

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

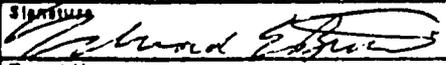
Report Symbol U-47

1. PROJECT TITLE Primary Education Improvement			2. PROJECT NUMBER 633-0222	3. MISSION/AID/W OFFICE USAID/Botswana
4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <u>86-1</u>			<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	
5. KEY PROJECT IMPLEMENTATION DATES		6. ESTIMATED PROJECT FUNDING		7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>81</u>	B. Final Obligation Expected FY <u>85</u>	C. Final Input Delivery FY <u>86</u>	A. Total \$ <u>11,014</u> B. U.S. \$ <u>7,293</u>	From (month/yr.) <u>May 1984</u> To (month/yr.) <u>June 1985</u> Date of Evaluation Review

B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., telegram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Review of Proposals for a Design Team for PEIP II PP	MOE/UB/USAID/ Contractor	9/85
2. PP Preparation of PEIP II	MOE/UB/USAID	1/86
3. Use of More Short-Term Consultants During Last Year of PEIP I	Contractor/ USAID/MOE	8/86
4. Replacement of a Liaison Coordinator for PEIP in MOE	MOE/DOP To Be Determined	
5. Master of Education Program in Primary Education at U.B. with a Research Program as an Integral Part of PEIP II	MOE/UB/ Contractor	11/88
6. High Level Participant Training in Primary Education, PEIP II	MOE/UB/USAID/ Contractor	1/90
7. A Revised Core PTTC Curriculum under PEIP I and II	MOE/UB/ Contractor	1/86
8. Use of a Teaching Competency Model on a National Scale, PEIP I and II	MOE/UB/ Contractor	1/88
9. An Institutional Network for Inservice Training of Primary Teachers under PEIP I and II	MOE/UB/ Contractor	12/88
10. Construction: Three Education Centers, Enlargement of Primary Education Center at UB, a 108-Bed Hostel at UB under PEIP II	GOB/MOE/UB/ USAID/Local Contractor	4/88

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT		
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input checked="" type="checkbox"/> Other (Specify)	A. <input checked="" type="checkbox"/> Continue Project Without Change		
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	2 Workshop Evaluation Reports - MOE	B. <input type="checkbox"/> Change Project Design and/or		
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C		<input type="checkbox"/> Change Implementation Plan		
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	<input type="checkbox"/> Other (Specify)	C. <input type="checkbox"/> Discontinue Project		

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)		12. Mission/AID/W Office Director Approval	
Mr. Peter Sephuma, CEO/MOE Dr. Barnabas Otaala, Dean F of E/UB Mr. Joseph Butale, REO/MOE Dr. Brian Axtell, TDO/MOE Mrs. Ellen Matlho, A/Head, Camp School/MOE		Signature 	
		Typed Name Edward Butler, A/Director	
		Date 10/25/85	

AID 1330-18 (3-78)

Dr. Patrick Lynch, PSC/Penn State
Dr. Ann Domidion, HRDO/USAID (Proj. Mgr.) 7/12/85

EXECUTIVE SUMMARY

1. Primary Education Improvement Project (PEIP) 633-0222:
2. Project Description and Development Problem:
 - a. Description

Since its inception, May 13, 1981, the Primary Education Improvement Project (PEIP) has been making steady progress towards assisting the Government of Botswana to increase the access, efficiency and relevance of primary education in Botswana. The purpose of the project is twofold: 1) to establish in the University of Botswana (UB) a permanent capacity to provide appropriate pre-service training through the creation of a four-year professional Bachelor of Education degree program and a two-year Diploma in Education to upgrade senior primary school staff for whom a degree is not appropriate; and 2) to strengthen the capacity of the Ministry of Education (MOE), in cooperation with UB, to organize and implement effective in-service programs for teachers and supervisory staff involved in primary education.

To date, the pre-service and in-service activities under the Ohio University Contract have proceeded on target and, in several instances, have exceeded the output levels set in the original project paper. The first 20 four-year B.Ed. graduates have been assigned as primary teacher training tutors (15) and as education officers (5) in the MOE. The two-year Diploma in Education graduates (9-10) have been taking positions as head teachers, senior teachers or primary education officers in the field.

The in-service teacher education program has increased in size and scope from training ninety teachers and twenty-seven education officers, representing thirty schools in the first two years of implementation, to training 180 teachers and thirty-two education officers, representing sixty schools with at least 150 spin-off schools, thereby reaching approximately 2,000 primary teachers. To date, there have been sixty-three PEIP teacher/education officer workshops, twenty-seven head teacher workshops, covering all 520 primary schools in Botswana, seven education officer workshops plus additional special ones called by education officers for head teachers. Programs are presented in PTTCs, education centers and schools, depending upon the availability of classroom space and hostels.

Six participants with Masters' degrees in Education have already returned from the U.S. to take up positions as lecturers in the newly created Department of Primary Education at UB. The localization of positions will be about eighty-eight percent complete with the return of the last staff development fellow, currently in training under Phase I of PEIP.

b. Development Problems

Of the 6,700 primary teachers, approximately 1/3 are untrained or have not been exposed to in-service workshops. Although the five education centers now in operation maintain busy schedules for inservice training, they cannot reach all primary teachers in Botswana. Remote areas are often the last to benefit from the in-service program although basic steps have been taken by the MOE to assign better qualified teachers and education officers to the rural and/or remote areas. Activities under PEIP have collaborated productively with MOE goals of individualized instruction, continuous assessment, teaching competency instruments, guidance and counseling, breakthrough to Setswana, special education, and self-study in the primary teacher training colleges.

3. Purpose(s) of the Evaluation

In the Mid-Point Evaluation of November, 1983, as well as in the Annual Evaluation of May, 1984, the PEIP consultants recommended the continuation of the current program for another five years, principally to ensure the firm operation of the MOE/PEIP/UB plan on a national basis.

Therefore, in addition to updating the accomplishments, activities and final steps in implementation of PEIP I, the findings and recommendations of this evaluation would form the basis for the PEIP II project paper. Although a concept paper had already been written in USAID/B and approved by AID/W, this evaluation was designed to reinforce or revise the thrust of the concept paper, furnish additional information to the writing team and provide the most recent opinions and statistics on the progress of the PEIP program.

4. Evaluation Methodology

a. A PEIP Evaluation Committee was selected by the MOE, UB and USAID to review documents and findings, recommendations and suggestions of a personal services contractor and the AID/W backstop for education in Botswana. Unfortunately, the latter was not able to participate and a replacement was not available; so the USAID/B HRDO was assigned to draft the final report, based upon the report of the PSC and the committee inputs, as well as perform, to the extent possible, the scope of work originally approved by the MOE/UB for the AID/W advisor.

b. Interviews were conducted with head teachers, assistant heads, senior teachers, education officers, regional education officers, Ohio University team members, principals of the teacher training colleges, MOE officials with primary education responsibilities, Faculty of Education, UB officers, returned participants, and operations experts under the project. Altogether, forty-one were interviewed.

c. The project files in USAID were reviewed to determine written evidence available on PEIP progress. Documents included reports by short-term consultants, Ohio team members, MOE/UB, inservice workshop evaluations, semi-annual reports of the Ohio University Contractor, previous project evaluations and the activities of operations experts (OPEXers) under PEIP.

d. Special attention was given to the impact of the four long-term OPEXers who operated outside the contract but who contributed generously of their time and efforts to support the activities of the PEIP contractor, Ohio University.

1) The OPEX Finance Officer at UB was instrumental in working out the budget process for the in-service education program in coordination with the PEIP Contract Inservice Advisor at the MOE and the Department of Primary Education, UB.

2) The OPEX Head of the Science Department, UB was able to coordinate course work for both primary and secondary science teachers to provide continuous curriculum development at UB and revision work in science at three PTTCs, in addition to participation in the development of the science curriculum in the BEd and DPE programs under PEIP.

3) The OPEX Senior Curriculum Development Specialist was stationed at the MOE Curriculum Development and Evaluation Unit (CD/EU), working closely with primary science, Standards, 1-7. His work involved both the design and testing of curriculum as well as participation in workshops and classroom visits throughout Botswana. Although no longer currently working under the PEIP project, he is serving in the same capacity under another USAID project.

4) The OPEX Primary Education Specialist has served for almost four years as Coordinator of the PEIP project at the MOE before its authorization in 1981 to the present, both under a previous USAID project and, since October, 1983, under PEIP. He has played a key role in helping to bring about cooperation and mutual understanding among the MOE, the Faculty of Education, the PTTCs and the EOs. In collaboration with the Acting In-service Leader at the MOE, he has assisted in the design of a network of education centers throughout Botswana to reach all primary teachers through in-service workshops. He has worked to emphasize the importance of a career ladder for teachers, continuous assessment in primary schools, breakthrough to Setswana, individualized instruction, special education and the role of the education officers as supervisors, not inspectors. The most recent thrust, in which he has played a vital part, is guidance and counseling. While he has not been solely responsible for any one innovation or educational change, his position in the MOE has furnished the necessary catalytic control to help move/coordinate activities related to primary education, forward.

e. Six short-term consultants have made important contributions to the design, implementation and evaluation of the project. Their reports are on file in the USAID office.

1) In early 1982, a consultant from the Ohio University faculty came to UB to help develop the BEd/Diploma of Ed programs which formed the bases for later revisions. He returned in May of 1984 to serve as an external examiner at UB and to revise the BEd/DPE programs to reflect recent needs.

2) In late 1982, the campus coordinator of the project spent twelve weeks in Botswana discussing the possibility of a career ladder for primary teachers in development of a competency model in the in-service program and a PTTC self-study program which would be viable and acceptable to the MOE and UB. The suggestions made in the consultant's report have culminated in current attempts to plan and design a Diploma of Education course at one or more of the PTTCs. The self-study program has already begun with an appreciable degree of interest shown by all concerned. The competency model for teachers has been endorsed by the MOE, and many supervisors are being introduced to its techniques.

3) During a six week period at the end of 1982, a guidance and counseling consultant from Ohio University reviewed possibilities with the MOE and UB of setting up a guidance and counseling program for the pre-service and in-service education of primary teachers. Three courses were developed to be included in Educational Foundations in the BEd. program: Guidance and Counseling, Guidance in the Curriculum and Career Guidance and Counseling. Two years later, the same consultant will return to help establish a guidance and counseling program which will be more comprehensive and include secondary and higher education levels. The invitation to return is regarded as a sincere interest on the part of the MOE, UB and the TTCs to establish a unified guidance and counseling program for all school/college age students as well as teachers.

