workshop review Phase I research report and Phase II instruments.</li> <li>• One-week training workshop at WTRC (coding, recording, data reduction, scaling and data analysis).</li> </ul> <p>(PA) Various informal, "hands-on" training for AEPAN Staff.</p> <p>(SL) National Workshop on research output, 7/11-13.</p> <ul style="list-style-type: none"> <li>• One 3-day workshops for training in attitude measurement, statistical analysis, conduct of field work, etc.</li> </ul> <p>(TU) Short workshop on survey instruments.</p> <ul style="list-style-type: none"> <li>• Training sessions for HEC researchers in qualitative multi-site case study research methods.</li> </ul>

<b>FT YEAR</b>	<b>ACTIVITIES</b>	<b>PLAID</b>	<b>ACCOMPLISHMENTS</b>
1988 (cont.)	Seminars	(PA) Seminar on conducting research for the field (interviews, analysis of data, etc.) 1-2 weeks;  ▪ Seminars on educational planning and policy implementation;  ▪ Two-week seminar on the cost of education.	(PA) Three-day seminar on the cost and financing
	Model Demonstrations and Training	Unspecified	RTI: slide show: Impact of Education on development  STEP: Final version of STEP was completed including color brochure, tutorial, users manual  EPU: Initial conceptualization and design  EIM: Initial version of this model mapped out; literature review  BRIDGES Educational Policy and Planning Game: alternative data base developed, with documentation and Player's Manual  GENDER: New software and color brochure  Enhancement of RTI - developed Best modeling system  Report published in <u>Development Communication</u>  Report on simulation game and education planning software  Demonstration of BRIDGES software at 18 international cities.  (PA) Training in STEP in four provinces - Five workshops;  (BG) Assist EPU to assess policy options with models - Two workshops
	Publications	Two Research Reviews  Initial publication of Research Digest  Newsletter to be begun.	Two Research Reports published in FT 88 (3/88 and 7/88 - 1,300 copies published)  Three Development Discussion Papers (2/88, 7/88, 9/88 - 300 copies)  FORUM published bimonthly since January 1988 - 150 copies each.  Six Manuals  23 Casual papers  Other: Workshop brochure, formal meeting agendas, covers, t-shirts & graphic brochures

BU: Burundi, BE: Egypt, IU: Indonesia, PA: Pakistan, SL: Sri Lanka, TH: Thailand, YE: Yemen

FY YEAR	ACTIVITIES	PLANS	ACCOMPLISHMENTS
1989	Conferences and Meetings	<p>Second BRIDGES Annual Meeting</p> <p>(BG) International Conference on "Policy Options for the Improvement of Education" in Cairo in early February 1989.</p> <p>(PA) A National Conference on "Strategies for Implementation of the 7th Five Year Plan in Education, Islamabad, January 1989.</p> <p>• A second National Conference on "Policy Options for the 7th Five Year Plan." Islamabad, July, 1989.</p>	<p>Second Annual BRIDGES Meeting in Bangkok</p> <p>(BG) International conference on educational policy and reform in Cairo in February 1989.</p> <p>(PA) A second National Conference on "Policy Options for Better Education Outcomes at the Primary Level," July 1989.</p> <p>• A Symposium hosted by AEPAN was held during July-August.</p>
	Workshops and Training	<p>Harvard Workshop (Summer 1989)</p> <p>World Bank Organized Workshop in Turkey</p> <p>Propose to organize an RTI-based workshop for educational planners and policy makers from developing countries.</p> <p>(BG) Training in such areas as project management, conceptualisation and research design, instrument development, interviewing, classroom observation, data coding and data management.</p> <p>• Workshops for representation of ministry offices to review and discuss the BRIDGES work (early 1989).</p> <p>• Workshops on first year results and to finalise year two activities (November, 1989).</p> <p>• Workshops for review and dissemination of project results (September, 1989).</p> <p>(BG) Training in the use of word processing software.</p> <p>• RTI will organise and conduct two workshops (STEP, EPM).</p> <p>(IN) A project workshop in which coding schemes and scales will be constructed and analysis design formulated (February 89).</p> <p>• Workshops on data analysis and report format (May, 1989)</p> <p>• A final project workshops (August, 1989).</p> <p>(PA) Hands-on training for AEPAN.</p>	<p>(BG) Three 2-week training workshops on research design and policy analysis.</p> <p>(BG) Training components closed out.</p> <p>(IN) Training on research methods and report writing.</p> <p>(PA) Hands-on Training for AEPAN.</p>