4) A media expert spent three months in 1983 at the Primary Education Media Center in the Primary Education Center, UB, designing and implementing plans to procure audio-visual and production equipment and to organize a curriculum materials laboratory capable of processing workshop and classroom needs until the participant being trained in educational media returns from U.S. training. Equipment and materials in the Media Center are in almost constant use for workshops and class discussions at UB.

5) A consultant was hired in mid-1985 to design a series of definite steps which would implement the original report of the campus coordinator of 1983: TTC self-study, teacher education, the in-service program, utilizing the TTCs and the education centers in cooperative in-service programs, the licensing of teachers for a career ladder, and the development of a teaching competency model in the in-service

program. The July, 1983 report stimulated the MOE and the UB/TTCs to begin several reforms almost immediately. Others are in the process of development and planning for the new school year.

6) One consultant, not hired directly under the Ohio University Contract, has served in the role of project evaluator on four occasions: twice in 1982, once in 1984 and once in 1985. His evaluation reports, which were separate from the 1983 mid-point evaluation, reflected the growth of pre-service and in-service teacher education in Botswana under the PEIP project. Since the consultant originally set up the evaluation plan under the contract, he has been able to revise his outline as circumstances permitted. The last report of May, 1985 is Attachment A of this document. Many recommendations contained therein will be considered during the design phase of PEIP II.

f. Particular attention was given by the Evaluation Committee to the role of the Ohio Team in the implementation of the PEIP programs. Under a collaborative assistance mode contract, Ohio University was responsible for assisting in the design and implementation of the project. Attached to this summary evaluation is a detailed review by an outside consultant of the impact of the Ohio University Team. Dr. Patrick Lynch's May, 1985, report is an update of his previous year's evaluation and treats the activities of the Contractor in depth. Both the Committee and the outside consultant agreed that the Contractor had kept pace with the PP Implementation Plan (Schedule of Events, Annex C of PP) and, in some cases, exceeded the original targets.

Twenty (instead of seventeen) B.Ed. graduates have taken their places as PTTC tutors or education officers as of June, 1985. Ten (not eight) recipients of the DPE in June, 1985, have returned to primary schools; one has become an education officer, and a former DPE graduate has also become one. All but three participants have returned to serve as lecturers in the Department of Primary Education, in the Curriculum Development and Evaluation Unit, MOE, or in the Department of Educational Foundations, UB. Inservice workshops under Phase II of the schedule have increased in size and scope to include one hundred and eighty teachers, instead of ninety, and thirty-two education officers, instead of twenty-seven. When a sixth member of the Ohio Team joined the project in January, 1984, to introduce/develop/revise teaching competency instruments, a marked increase in the number of in-service workshops was begun. By the end of the advisor's eighteen month tour in Botswana, twenty-seven workshops reaching all head teachers of 520 schools had been completed. In addition to his End-of-Tour Report, the advisor left a very practical handbook, Botswana Teaching Competency Instruments, 6/85, which has been distributed (600 copies) to all primary schools, education officers, PTTC principals, and MOE/UB officials concerned with primary and teacher education.

An extra dividend from the PEIP project has been a succession of reports, working papers and seminar presentations, written by members of the Ohio Team, OPEXers or returned participants, either individually or jointly. These were read with interest by the Evaluation Committee. They reveal the almost daily collaboration between the PEIP Team and the MOE, the PTTCs and the education officers/education centers. Such cooperation has cemented the primary education/teacher education thrust in Botswana more closely to the primary classrooms, either directly or indirectly.

g. Site Visits

1) Several Committee members were able to attend the four day in-service education workshop for teachers, education officers and PTTC principals at the Tlokweg PTTC, June 17-20, 1985. Since the four workshops in math, social studies, English and admin/supervision were held in the same location, there was a constant interchange of ideas, resulting in unofficial sessions outside those scheduled. The proximity of Tlokweg to the MOE and UB made it possible for higher level officials to participate, and contacts with outlying schools were given more attention than is possible during other times of the year when workshops are in 3-4 different locations during one week.

Since the June workshops provided for the resumption of an annual EO Conference, which had been dropped in 1981, the enthusiasm and interest on the part of the EOs were particularly noticeable. Curriculum Development and Evaluation Center officers came to observe and found themselves very much involved with the teachers, and the workshops. The team approach to workshop presentation was very much in evidence with participants benefiting from the expertise of DPE lecturers, PTTC tutors, CD writers, EOs and Ohio Team advisors.

2) Since the Lobatse Education Center and PTTC were visited during a PEIP math workshop in April, 1985, the committee did not return in May or June. In spite of cramped quarters for the actual four day workshop, participants did have opportunities to review the educational books in the center library and work with one another on projects to take back to their home schools.

5. Findings

a. It was obvious to the Evaluation Committee that PEIP has become a household word in Botswana. The first BED graduates (20) from the Department of Primary Education were assigned as tutors (15) in the PTTCs and education officers (5) in the districts. As the number of teacher participants and education officers increased in in-service workshops and 9-10 Diploma in Education graduates returned to primary schools from the University each year, the impact of PEIP has spread. Workshops on the teaching competency instruments reached all primary head teachers (520), and handbooks (600) were distributed to reinforce the emphasis on improved teaching.

b. Instead of putting the design, preparation, management and implementation of scheduled workshops entirely in the hands of Ohio Team advisors, the team approach has become a viable, more successful arrangement with inputs from education officers, PTTC tutors, curriculum development personnel, Department of Primary Education lecturers and MOE officials. The general enthusiasm that has resulted in more involvement of personnel has increased since the April, 1985 workshops.

c. The content of workshops is gradually changing from a subject area emphasis, almost exclusively, to that of problem-solving, discussions of key issues in primary education, innovations in teacher education and attention to the value of music and art education on the primary levels, to list a few.

d. Organizational changes within the Ministry of Education have paid dividends in several ways. Once plans were formulated to expand primary education and having provided essential participation in project design, the MOE adopted PEIP as one vehicle for improving the quality of primary pre-service and in-service education. Working more closely with the Faculty of Education, UB, the MOE has increased the chances of success for PEIP, which has, in turn, moved in the direction of greater involvement with the PTTCs and the CD/EU as implementation continues.

e. The gradual change in the EO job description by the MOE from that of "inspector" to that of supervisor/guidance counselor has increased the awareness of PEIP's potential in the educational activities in the fourteen districts in Botswana. Evidence of EO enthusiasm for the PEIP workshops was clearly shown through interviews at the Tlokweny PTTC in June, 1985. It has also become evident that the EOs give generous amounts of their time and energy to implementing PEIP in their schools, education centers and head teacher workshops. In spite of many untrained EOs, the interest is there for the educational improvement of primary school programs. As graduates of the BEd courses take their places among the ranks of EOs, the chances for greater education advancement in the districts are greatly increased.

f. Since reports on the evaluation of the last four sets of workshops held since August, 1984 were not available for review, the Evaluation Committee relied more heavily on interviews with teachers, MOE officials, EOs and returned participants. It is hoped that the evaluation reports will be ready for review by the design team of PEIP II.* Although earlier reports were quite positive, more recent ones should reveal the extent to which Phase II workshops, involving Target I and Target II schools, are improving overall teacher performance.

*Reports on Phase II Workshops #4, 5 and 6 for October and December, 1984 and February, 1985 were received on July 11, 1985, after this report was written in draft.

g. Returned participants who have taken their positions as lecturers in the Department of Primary Education, UB have already demonstrated their willingness and ability to participate in in-service workshops in addition to their teaching loads. The June, 1985 workshops in the Tlokweg PTTTC showed a strong indication of the potential contribution the returned participants can make toward the team approach workshop strategy recently adopted.

6. Lessons Learned

a. Cooperation among units is necessary for the success of a project. The MOE initiated PEIP. The cooperative effort then began to include the U.B., the EOs, selected head teachers, senior teachers and some TTC tutors and principals. At no time did the responsible organizations lag in their enthusiasm or support for PEIP, despite overloaded staffs and other policy initiatives. In turn, the contract team was able to fit into the educational framework approved by the MOE.

b. The success of a project has many leaders, all working toward the same goal. In order to achieve steps in implementation, a project, however, must have sustained direction, strong leadership, monitoring and active problem-solving by key administrators who adopt the project as their own. Such is the case with PEIP.

c. Special resources are necessary to implement reform ideas. PEIP has had the advantage of a good base for accomplishing its objectives so far.

d. A project must have the flexibility to change procedures, as well as goals, if necessary. Changing directions from Phase I to Phase II workshop procedures has improved the performance of the program as indicated by interviews with teachers and education officers.

e. Overloading the education system with new initiatives can be detrimental. With limited staff at the MOE, UB, the PTTTCs and education centers, too many changes/innovations can result in little or no improvement in the system. With only one or two new directions introduced per year, the personnel is better able to take them in stride and implement them before another initiative is introduced. In each instance, there must be a fit between the culture and the society on the one hand and the innovation on the other. PEIP has become an integral part of education in Botswana, suited to the country and its cultures and not regarded as an alien transplant.

7. Recommendations

a. Begin the preparation of PEIP II PP to ensure the continued flow of primary in-service and pre-service support by the contractor for the next five to six years.

- b. Develop a Primary Education Specialization in the Master of Education Program at UB, beginning with PEIP II, with a research component.
- c. Plan a participant training schedule in PEIP II to allow training on the doctoral level for those capable lecturers in the Faculty of Education teaching in the Department of Primary Education.
- d. Construct three education centers in PEIP II to complete the network of one in each of the fourteen districts of Botswana to ensure complete coverage of primary teacher in-service workshops.
- e. Establish a network of in-service training, linking education centers and schools with PTTCs, the DPE/UB and the Primary Education and Training Unit at the MOE. Such a network is already in the planning stage; it needs to be modified and/or revised to keep pace with the building programs under several USAID projects.
- f. Continue work with the TTCs in their self-evaluation and affiliation with UB to establish continuous linkages between UB's Faculty of Education and the TTCs, thereby moving them further into the stream of in-service training and encouraging them to become key links in the system of primary school reform.
- g. Consider the possibility of the DPE/UB staff working more closely with the Tlokweg facility in the planning of an experimental curriculum already underway.
- h. Clarify the status of returned participants, regarding future opportunities for outside doctoral work and experiences.
- i. Consider the advantages of providing a part-time Diploma in Education Program at either the PTTCs or at key education centers. With only ten graduates of the two-year program each year from UB, the need for senior/head teacher upgrading is not being met quickly enough to keep pace with the growth of the primary schools.
- j. Appoint a liaison at the MOE to replace the departing OPEXer who has been serving as the Primary Education Coordinator for PEIP in the MOE. Until a Teacher Education Unit is established in the MOE, there is a need for daily coordination between MOE and UB functions dealing with primary education in general and teacher education in particular.
- k. Encourage more concentrated use of the Teaching Competency Instruments in PEIP schools. Observations could be made from video tapes to indicate changes in classroom behavior.
- l. Establish procedures and forms for the follow-up of DPE and BEd graduates with data collection begun with the class of 1983 for the DPE and for the BEd with the class of 1985.

m. Use voice recorders by members of the PEIP team concerning the conditions or variables related to success of PEIP or those seen as obstacles.

n. Repeat the Primary Education Survey in 1986. This would be a follow-up of the very important 1982 Survey. High priority should be given to this effort.

o. Continue work on improving selection procedures for DPE and BEd candidates. The MOE and the PEIP team should be involved whenever possible.

p. Continue/revise the use of the instruments measuring mastery of concepts and attitudinal data from teachers as one basis for workshop evaluations.

q. Revise the Primary School Leaving Exam each year to reflect changes in teaching that are being fostered by the various educational reform programs. A variety of educators involved in primary instruction should continue to be involved in the test development process.

r. Consider the use of in-service training to allow teachers to obtain certification. This will involve setting up a career ladder for teachers and education officers.

s. Enlarge the facilities of the Primary Education Center at UB to house the increased demand for BEd/DPE enrollment. Build at least one more hostel on the UB campus to provide accommodations for new entrants.

t. Provide for more adequate secretarial services to handle the increased workshop and lecture volume. The present situation is extremely inadequate. Sooner or later, expatriates will no longer be available to share the burden of duplication of materials and purchases of workshop/classroom commodities.

u. Train the head teachers to become change agents in each primary school to liaise with education centers and PTTCs.

PRIMARY EDUCATION IMPROVEMENT PROJECT
EVALUATION REPORT

Project Number 633-0222

USAID/Botswana

Patrick D. Lynch, Ph.D.

Submitted: May, 1985

Revised: Aug. 13, 1985

AID Order No. 633-9999-3-00-3023-00

(April 16, 1985)

I. Project Title and Number: Primary Education Improvement Project, 633-0222, USAID/Botswana

II. Project Description and Development Problem

The Primary Education Improvement Project in Botswana, begun in 1981, had as its purpose the reform of the training of teachers of primary schools. It was structured to accomplish this by two means, one of which was a direct approach to assist teachers to change their methods through in-service training; the other was to establish a Department of Primary Education in the University of Botswana.

III. Purpose of Evaluation

The purpose of this evaluation is to assess the progress of FEIP toward its stated objectives. Specifically, the contractor was requested to determine the extent to which the institutionalization of inservice education has advanced under the project, how the development of existing education centers relates to institutionalization of in-service education, the status of the current in-service delivery system and the programs at the University of Botswana. He was to give special attention to the teaching competency model, review the present development of the PTTC Institutional Self-Study Program, and steps for guidance and counseling services proposed by the Ministry of Education.

The contractor was requested to propose suggestions and recommendations for project improvement through the completion of PEIP, Phase I, as well as to provide an outline of proposed activities under PEIP, Phase II, as described in the concept paper submitted by USAID, Botswana to USAID, Washington in March, 1985.

IV. Evaluation Methodology

The external evaluator for the FEIP began his fourth work period in Botswana on April 28, 1985 and completed it on May 10, 1985. The previous work periods, each of which resulted in an evaluation report, were in January and October, 1982, and May, 1984. A mid-point evaluation of FEIP was conducted in September, 1983, under the leadership of Dr. Jean Meadowcroft of USAID.

An evaluation plan for PEIP was submitted by the contractor (who is the external evaluator) in January, 1982, to USAID. It called for both summative and formative evaluation approaches to be used, with clear emphasis on the formative approach. This was in response to the scope of work of the contractor's first visit to the project in January, 1982.

Formative evaluation, an internal process, is used to assist those involved in and served by a project to assess its effects during the life of the project with the purpose of improving its effectiveness. Summative evaluation is a final assessment of a project's effectiveness.

This fourth visit of the external evaluator is a necessary step in assessing the continuous progress of PEIP. The end of the current PEIP contract in August, 1986, raises both formative and summative concerns which will be addressed in this report. An additional concern for the external evaluator is the set of recommendations which will be made concerning PEIP II scheduled to begin o/a September, 1986. These recommendations will be based upon findings and conclusions in this and previous work periods.

The methodology used in this evaluation is both quantitative and qualitative. The quantitative methodology depends upon the use of documents in the Ministry of Education, USAID, and PEIP, which contain data necessary for the evaluation. The qualitative methodology consists mainly of structured and unstructured interviews with MOE officials, PEIP staff, including those who have returned from study in the U.S., Education Officers, Principals of Teacher Training institutions, members of the PEIP Evaluation Committee, USAID personnel, consultants to the MOE and USAID, and expatriate personnel serving in the MOE.

The product to be presented to USAID, Botswana, is this report which has been prepared in preliminary form in May, 1985. The contractor will work with USAID, Botswana after his return to the U.S. on necessary modifications of this report.

V. Findings

A. Introduction

Botswana is an unusual country, in that it is a participative democracy; it has resources which have been carefully used so that it does not suffer the economic distress, so deeply felt in other countries, and people who exress optimism, intelligence and common sense. All of these elements contribute to the success of PEIP. To have stated that is only the beginning of a deeper analysis of the effects of PEIP.

It is also most unusual to be reporting on the factors which led to the success of a country-wide primary teacher training reform. Most other large scale reform projects of that kind are notable in the literature for diagnosis of their failure. Botswana's MOE undertook a very ambitious project in attempting to change both teacher training and behavior of teachers in the classroom. To be succinct, the project has achieved a certain degree of success, as compared to other large scale attempts. This contractor has attempted to identify some of the reasons for this success, as well as pointing out, as an evaluator must, where improvements might be made. It is not too late for improvements to be made in PEIP I, particularly when the staff has requested assessment comments which are addressed to the remaining 15 months of the project.

Given such an enthusiastic beginning, the contractor must warn that a temptation to "declare victory" in primary education at this time would not only be premature because of the fact that the project is only a beginning of reform of primary education. But it might also result in damaging the improvements in teacher training and behavior which are now evident. To paraphrase Winston Churchill, this project is not at the "end of the beginning", but at the "beginning of the beginning" in reform of primary education. All success so far is prologue to what the MOE and Republic of Botswana really wish to accomplish.

These findings will be organized into three sections: those concerning teacher training, those concerning in-service training, and those concerning organizational changes. The third group affects both the first two. All three are increasingly related, and it is in part because they are that the project has so far been successful.

B. Teacher Training

1. The contractor's May, 1984 Report recommended that PEIP work more closely with the TTCs in their curriculum, functions, and administration. That has been done, with the following particulars as examples:

a. PEIP staff have had three meetings with TTC principals on the use of Dr. Evans' proposed self-assessment model, as well as discussion of in-service cooperation between TTCs and PEIP. The desire of the PEIP team is that the TTCs develop their own handbook, adapting the Evans model to their own requirements. This may take 1 1/2 years, according to the PEIP director.

b. TTC principals, at their request, have been invited to the June, 1985 workshop for Education Officers.

c. One of the Ohio University's former participants, Mr. T. Mautle, Lecturer, DFE, and Dr. Ulla Kann, Senior Planning Officer, MOE, have been working with selected TTC principals on research problems, skills and methodologies. Another member of the DFE, also a former participant, Mr. Walter Dikole, worked with a TTC on the use of educational administration materials. Although the activities were not directly related to the PEIP project, the two returned participants were directly involved.

d. PEIP has not been requested to assist in the planning of a new curriculum for the Tlokweg TTC. A recommendation was made in my 1984 Report that PEIP work with the Tlokweg TTC on their new program. The staff in the DFE/UB could be a good resource.

e. A handbook which is a guide for affiliation of TTCs has been prepared by the Faculty of Education of U.B. PEIP staff have been cooperative in assisting TTCs to provide

better coordination between the U.B. programs and the TTC programs.

2. The integration of participants into the Department of Primary Education and the University of Botswana has been advantageous for PEIP as well as the participants. Some details are as follows:

a. A member of the Ohio Univ. team has co-authored articles with two of the participants which will shortly be published in professional journals.

b. Returned participants either are teaming with a member of the Ohio Univ. team, or are working closely with another faculty member in order to integrate into the University's professional activities.

c. One returned participant has voluntarily assumed responsibility for being a faculty tutor, a very demanding and responsible role. Another returned participant has taken over responsibility for the internship portion of the training of Diploma of Education and B.Ed. students. The participants are rapidly assuming major faculty responsibilities, including their normal teaching and advisement responsibilities. Those alone are quite heavy.

d. The participants in the Department of Primary Education are working gradually and carefully into the in-service workshop programs. Care has been taken not to overwhelm them with workshops and to allow them to become accustomed to academic and research roles.

e. The U.B. does allow credit for presentation of a small number of professional papers at conferences to count toward promotion. However, the faculty member desiring promotion must show evidence of scholarly accomplishment in writing. The participants are well aware of these expectations.

f. Evaluation of the returned participants as faculty members has begun. Inevitably, a variability will be found as new faculty are evaluated. University criteria for evaluating faculty must be used; so returning Botswana participants will be measured against standards to which all other faculty are held. It is possible that not all the participants will successfully meet these exacting expectations, while some reveal a high level of academic and research skills.

g. The returned participants, without exception, stated that they received excellent advisement. One of the five expressed disappointment in the types of courses available in her field at the University of Ohio, while the others expressed satisfaction in the academic preparation for their Master's degree programs. While the participants varied in their grade point averages and exhibition of

research skills, none has failed to complete the degree work required. All have returned to Botswana on time. Among the participants still in U.S. universities are some very good scholars. By August, 1986, all eleven will have returned to Botswana.

h. Some concern was expressed that the UB did not count experience in MOE schools toward the lecturer's standing on the UB salary scale, if that person had not had a degree while teaching in the MOE.