**FY YEAR**

**ACTIVITIES**

**PLANS**

**ACCOMPLISHMENTS**

1989

Workshops and Training  
(cont.)

(PA) Formal training [(1) eight persons for Academy will come to the U.S.A. for training visits, (2) four persons will participate in the annual BRIDGES Workshops on EPPA, (3) offer four seminars or workshops]

\* RTI will organize five in-country workshops (the four provinces, and in Islamabad).

(BL) Training for (1) coding instruments, Totto in September, 88; (2) the observation of classrooms, Totto in January, 1989; (3) automatic checks on data inputting, Totto and Chang, January, 1989; (4) estimating "missing data," Cummings in October 1988; (5) word processing, Navarro in January, 1989; (6) introduction to STEP; (7) utilizing the SYSTAT graphics package a series of small workshops focusing on the major on the major findings of each of the studies along with their

(TH) Ongoing training activities: 1) Qualitative methods; 2) Survey analysis; 3) Cost analysis; 4) Policy analysis.

(PA) Six participants visit Harvard University for training.

(BL) Formal training, informal on-the-job training.

\* A number of 1-3 day workshops on Attitude Measurement, Data Inputs, Field Work, Word Processing, etc.

\* Data management workshops, February 1-3, 1989.

\* Workshops on teacher motivation, performance and policy issues, January 19, 1989.

\* Close out Research/Training.

(TH) Ongoing Training

Model Demonstration and  
Training

CIES Annual Meeting Demonstration

Continued development and demonstration of EPW, EIM  
BRIDGES Gen, cost module.

One week workshop on GAGE, EIM and STEP for BRIDGES and  
"perhaps" IIES staff.

Two to three week workshops for planners and policy  
makers from developing countries.

Country workshops Pakistan and Egypt.

Demonstrations of models for AID/W

Necessary documentation for models.

(BU, BU, IS, PA) Further development of a variety of data bases.

CIES Annual Meeting Demonstration

GPES - Initial working version produced with manuals and  
pamphlet, and upgraded and improved HELP screens.

EPIC - User manual completed.

Final version "Computer Applications for Educational Planning  
and Management" Course for future training workshops.

BRIDGES software requested/distributed to over 30 institutions.

CEPDR - User manual completed.

EIM - Model completed and ready for use in FY 90.

Two articles utilizing BRIDGES work accepted for publication in  
professional journals.

Fourteen different exposures of BRIDGES software in  
international fairs.

(BU) Short research skills training workshop.