3. The Chairman of the Department of Primary Education uses a participative style of administration which requires even newest faculty members to become involved in decisions concerning the programs of preparation and PEIP activities. This technique has been helpful in integrating new Botswana faculty members into university norms.

4. The first group of 20 B.Ed. and the third group of 10 Diploma of Education students will graduate in the spring of 1985. There have been no academic failures; but, given the population from which these students have been drawn, mature-age entry*, some with only J.C. experience, their academic performance is not so high as COSC entry students in the University. It is to the credit of the University and the great efforts of the Faculty of Education, including the Primary Education Department, that these students have been assisted, rather than being treated as a group which would be forcibly reduced through academic attrition. In the words of Prof. Kibria, these students were "serious, experienced, and mature," even if they are not at the top of the University's academic roster.

a. Of the first group of 20 B.Ed. graduates, 15 have been assigned to TTCs as tutors and five will go to the MOE; four of the five will become Education Officers. An excellent feature of the assignment process has been the use of questionnaires in which students express their preferences. This was an outgrowth of a recommendation made at the November, 1984 PEIP Advisory Committee meeting. Both the CEO of Primary and Teacher Training of the MOE and the Head of UTS met with the graduates in order to discuss possible assignments. Generally, the assignment process is working well and as planned. It would not be helpful for the primary education reform if graduates of the primary training programs were drafted into secondary positions, great as the need is in that area. Status differentials might be drawn between primary and secondary positions which would be most unfortunate for the entire educational system.

b. Selection processes for DPED and BEd students which require the cooperation of the MOE and the Department of Primary Education appear to be working well. The UB has taken more responsibility for the selection of candidates for the D.P.Ed. and B.Ed. In a very few cases, obtaining more

* Note: Students take the Mature Age Entry examination for UB admission.

information from the UTS of MOE before admitting the candidates might have avoided some problems. Further, there could be more input from the PEIP staff and MOE about selecting the particular candidates.

c. The Faculty of Primary Education reviews its teacher preparation programs in order to make decisions about needed changes. It plans to use student feedback in doing so. The participation of the Faculty in these programs allows continual review of their efforts. External examiners play a key role in the process, as well.

4. A decision has been made by the Faculty of Education to recommend that an M.Ed. in Primary Education be offered under PEIP II. It will use the same university degree structure as the existing M.Ed. in Secondary Education. The degree candidates will be expected to carry out a research problem as part of their work. This should have the effect of increasing the base of knowledge about theory and practice in primary education in Botswana. The existence of a new graduate degree program would reduce to some extent, for the future, the amount of time that the Primary Education Department faculty would have for workshops. The effect of the establishment of an M.Ed. program, however, must be seen as a maturing of the program, and a chance to develop educational research and evaluation in Botswana.

5. The establishment of a Primary Education Department in a University which has been based on a Commonwealth model was a daring proposition. Heretofore in universities, only secondary education was regarded as a program worthy of university affiliation. The Department is no longer a curiosity, or an embattled newcomer struggling with University bureaucracy to become established. It appears to be a respected unit with a great many resources which are used to help Botswana's educational system. The continued progress of the Department and its programs has also facilitated, and has been facilitated by, increasingly harmonious relationships between the MOE and the UB. Cooperation between these two great institutions is now a fact which can only be a benefit for the education of the people of Botswana. A university dedicated to helping its country, of course, must reach out to its constituents and help them in ways which an isolated, autonomous institution would often disdain.

6. It is possible that a single authority will be established in the MOE over both primary and secondary teacher training. This arrangement might be advantageous in reducing competition between the two levels of teacher education. It would also allow a unified approach to the curriculum of the TTCs. The PEIP director has gone on record as favoring such a development because of the unity of teacher preparation. Continuity or sequencing of curriculum from primary to junior secondary to senior secondary program is certainly an objective of the MOE, one about which the Curriculum Development and Evaluation Unit must be concerned. The concept of a core TTC program would help

prevent a wasteful set of disconnected curricula for primary and junior secondary schools from coming into existence.

7. There is an urgent need for more space for the Dept. of Primary Education which is mentioned in the USAID Concept Paper Draft (Jan. 26, 1985) as an objective of the PEIP II proposal. An increase in the number of BEd students and the creation of a graduate degree program will cause further pressure on facilities. Elimination of the temporary quarters would remove the onus of some lecturers working in uncomfortable quarters apart from the main department facilities and faculty.

C. In-service training

1. Some of the success of PEIP is due to an MOE restructuring of the in-service program. This success became more striking after the Phase II of the program was begun. Phase I, which was not well evaluated and which had only a vague plan for the spread of practice, was replaced by a well-planned Phase II for which 60 target schools were chosen, half of which would be Target One and the other half Target Two schools. They were deliberately selected because they were close to each other; so the first team participating in a workshop could train their counterparts in the Target Two school. The schools were chosen by the Education Officers from various regions. Two of the target schools have Afrikaans-speaking children, in which Setswana as a second language is a main concern of the EO and the PEIP-affiliated teachers. One EO has added a third target school close to the other two and has managed to integrate the three groups. By February, 1986, 180 participants will have participated twice in three different workshops. In addition, 30 EOs will have been trained in workshops of Phase II. Phase I, by contrast, involved 30 schools, 90 teachers actively, and 27 EOs. Shortcomings in the planning, conduct, evaluation and spin-off workshops during Phase I led to modification for the organization of the training of the workshops in Phase II. Clearly, they were better organized and evaluated. Complete data on the Phase I workshops evaluations appear not to be available.

2. The TTCs are becoming more involved in the in-service work. A planning team for each workshop consists of a TTC representative, two students from the U.B. primary education programs, the Curriculum Development Unit of MOE and a PEIP representative. Cooperative planning will result in a greater variety of methods being used and close coordination of the content of the workshops to the syllabus. Involvement of TTCs in the workshops was recommended in the contractor's 1984 Evaluation Report.

3. Scheduling of the workshops has been done carefully so as to allow a team from a Target One school to teach a team from a neighboring Target Two school. Education officers have been most helpful in seeing that teachers get the time to participate. It is possible that an occasional Target Two school is missed, due to timing or lack of materials.

4. The evaluation of the workshop consists of two steps. The first step consists of a post test of knowledge of the concepts presented in the workshop and an assessment of the participants' attitudes toward the usefulness of the workshop. The workshop planning team uses the data from these sources for modifications in workshop activities. The second step is the application of a pre-test of knowledge of the concepts of the workshop to the Target Two participants who were taught by the Target One team. The Target One team is taught by the PEIP team, and the Target Two team is taught by the sister target school team which had been taught by the PEIP team. The Target Two team later participates in the same workshop, this time carried on by the PEIP team. According to data collected as part of the evaluation of workshops 1, 2, and 3 in May and August of 1984, those participants in the Target Two workshop taught by the Target One teacher teams had a slightly lower mean score in knowledge of concepts of the workshop than the participants (Target One) taught by the PEIP team. However, what is more important to note is that the mean differences on all three workshops (Reading, Mathematics, and English) in all three regions (North, Center, and South) between those taught by PEIP and those taught by participants were not significant although more data are needed to verify this conclusion. This suggests that using teachers trained in PEIP workshops to train other teachers does not result in a significant loss of knowledge of the concepts presented. With further refinement of the evaluation instruments used for assessing workshops and continuing refinements in workshop methodology, the differences between performance of the participants in the two waves could be reduced even further. It is a very impressive finding with implications for in-service training everywhere. Video cassettes have been made of target schools which show PEIP-trained teachers in action. These are excellent sources of evaluation material for PEIP. Some preliminary information has been gathered on the achievement of children in Phase I and Phase II schools before and after workshops. Some implications of these data will be discussed in section C.11.

5. According to literature recently written on changes in schools, the role of administrators as stimulators, monitors, and helpers of teachers is now recognized as a very powerful element. Negatively, the role of supervisors in countries with centralized systems has been seen as a hindrance to desired reforms if the supervisors are not in favor of the change. In Botswana, the Education Officers have played a very important role in working with PEIP and the in-service office of the MOE to secure teacher participation and to encourage teacher use of the concepts and materials. EOs are a source of strength to PEIP and primary education.

6. The willingness of Botswana's teachers to change must be seen as a great source of the success of the PEIP, thus far. The teachers have been willing to go to great lengths to attend workshops, spend extra time in preparation for their classes, and then reorganize their classroom style and methods. While this is being taken for granted here, it must be noted that in developed countries, especially the U.S., workshops result in little, if any, change in teacher behavior. There is also a phenomenon of resistance to workshops in the U.S., so that teachers must be paid full scale during their in-service workshops. It is too early in Botswana, and the teaching climate is still too favorable to talk of resistance or apathy to workshops, but some education officers have commented that these must offer a changed format often enough to keep teachers interested. The same concern was mentioned in the contractor's first evaluation, in the context of the benefit perceived by the teachers. The idea of teachers acquiring credit from the workshops leading to higher degrees of certification was discussed. At that time, such an idea was rejected by the MOE as having cost implications which were excessive. Too many teachers might use this mechanism to advance on the pay scale for the resources available for teachers' salaries, it was feared. This idea ought to be carefully studied, nonetheless. Many alternatives of this idea could be considered, including one which simply limits the number of teachers by standard or school which could use this career ladder system. It is particularly important that estimated costs be worked out for the various alternatives.

7. An obvious reason for the success of the in-service program is energetic leadership. With excellent backing and cooperation in the Department of Primary and Teacher Training of the MOE and support from other sections of the MOE, the entire PEIP team has worked well and tirelessly to improve inservice workshops. Critical comments which are presented later in this section must be termed as friendly advice from enthusiastic professionals. The team planning approach to the workshops has involved so many that the credit for success can generously spread to a large number of Batswana and non-Batswana professionals.

B. Comments by education officers are presented, in no particular order:

a. Hold workshops in target schools with demonstration classes composed of school children of that school.

b. Keep the workshops more closely related to the content of the syllabus.

c. Vary the format of the workshops to keep people excited with new kinds of activities which will be used.

d. Use as ideas in the workshops problems actually presented by teachers, rather than problems which might be applicable to all settings.

e. PEIP staff should observe changes in teachers in target schools. (Contractor's note: This is why the classroom observation or competency model was originally proposed.)

f. Closer linkage between first and second wave schools is desirable.

g. E.O.s should attend all workshops.

9. A consensus of comments from education officers concerning the effects are presented in no particular order. It is easy to see the differences in teaching behavior between PEIP-trained teachers and non-PEIP trained teachers. Examples: use of materials in classrooms, better speaking of English, more confident behavior with groups, more variety of methods, more constructive attitudes and behavior toward students, more involvement of students in the classrooms. The above list is impressive as it exhibits evidence that the PEIP-trained teachers are changing more noticeably in the way the project objectives called for. It also happens to be true in educational research that training effects of teachers are observable only under the most carefully controlled conditions, after the use of very powerful training methods and concepts which call for basic rather than marginal changes in professional behavior.

10. The Botswana Teaching Competency Model is a product of 18 months of work. The model consists of instruments to observe classroom procedures and interpersonal skills. The product is very usable; one head teacher says she has used it to observe eight teachers, and by now it is widely known. The PEIP author of the model will have presented 28 workshops in all parts of the country to EOs, head teachers, classroom teachers, TTC staffs, UB staff and students, MOE officials, education center staff as well as others. Hence, the key users have now been oriented to the instruments and model. The only value of any model is in its usability. In order to maximize its usability, the PEIP author requested feedback from all who attended his workshops to suggest changes. The present version is the latest in a series of revisions which have been made as a result of use in classrooms for a period of over a year. It is long as such instruments go, but need not be used in its entirety, according to its author. Selection of certain items can be made which an observer or group of teachers feel are those they wish to observe. The author decided to use statements in the instruments which are not neutral, but which imply a desired direction. This decision was based upon his perceptions of what Botswana professionals preferred in the way of language structure.

The instruments are very easy to understand and to use. He advises that one spend from 30 minutes to 45 minutes observing a teacher in order to complete the instruments. The author is now preparing a handbook for guiding the use of the model. Great stress has been placed on avoiding the use of the competency model as an evaluative device for teachers. Because there is such a scarcity of trained teachers, it is unlikely that attempts will be made for quite some time to evaluate teachers' performance on any scale. However, it is equally unlikely that, when the supply of teachers begins to catch up with demand, a competency instrument would be ignored as plans are made to rate teachers in some objective manner on their behavior. That time may be too far off to worry about the misuse of this competency model, mainly because the principal effect of such a model is to orient professional educators toward a way of observing teachers and of thinking about teacher behavior. In all likelihood, this will be only the first set of instruments constructed in this country for observing teacher behavior. The competency model is a fine first step. The contractor was told that a non-Botswana government agency was considering using the instrument to evaluate its personnel in Botswana. One head teacher felt its use in her school changed two teachers' behavior and attitudes toward students. The steady enthusiasm which has been displayed makes it probable that the model will be widely used. How it will be used is a much more important concern now. If it is used carefully as a resource to help teachers change toward desired directions, it will have been well-used. There needs now to be some conceptual thinking on how this process can fit into the reform of primary education and how it relates to other MOE policy initiatives. This will require extensive thinking and consultation by many people. Instruments and processes can be used in many unhelpful ways so that people tire quickly of them. Some thoughts on the role of the competency model would now be helpful for the MOE. Perhaps this can be included in the handbook.

11. Eventually, people will ask what effect the PEIP reform has had on pupil achievement. We know from the research of the past decade on school effectiveness that control over classroom behavior, structural lessons, direct instruction, which means clearly stated teacher selection of objectives, teacher-assigned tasks followed by careful monitoring of student written and verbal behavior, and amount of pupil time spent on tasks related to the assigned objectives result in higher pupil achievement. This kind of achievement is what Getzels called convergent behavior -- that is the demonstration that a student can perform a targeted skill. It does not relate to divergent or creative behaviors. PEIP has stimulated a more open classroom system with more pupil involvement. The teachers in PEIP have been liberated from constraints of a rigid content teaching system in accord with what the MOE stated as objectives for PEIP.

The point is that on traditional, structured memorization tasks pupils of PEIP teachers may be trained not to do so well as pupils of more traditional memory-drill oriented teachers. Several implications attend this set of facts, the most obvious of which is that Standard Four examinations and the PSLE now do not reflect well the PEIP-related, more unstructured, learning tasks being used. These examinations already contain samples of items measuring less traditional and higher order mental behavior, however, such as application and comprehension. The PSLE does contain more than memory items, and the content is reviewed each year by a representative panel. More concrete changes will be made in 1986.

D. Organizational Changes.

The Ministry of Education took a bold step toward improving the quality of primary education when it adopted PEIP. That step has paid off in improved teacher performance, but its effect on pupil performance remains to be seen. A benchmark for observing pupil performance exists in the 1982 Primary Education Survey, conducted by the Examinations Unit of the Department of Curriculum Development and Evaluation of the MOE.

Another major policy initiative was undertaken in the 1980s with the extension of universal basic education eventually to nine years. Some possible effects of that decision on PEIP were discussed in the contractor's 1984 Report. This section will be devoted to a discussion of Ministry policy initiatives and structural changes as they affect the future of primary education and the role PEIP should play in the future.

1. Within primary education, four recent policy initiatives are being discussed, planning for which is underway. These are as follows:

- a. Special Education
- b. Breakthrough to Setswana
- c. The Teacher Competency Model
- d. Continuous Assessment of Students

In order to implement the above four, a fifth element is necessary, which is the concept of the helping teacher. That would be a person, perhaps a deputy head teacher or senior teacher, who helps teachers implement these initiatives. In a sense, this person would be an implementer of change as well as a kind of in-school supervisor. I will not discuss each of these initiatives because others can do so more accurately, in more detail. Of more importance in this document is the relevance of all of those to PEIP, especially

PEIP II. An integrating theme of individualized instruction has been identified for the initiatives. This is a direct translation of the PEIP objectives.

There is a concept of stimulus overload which has been studied among teachers for about a decade. Simply, it is the notion that too much change can be expected of teachers too quickly. Even if they are willing, they become exhausted. Further, the knowledge base required of teachers to participate in many changes becomes impossible for them to assimilate. A related concept is that of "burn-out" among teachers who have been too intensively involved in too many changes of program. The most willing and energetic teachers are the ones who suffer from "burn-out," because they have attempted to do too much too quickly.

In the area of educational policy, it is noticeable in the U.S. and some developing countries that, if too many policy directives are created for schools, some are ignored, and others may be only minimally complied with. Ministries must be very careful not to overload the professional system with too many expectations at too fast a pace, or non-compliance becomes accepted and habitual.

The implementation of the policy initiatives in primary education will be difficult because of the multiple nature of the initiatives, each requiring changed behavior on the part of teachers and students, and the knowledge required on the part of professionals required to understand and apply the initiative intelligently. The research base for each of these initiatives is complex and extensive. Teachers have needed and now request help to comply with the PEIP initiative. Similarly, they will use the extensive assistance of resource people to carry out each of the initiatives. This has obvious implications for the mission of PEIP II.

It appears that the planning for the initiatives includes implementation steps. The primary one is to appoint a person in each school such as a deputy head teacher who would serve as a resource person. That person will be mainly responsible for monitoring the progress of initiatives and helping the teachers accomplish them. This is an excellent idea, and it is doubtful that a multiple policy initiative would have much of a chance of implementation without such a structural arrangement. The deputy head teacher would plan for workshops, visiting consultants and collecting needed materials. That person will need training in management and supervision in order to function successfully.

2. A related organizational change which is tentatively planned would assist the primary schools greatly in implementing the initiatives. This is a plan affecting PEIP and all of primary and secondary education. Briefly, it envisions the establishment of four regional education centers, each with satellite centers which would serve a

cluster of schools. The TTC in the region would provide its staff to help the education centers plan and carry out their purposes. Nearly all in-service work would be done through this network. Related to that network is the idea that each school will have a change agent linked to the nearest educational center. That person was referred to in the previous section concerning policy initiatives.

The organization envisioned for carrying out educational reform is extensive, but not too ambitious given the planned policy initiatives and manpower restrictions. Certainly a new organizational structure is necessary for delivering in-service training to a growing number of teachers. The envisioned policy initiatives create a demand as well on another group in the MOE, the education officers, who will be discussed in the next section. The people who will staff the educational centers will all need management training as well as training in supervision. Their roles will be organizers and managers in delivering services to the schools.

These organizational changes require new thinking about the role of PEIP and the Department of Primary Education. The existence of a network for reform along with the policy initiatives calls for an institution devoted to research on the effectiveness of the initiatives, the evaluation of what has happened to affect achievement of students, and of course the training of people who can implement all these very ambitious plans.

3. The administrative structure of the MOE, with regional education officers reporting to the Ministry, education officers serving in one of four regions, and head teachers being observed by EOs will have to change qualitatively and quantitatively if the multiple policy initiatives are to be carried out. In a qualitative sense, more delegation of authority to regions or to communities will be necessary because local energies for implementation will have to be organized by head teachers and EOs. The number of EOs will have to be increased, obviously, if they are to assist schools to accomplish more policy initiatives. This system has worked well in implementing PEIP for several reasons:

a. The EOs gave generous amounts of their time and energy to implementing PEIP in the schools.

b. The EOs worked together directly with the PEIP staff in special EO workshops as well as informally to secure implementation.

c. PEIP was an important factor in supporting the MOE's move toward a more professional role for EOs. The EOs have changed their roles as a result of MOE decisions, and PEIP was compatible. This is partly due not only to their special workshop activities but also because they

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individually worked out their own role changes as the MOE involvement in PEIP became more important to them. While EOs still refer to themselves as "the inspectorate," they are functioning less as inspectors now than was true when PEIP started. They are moving consciously to a role of resource persons for teachers.