FY YEAR	ACTIVITIES	PLANS	ACCOMPLISHMENTS
1989 cont.	Model Demonstration and Training (cont.)		<p>(EC) Workshop in computer and EMIS skills.</p> <ul style="list-style-type: none"> <li>• Training on GYES and one-week conference in February, 1989.</li> </ul> <p>(IN) Training in computer models.</p> <p>(PA) Seminar on applications of EMIS to Education planning and Policy analysis.</p> <ul style="list-style-type: none"> <li>• Training in software for educational officers from all provinces.</li> <li>• A color computer "slide show" of the effects of educational development and the expected impacts of the PEB (Pakistan Ed. Dev.) Project.</li> </ul> <p>(TE) Workshop on computer and EMIS skills.</p>
	Seminars	<p>(BU) BRIDGES will organize and present a seminar that introduces the STEP in early November 1989.</p> <ul style="list-style-type: none"> <li>• On EMIS (Educational Management Information Systems) in Cairo late April, 1989.</li> <li>• BRIDGES will present an eight-day seminar on the development of an educational costing system in mid-December.</li> <li>• A two-week seminar for 50 MDE participants (review major existing software packages for educational planning, in March 1989).</li> <li>• A seminar for 25 participants that will present a list of key research topics in April 1989.</li> <li>• RTI organize a national-level seminar on the use of STEP and other seminars.</li> </ul> <p>(TE) MEC host the first of a series of policy seminars which will occur on an ongoing basis until the end of FY 1990 (during the fall of 1989).</p>	<p>(EC) Seminar in February, 1989 on Educational Policy and Reform.</p> <p>(PA) Seminar on collection and analysis of data on the cost and financing of education.</p>
	Publications	<p>Research Reports  Research Digest  Forum (Newsletter, Six times per year)  (BU) Two articles on BRIDGES work in Burundi in Journals; Five papers for</p>	<p>Two State-of-the-Art Research Reports  One Development Discussion Paper  Eight Editions of FORUM</p>

<b>FY YEAR</b>	<b>ACTIVITIES</b>	<b>PLACES</b>	<b>ACCOMPLISHMENTS</b>
1990	Conference Meetings	Third Annual BRIDGES Meeting Host Country final review meetings.	
	Workshops and Training	Three regional workshops (January, 1990) Host country final training sessions (TH) UCEFA Thailand (March, 1990)	
	Seminars	European universities and research institutions World Bank Staff	
	Models Demonstrations and Training	Completion of six software products with general applicability (STEP, GENDER, OPES, TRIST, Min PROJ and EIM) (ID) Completion of "Indonesia Model" CIES Annual Meeting (Anaheim, March 1990) AERA Annual Conference (Boston, MA, February, 1990)	
	Publication	Eight research reports Thirty field research reports (Total) Sixty case studies (Total) FOCUS	

75

BR: Burundi, BS: Brazil, ID: Indonesia, PA: Pakistan, SL: Sri Lanka, TH: Thailand, YR: Yemen

## APPENDIX F

### Persons Interviewed

#### AID/Washington

Clifford Block	Frank Method
Ron Bonner	Tom Nicaastro
Joe Carney	Murray Simon
Hal Freeman	Gary Theisen (now Academy for Educational Development)
James Hoxing	

#### Harvard University

Tom Cassidy	Noel McGinn
Ernesto Cuadra	Sue Rarus
Bill Cummings	Christina Rawley
Frank Dall	Fernando Reimers
Katherine Galaitsis	Andrea Rugh
Billie Jo Joy	Don Warwick

#### Institute for International Research

Dean Nielson	Paul Spector
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#### Michigan State University

Henrietta Barnes	Michael Schechter
Suwanna Eamsukawat	Bill Schmidt
Robert Floden	Jack Schwille
Sang Jin Kang	Benjalug Sookpokakit
Sunethra Karunaratne	Wimol Taoklam
Marie Mayoya	Teresa Tatto
Richard Navarro	Mun Tsang
Stephen Raudenbush	Chris Wheeler

#### Research Triangle Institute

Luis Crouch	Luis Cubeddu
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#### Texas Southern University

Dean Joseph Jones

#### USAID Missions\*

Jon Ford, Egypt	Gary Suwannarat, Thailand
Norm Rifkin, Indonesia	Jerry Wood, Egypt
Craig Steffenson, Thailand	Dennis Zuinakis, Sri Lanka

**World Bank**

**Marlaine Lockheed**

**John Middleton**

**Pakistan**

**Javaid Aslam, GOP**

**Muhammad Nasim Quaisrani, GOP**

**Attaullah Chaudhry, GOP**

**David Sprague, USAID**

**Andra J. Herriot, USAID**

**Sara Tirmazi, USAID**

**\*By Telephone**