4. There are possible dysfunctions which could affect PEIP and all other policy initiatives in the administrative structure:

a. The first, referred to earlier, is the concept of overload. Too many responsibilities which appear unrelated could result in education officers becoming paper-pushers instead of the vital group they now are.

b. Resources available to the EOs are very meager for carrying out their responsibilities, especially to remote schools. Lack of money for transport and communication as well as office assistance are cases in point. More may already be expected of EOs than they can accomplish.

c. EOs are not provided sufficient special training for their roles. They function, according to them, by learning on the job and using common sense. To expect them to administer an even bigger and more complex primary system without extensive formal training in management is expecting the impossible, no matter how willing or intelligent they may be.

d. Some EOs now have decided to work through head teachers, wherever possible, to help classroom teachers. This method is only possible where head teachers themselves are experienced enough to work in developing their teachers. The function of EOs working with head teachers is a rational response to an organizational problem of too wide a span of control, but that solution is only possible if the head teachers are trained in management and supervision. If they are not, they cannot be depended upon by EOs as links in the chain of teacher improvement. It appears impossible for EOs to work directly with all teachers in their assigned areas to improve instruction. Inspection is far easier and less demanding than supervision or development of teachers' skills.

e. What has been said concerning the need for training for EOs and head teachers must also be applied to the deputy head teacher who will have special responsibilities under the policy initiatives package. Everyone with administrative responsibilities in the primary schools will need the combination of management and supervisory training.

f. The present administrative structure of primary education is thin and overloaded. Delegation of more responsibility to EOs will cause severe problems unless certain steps are taken promptly to insure that they are properly prepared for their roles. Given too many additional responsibilities, the structure could break down, with the initiatives becoming a dead letter. The EO system appears robust, but it depends on a very few people who are giving their utmost. It is unrealistic to raise expectations of their performance further, without additional administrative buttressing of the system, as envisioned in the plan for the network of centers. In that plan, the EOs work through educational centers to reach teachers. That is a good idea, but intensive management and supervisory training of all concerned are essential if it is to work. Presumably, the pacing of the structural changes mentioned in previous sections will be deliberate enough to allow for training and in-service work for the EOs and head teachers. This is the major challenge for PEIP II. The contractor in the 1984 Report recommended that PEIP work with EOs in the areas of supervision and administration.

g. The roles of EOs, head teachers, and REOs are defined by the MOE, but personnel do not yet have all the skills required to perform their roles; so they may not be clear as to what their roles are. Some (roles) will become all the more complicated as other policy initiatives are introduced. A great deal of work should be invested in redefining the roles of the various officers of the primary system as the new organizational structure is planned. No structural arrangement ever works completely as planned, including the PEIP organization, but roles must be created in order to meet demands in the system. More planning time should be given to functions or roles of officers than the relationships or arrangements of those positions. Position does not really describe function or role. PEIP staff have the experience to help serve as resource people in providing changing role definitions of the EOs and head teachers.

5. EOs and head teachers work with education secretaries in getting materials, supplies, and renovation and repairs for buildings. Sometimes this system of the Ministry of Local Government and Lands supplying the material needs of the schools does not work well, according to the EOs. What is more important in this discussion of changing educational structure is the fact that the education secretaries, some of whom were formerly EOs and all of whom were teachers, have to obtain further training in order to obtain a certificate or diploma. With either of those two documents, promotion is possible. Without such training an education secretary cannot be promoted. Consideration should be given for such a ladder or incentive system for head teachers, EOs and REOs. This procedure would provide a stimulus for all primary education administrators who wish to be promoted to invest time in the development of their own

human capital. It would provide a powerful incentive for those administrators to respond to an offer of training by the PEIP staff.

6. The demographics of Botswana assure that the rapid growth of primary education will be a concern for several more years. Quantitative growth will be necessary in order to accommodate the rapidly growing population which has a very high birth rate. The Ministry of Education has insisted on paying close attention to qualitative improvement as well, which is the subject of PEIP and this evaluation.

However, the sheer numbers of students have implications for structural and functional organization as well as how qualitative reform is carried out. According to one source in the MOE, an entry cohort of first standard students consists of 37,500, whereas seven years ago it was approximately 25,000. In order to accommodate a pyramid-shaped student distribution, several initiatives of an organizational nature appear to have been undertaken. One is the proposal for preparing 50 EOs by 1990. Another is the delegation of more authority to intermediate levels of administration and to the head teacher. All of this will test the strength not only of the official system, but of communities which will have to exhibit their grass-roots capability of solving problems. One has to be optimistic about Botswana's community strength given its history and present viability. Perhaps closer working relationships between district and town councils, education secretaries, and the MOE representatives will result as authority is delegated downward. A plan which would allow for decentralization has been made. The success of the plan requires much more training, the employment of more administrative personnel and patience as well as hard work by all concerned. The pressures of growth will make the qualitative reform efforts more difficult, but certainly should not discourage these reform plans. What is expected to be a trade-off is that some schools will become much better much more quickly than others. Remote schools will likely be improved, however, under the MOE quota system. If people accept the notion of change taking place not in linear fashion, but on a broken front, the entire system will be improved as many schools become excellent and others become much better, qualitatively. The 1982 Primary Education Survey provided glimpses of some factors which affect achievement, and with the next application of that study, we shall know far more about the dynamics of how those social and school factors affect achievement.

D. The contractor's 1984 Report called for developing the research capability of the Department of Primary Education at UB and the strengthening of research and evaluation functions of the Ministry of Education. The Research and Testing Centre, which had carried out the Primary Education Survey of 1982, may not be in a position to

repeat this extremely valuable study, due to heavier expectations of that unit to work on testing materials, including a new Standard 4, yearly revisions of PSLE Standard 7, and the beginning of work on a new Form II for the Junior Certificate. That unit has only 6 professionals and needs more personnel to enhance its essential roles of research and testing.

At the present time, there is a small research unit for education in the MOE. Certainly, research is an essential element for implementing and evaluating the effectiveness of PEIP I, its successor, and all policy initiatives planned for primary education. It is difficult to imagine policy initiatives succeeding without a stronger research and evaluation function with respect to the network of school reform. Certainly, the UB's Department of Primary Education is one such possibility. It could generate research in Botswana on the PEIP effects and on further policy initiatives, help in planning the evaluation function of the primary education system and could be the main source of research base for the initiatives. Without some very strong research and evaluation function designated in the network, much of the implementation of all initiatives will be random behavior with no discernible effects. A worst-case scenario could be parents and students confused with all the new methodologies and asking what their value is in learning, followed by an answer that that question can not be answered because no attempt was made to do so.

The knowledge base for the competency model, for continuous assessment, for special education, and for breakthrough to literacy is enormous and complex. Any one of these initiatives requires very extensive knowledge for implementation if it is not simply to be a ritualistic set of motions done by teachers who understand little of its purpose. For example, does the continuous assessment concept imply that the primary teachers using it will be moving into a kind of mastery teaching model, in which all children are measured by units of time for accomplishing certain criterion tasks? That is only one among many questions which must be asked concerning the use of the elegant, if simple, concept. The present condition of research and evaluation in Botswana is very poor. It must soon be attended to, seriously, with the same kind of attention and care paid to the policy initiatives if those are to succeed even to a slight degree.

The RTC of the CD/EU performs research on education in the country, but expanding test development commitments may curtail the time to do so. It has available data on such important concerns as the growing sex differences in achievement of junior secondary students, the factors associated with great urban-rural differences in achievement, characteristics of TTC students and their prior achievement (including some remarkable differences in selection practices among the four institutions!), longitudinal data (rare in the world) on 7th Standard students who later took the Junior

Secondary Certificate and Senior Secondary Completion examinations. This wealth of data is simply too valuable and useful to go to waste. Analysis of it could answer many questions being raised now in the MOE, by EOs, head teachers, classroom teachers and the staffs of the TTCs.

It must be emphasized that both evaluation and research functions must be planned for the future of education in Botswana. Serious attempts to stimulate research have been helpful, such as the journal, Boleswa. However, these attempts cannot substitute for an institutionalization of both functions. Evaluation is usually seen by policy makers as having more value because of its immediate payoff in answering questions about policy choices. However, without a base of research knowledge generated in Botswana, evaluators and educators must apply research findings from other, mostly developed, countries which may have limited applicability in Botswana. The RTU of the MOE has few resources and little time to carry on research, using its own data. Therefore, a place for carrying on research should be identified in Botswana which could backstop the growing qualitative reform efforts in the country. It is equally important that the Evaluation Unit be further strengthened so that it can carry on the many needed new responsibilities associated with extensive primary education reform.

VI. Lessons Learned

This section must be selective and therefore cannot act as a set of conclusions. This is, of course, a subjective exercise which is peculiar to each observer.

A. Perhaps the first lesson learned from PEIP so far is that cooperation among units is necessary for the success of a project. The MOE initiated PEIP. The cooperative effort then began to include U.B., the EOs, selected head teachers, senior teachers, and some TTC people. At no time did the responsible organizations lag in their enthusiasm or support for PEIP. With so many other policy initiatives being considered, PEIP must continue to be an important element for improving primary education.

B. The success of a project has many parents. Without excellent personnel to implement PEIP, it would not have been a success story. Not only is the Ohio University team a first class one, but the new lecturers, the many classroom teachers, head teachers, EOs and MOE personnel responsible are energetic, resourceful, and dedicated people. Without those characteristics, PEIP would have been largely a paper exercise.

C. In order to achieve implementation, a project must have a sustained direction, leadership, monitoring, and problem-solving by key administrators who adopt the project as their own. This was clearly evident in Botswana as key people in the MOE, UB, and in schools adopted and stayed with the project.

D. The PEIP project has experienced problems which were solved by key people working together. Personal considerations were not allowed to interfere with the project's implementation.

E. PEIP so far may be seen as successfully implemented in part because it had no serious rivals for attention. Educators, interested in developing the system related to it helped constructively so that energies of key administrators and teachers were focused on one project. In order to preserve its unique position of attention, it must not be seen as one of many projects now being considered, but as a means to implement the other reform initiatives. Without this continual emphasis, interest in and participation in PEIP will decline greatly as other reform initiatives compete for attention and resources.

F. A project can succeed in its early stages with little hard data to prove its effectiveness if enough people are convinced it is worthwhile. The results are not yet at hand concerning PEIP's effects on people. It is enough so far that it stimulated people to change their approaches to supervising teachers and to teach children, even how to think about primary education. Those are not small gains but big ones, but more searching questions will be asked about its effectiveness by policy-makers in Botswana in later years.

G. A concept, to be successful, must be home-grown. Although not an original main focus of PEIP, a desire to improve the quality of instruction away from memorization to higher level mental skills and pupil involvement in learning tasks grew spontaneously. This was not "sold" to the MOE by outsiders.

H. Formative evaluation assists implementation. An evaluation at the end, of course, would not have helped PEIP, except to provide a post-mortem examination. Formative evaluations are designed to help the project succeed, not merely to comment on its shortcomings or successes.

I. "Esprit" among the PEIP project team, which means all those working in or with PEIP, is high. A feeling of thrust toward the goal appears to permeate relationships among the many people involved. A belief that PEIP is good and that it is working well is a strongly held norm by those associated with it.

J. Special resources are necessary to implement reform ideas. PEIP has had the advantage of a good base of resources for accomplishing its objectives so far. One cannot generalize from PEIP that any single reform initiative may succeed in primary education, but organization for implementing the project objectives and sufficient resources are necessary for carrying them out.

K. One success stimulates others. The abundance of policy initiatives and organizational change ideas have been stimulated by PEIP's success and the belief that changes in primary education are possible.

L. Unsuccessful practices must be identified and corrected as soon as possible. In FEIP, it was necessary to change directions away from the first phase of workshops, which clearly was not an efficient way of delivering in-service training. Changing directions was a necessity in that instance. A project must have the flexibility to change procedures as well as goals if that is necessary. PEIP was and is a flexible organization unbound by rigid personalities and rules. What has been said of changing directions and goals must also be said of people.

M. There must be a fit between the culture and the society on the one hand and the innovation on the other. This innovation has become peculiarly suited to the country and its cultures. It is not an alien transplant but is now especially Tswana.

VII. Recommendations

The following recommendations are divided into short-term and long-term suggestions. The short-term recommendations refer to the remaining period of PEIP I, while the long-term recommendations refer to PEIP II.

A. Short-term Recommendations

1. Continued work with TTCs in their self-evaluation and affiliation with UB can work toward the objectives of establishing continuous linkages between UB's Faculty of Education and TTCs, moving TTCs further into the stream of in-service training and encouraging them to become key links in the system of primary school reform.
2. The MOE should consider the possibility of DPE/UB staff working more closely with the Tlokwenj facility in the planning of a new curriculum, already underway.
3. Clarifying the status of returned participants regarding future opportunities for outside doctoral work and experiences plus placement on the salary schedule may be helpful to them. Orientation of new lecturers is very important, and this has been well done so far.
4. Participants in the U.S. should be encouraged to attend the annual meeting of the American Educational Research Association or the Association for Research and Development. These experiences would put them in touch with current research valuable to education in Botswana and in their own education formation.

5. Space is very tight in the Department of Primary Education. As soon as possible, an addition needs to be considered. At the very latest, this should come the first year of PEIP II.

6. Secretarial assistance for PEIP is very skimpy and needs to be increased so that the staff can work more efficiently. Assuredly PEIP II must be better assisted with secretarial staff than has been true of PEIP I. The Faculty could also be more efficient if more word-processing equipment were available.

7. The evaluation of the remainder of PEIP I can be made more effective by considering the following steps:

a. Using video tapes of teacher behavior in PEIP classrooms at various stages of training.

b. Use voice recorders by the PEIP team concerning the conditions or variables related to success of PEIP or those seen as obstacles. These cassettes need to be collected soon as those who will return to the U.S. will soon thereafter forget the importance of their experiences.

c. Procedures and forms for follow-up of DPE and BEd graduates should be planned, with data collection begun on the first cohorts of graduates in 1985, if at all possible.

d. As soon as possible, the competency model should be used to observe changes in classroom behavior of a sample of the PEIP teachers. These observations could be made from video tapes of the sequences of teachers' classroom behavior.

e. Continued use of the instruments measuring mastery of concepts and attitudinal data from teachers should be obtained and used for workshop evaluations. It may be necessary to modify the attitudinal instrument.

f. The Primary Education Survey should be repeated in 1986. Some adjustments in sampling may have to be made, given the limited resources of the MOE RTC. This is a follow-up of the very important 1982 Survey. High priority should be given to this effort.

g. The external evaluator should return in May, 1986, for observation during the last year of PEIP I. If a summary evaluation of PEIP I is desired as well, more than two weeks will be necessary as a period of work in Botswana.

h. Continued work with the in-service workshops according to the Phase II plan would appear to be important, but only if great care is taken to evaluate their effectiveness on a regular basis. A research article on the workshop series, both Phase I and II, would be a good contribution for education in Botswana and the profession.

i. The Primary School Leaving Exam should continue to be revised each year and test content reflect changes in teaching that are being fostered by the various educational reform programs. A variety of educators involved in primary instruction should continue to be involved in the test development process. To allow examination development to lag behind what is taught in the schools will have a detrimental effect on educational improvement. The PEIP team and some trained by PEIP include people who could serve as advisors to the RTC in revising the construction of the PSLE.

10. Continued work on improving selection procedures for DPE and BEd should be done. Careful communication with the MOE and involvement of the PEIP team in the selection process appear to be necessary.

B. Long-Term Recommendations:

1. Consideration should be given to the use of in-service training to allow teachers to obtain certification. Cost estimates should be made of different numbers of teachers arriving at higher pay scales in this way. Various approaches to this matter can be considered, including control of the number of those eligible for advancement each year.

2. Consideration should be given to a system of training incentives and promotion for educational administrators, beginning with deputy head teachers. The training effort envisioned in this report for PEIP II is so great and thorough that a certification diploma system may be needed to ensure that trained people occupy administrative and supervisory positions. The model of the promotion system used in the Ministry of Local Government and Lands is one which exists and may be studied.

3. The involvement of the Department of Primary Education in in-service education should be limited to that which is linked to a careful research plan if possible. The Department can make contributions by experimenting with different kinds of workshops, with results disseminated to TTCs and educational centers, where most of the workshop activity will be located.

4. The idea of a network of in-service, reaching from UB's Department of Primary Education to the primary schools, is now being planned. The linkages between education centers and schools will be very important to practice in classrooms. The linkages between TTC and education centers need careful definition. The role of the TTC as an in-service agent is recently being developed; so the TTCs will need assistance in planning their roles in in-service training and surely will need more resources for such a function. The linkages for in-service between UB Department of Primary Education (PEIP II) and the TTCs also

needs to be worked out carefully. A plan outlining the responsibilities of each toward the other and toward education centers needs definition. In part, recommendations 5, 6, and 7 relate to this linkage.

5. The role of PEIP to help provide a base of knowledge for the new initiatives and the continuing reform of primary education already underway is very important. For example, literature on change processes in schools, management of schools, adult education, and supervision needs to be accumulated very quickly so that this country's educational system will have access to up-to-date information. A center where knowledge is available for TTCs, education centers, EOs and HTs is badly needed. The knowledge base for the existing and proposed initiatives is very extensive and complex. It is mainly available in English, and nearly all has been based on work done in other countries. The dissemination of knowledge should precede a careful implementation of the initiatives. Concepts such as "direct instruction," "time on task" and "classroom climate" are very important for teachers to know. As PEIP's own work matures in its network of 60 schools, those schools' staffs will become more eager for information. The MOE does not have in its system yet a knowledge-dissemination function or institution which can prepare the ground for further reform initiatives. The knowledge-dissemination function requires a central clearing house where information on the continuous assessment, guidance and counseling, special education, primary education teaching methods, and educational supervision and management can be found. A next step is the distribution of selected information useful to users. This requires something beyond warehousing. The research knowledge must be adapted to the country in order to communicate the relevance and importance of the material to Botswana's teachers and administrators. The distribution from the central source can be through the educational centers to the participating schools. The ECs are designed to serve as centers for dissemination of information to school people. They will also have to provide a service of interpreting more complex research-based knowledge into materials teachers can understand.

6. Closely related to the function of knowledge dissemination is the generation of research. Research must be done in the primary schools of Botswana because the knowledge base as it now exists rests upon research done in other countries. Further, many assumptions made by policy-makers and administrators in Botswana need the testing which educational research can provide. Knowledge of what the effects of education are in Botswana can only be learned here. Many questions need the benefit of research very soon. For example:

What is the effect of in-service training of teachers on achievement?



What kinds of teaching methods for Setswana and English are most effective with certain types of children?

What are the effects of parents' background on children's learning in school?

What effects do parents' working with children have on their achievement? (The Primary Education Survey of 1982 provides some beginning answers.)

Do rural children achieve better when they learn in an urban school?

The function of educational research is essential for making intelligent educational policy. There should not be a push for change without putting in place the means of determining how the change should be undertaken, for whom, and at what speed.

The UB Department of Primary Education is one possible place in which to headquarter this research establishment. In the training of BEd and MEd students, research knowledge and practice should play an important role. Those who go to the TTCs should have some background in educational research if they are to understand and teach the basic principles of learning and teaching. Doctoral students sent by PEIP to other countries would take advantage of the data already existing in the RTC so that they can do research on problems in Botswana.

Performing research in Botswana and training people to do research can become an excellent combination which a university can perform well. The research center for the primary education system is at the same time a center for technical assistance to others in the TTCs who may wish to begin research, such as Dr. Kann and Mr. Mautle have begun to do.

A strong but flexible linkage between MOE and the UB is necessary if research on learning and teaching in Botswana is to remain relevant to policy-makers as well as practitioners. It may be necessary to keep a strong linkage between MOE and UB in this matter by establishing a research council which would suggest directions for research which would improve teaching/learning and inform policy. In that way, the UB would not be tempted to establish its own lines of research unrelated to Botswana's development needs. A related idea is that of a Botswana Institute of Education, working under MOE auspices in the UB. This idea has already been described in writing.

7. A need exists for more evaluation resources to be put into place in the planned in-service network. Evaluations of educational initiatives will be necessary so

that the MOE can answer to its citizens concerning the effects of its policies. The Research and Testing Unit (RTU) simply does not have the capacity to perform all the evaluation necessary in this country. Educational programs which are corrected by evaluation have a much better chance of helping students reach objectives than without such information. A part of the evaluation function must be the training of people in evaluation. The MEd students should have evaluation methodology and concepts built into their program. Workshops for TTC staffs and education center staffs will also eventually become necessary.

8. In order to meet the need for trained administrative and supervisory personnel, the PEIP should include a comprehensive long-range design for preparation of in-service orientation of education officers, TTC principals, education center staffs, and head teachers. The need is not only great but immediate. Training in management is required as quickly as possible because little of that has been done. A fine start for training EOs in supervision is evident in their receptivity toward a changing role as resource people rather than as inspectors. A combination of management (or administration) and supervision is necessary for all responsible administrators. Included in the core of management studies should be budget administration, personnel administration, education planning and evaluation, and organizational change. These all have practical usefulness and theoretical bases.

Formal training for the BEd and MEd students will have to be accompanied by in-service efforts for the officers mentioned above, as very few of them will be able to leave their jobs to take time out for extensive preparation. Two of the returned participants will have had training in educational administration by the end of August, 1986. While EOs have had some benefits of special training and work with the PEIP team, it has not been possible to give much attention to head teachers. Beginning with the head teachers of the 60 target schools, the training of all head teachers should be undertaken according to a careful plan.

PEIP's role in training administrators is necessary if all the policy initiatives in the MOE are to be carried out. The number of trained administrators in the MOE and public school system is so small, and the growing demands are so great on administrators, that this must be a very high priority matter for PEIP II.

9. When the examination is designed to test the students in Form I (or the second year of junior secondary), the validity problem will be a serious one. The content of the primary years should be reflected in that examination, and items should not be restricted to memorization of content. Application and comprehension items should be included in such an examination. A number of primary education experts should participate in planning that examination.

C. Summary Recommendations

To summarize the long-term recommendations for PEIP II, the main objectives to be considered on the basis of most pressing needs of the educational system of Botswana are the following:

1. Design the relationship of the UB PEIP to the proposed MOE network for change needs to be defined for PEIP II. The above recommendations are possible elements in that design.
2. Serve as a center for training EOs, education center administrators, principals of TTCs, and head teachers in management of education and supervision. Of the two, the more immediate need appears to be training in management. The training mission includes orientation and training of personnel in Botswana in the knowledge base of policy initiatives as well as many other concepts and functions of an educational system, educational research, and evaluation of educational programs;
3. Serve as a center for accumulation and dissemination of knowledge;
4. Serve as a center for training in educational planning, and in using and carrying out educational research;
5. Serve as a center for providing training and technical assistance in evaluation of educational programs.

APPENDIX A

The external evaluator interviewed the following people during his May, 1985 visit.

- Dr. Bryan Axtell, Senior Research and Testing Officer, Examinations Unit, Dept. of Curriculum Development and Evaluation, MOE.
- Dr. Marion Blue, Math/Science Advisor, Ohio University Team, PEIP, UB.
- Dr. Clifton Chadwick, Consultant to USAID, IEES Team.
- Mr. Walter Dikole, Ed. Administration Lecturer, PEIP, UB.
- Dr. Ann Domidion, HRDO, USAID, Gaborone.
- Dr. Max Evans, Chairman, Dept. of Primary Education, U.B., and Chief of Party, PEIP
- Ms. C. C. Ford, E. O., Molepolole.
- Dr. John Hansen, Florida State University, IEES Consultant.
- Dr. Luther Haseley, In-Service Education Leader, MOE, and PEIP.
- Mr. B. M. Kuswane, Head, Dept. of Unified Teaching Service, MOE.
- Dr. Gholam Kibria, Head, Foundations of Education Dept. U.B.
- Dr. Ray LeGrand, In-Service Education Advisor, Ohio University Team, PEIP.
- Mr. G. Mautle, Lecturer, PEIP, U.B.
- Mr. T. Mbulawa, E. O., Jwaneng.
- Ms. D. Mogobjwa, Lecturer, PEIP, U.B.
- Ms. R. Monau, Lecturer, PEIP, U.B.
- Ms. Z. A. Moncho, E. O., Tsabong
- Mr. K. N. Moshashane, E. O., Gaborone

- Mr. G. T. Mosinyi, E. O., Selebi-Pikwe
- Mr. M. Mosothwane, Lecturer, PEIP, U.B.
- Ms. E. Matlho, Acting Head Teacher, Camp Primary School,
Member of Evaluation Committee for PEIP.
- Mr. W. Ntsabane, E. O., Jwaneng.
- Dr. Barnabas Otaala, Dean, Faculty of Education, U.B, Member
of Evaluation Committee for PEIP.
- Dr. Jack Purves, Coordinator, Primary Education Management
Program, MOE.
- Mr. M. M. Rathedi, Principal, Francistown TTC.
- Dr. Jack Reed, Science Curriculum Advisor, Dept. of
Curriculum Development and Evaluation, MOE.
- Mr. P. V. Sephuma, Chief Education Officer, Primary and
Teacher Training, MOE.
- Mrs. O. B. Seretse, E. O., Maun.
- Dr. Douglas Windham, Economist, SUNY, Albany, IEES Consultant.
- Visit to Bosele School, Gaborone,
Mrs. B. Butale, Teacher, Standard 2.
Mr. Tjikwakwa, Head Teacher.
- Visit to Tlokweg PTTC

PRIMARY EDUCATION IMPROVEMENT PROJECT
PHASE II - WORKSHOPS 4, 5, AND 6
OCTOBER 1984 - FEBRUARY 1985

Research and Testing Centre
July 1985

For workshops 4, 5 and 6 of Phase II of the Primary Education Improvement Project (PEIP) inservice work, three evaluation approaches were used. As in the first 3 workshops of Phase II, the PEIP inservice leaders developed measures of content learning to assess participant learning from workshops; fifteen statements regarding teaching philosophy and methods were written to assess participants general approach and thoughts to teaching; and a revised set of 10 statements were used to elicit participants evaluations regarding the usefulness of workshop content. Copies of these instruments are attached to this report.

PARTICIPANT LEARNING

Learning was assessed in the same way as was done for workshops 1, 2 and 3. Schools taught by PEIP staff were given the content learning test at the conclusion of the workshop, and these schools were to mount the same workshop for their sister schools. When the sister schools attended the next workshop conducted by PEIP personnel, the same test was administered to them at the beginning of that workshop.

Performance on these tests is presented in Table 1, which gives results for each content area, region and the workshop leaders (PEIP personnel or teachers).

As with the first 3 workshops, while lower mean scores are obtained by teachers receiving the workshop from their sister school than by teachers receiving the workshop from PEIP staff, these differences are not statistically significant. This lends some support to the procedure of using teachers as workshop leaders. Caution is needed in this interpretation, however, as in Reading 12 or the 15 points possible were from true-false questions, and it can be argued that a score of 6 can result from chance alone, without learning having taken place. A similar situation, to a lesser extent, occurs in English with about 4 of 15 points possibly being attributed to chance. Looking at the test scores from this perspective raises some doubts as to the learning taking place, and emphasizes the need for more thorough investigation of the viability of using teachers to train other teachers.

The numbers of teachers completing the tests provided some unplanned information on the conduct of workshops by schools to sister schools, as teachers who had not received the workshop indicated this on their test form (and did not take the test). For workshops 4 and 5 (data for workshop 6 not available) the number of teachers who had received them

TABLE 1
PERFORMANCE ON WORKSHOP CONTENT TESTS

<u>Workshop</u>	<u>Region</u>	<u>Taught</u>		<u>N</u>	<u>Mean¹</u>	<u>s.d.</u>
		<u>By</u>	<u>To</u>			
Reading	N	PEIP	B	29	9.00	2.35
		B	A	25	6.88	1.77
	S	PEIP	A	22	8.86	2.44
		A	B	18	7.06	1.63
C	PEIP	B	29	8.31	2.07	
Math	S	PEIP	B	32	17.41	2.79
		B	A	19	10.79	4.83
	C	PEIP	A	27	12.07	2.28
		A	B	5	NA	NA
	N	PEIP	B	28	16.25	2.96
English	C	PEIP	B	28	8.54	2.76
		B	A	26	6.35	2.86
	N	PEIP	A	26	9.88	2.66
		A	B	18	6.50	1.30
	S	PEIP	B	30	8.54	2.28

1. Maximum scores are 15 for Reading and English, 20 for Math.

from their sister school suggests that about 2/3 of them are being conducted. This finding has been communicated to the inservice organizers, and investigations into the reasons for non-conduct and plans to ensure conduct are underway.

ATTITUDES TO TEACHING APPROACHES

A set of 15 attitude statements was prepared to assess several aspects of teaching methods and classroom approaches. Participants responded to each statement on the continuum "Strongly Agree - Strongly Disagree." The median values and the percentages responding positively (Agree or Strongly Agree) or negatively (Disagree or Strongly Disagree) are presented in Table 2.

The median values for the 15 statements fall in the directions (positive or negative) that would generally be expected, and the percentage of participants responding "Uncertain" is generally low, except in cases where such a response would not be unexpected (e.g., "There is a best way to teach any topic."). Of greater interest than the median values, however, are the distributions around those values. Statement 1, for example, has a median value of 2.3, which indicates disagreement with the statement and suggests a flexibility of teaching setting among the participants. However, the responses to this statement are quite bimodal, with 41% agreeing that a classroom and blackboard is where teaching should occur. Statements 4, 5, 6, 8, 9, and 10 are similar in having substantial numbers of participants endorsing the more traditional view of teaching.

It may be assumed that for the more traditionally oriented teachers, the workshops are not succeeding in instilling greater flexibility in their teaching methods; they are perhaps more likely to fit the workshop content into their more traditional model.

EVALUATION OF WORKSHOP USEFULNESS

In the report on Phase II workshops 1, 2, and 3 the question of participant response to attitude and evaluation instruments was raised. As an initial effort to investigate possible response biases or styles, the evaluation statements were revised for the current series of workshops. Two forms of 10 statements were developed, the first with the even numbered statements phrased negatively and the second with the odd numbered statements phrased negatively. Participants at each PEIP run workshop completed one or the other of these forms, on a random basis. The median values for each workshop under these two conditions are presented in Table 3.

The evaluations of the workshops are rather uniformly positive for all the statements employed, with statement 7 on organizing sports activities having the lowest median value. It was reaction to this statement in the previous evaluation that was one factor in questioning the possibility of some bias in participant responses.

TABLE 2

ATTITUDES TO TEACHING APPROACHES

<u>Statement</u>	<u>Median</u>	<u>Agree(4 and 5)</u>		<u>Disagree(1 and 2)</u>	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1. Teaching should take place in the classroom using the blackboard.	2.3	63	41	86	56
2. Students should be encouraged to explain things in their own words.	4.5	147	93	9	06
3. Students can explain some ideas to other students.	3.7	148	94	7	04
4. Students should take dictation most of the time.	2.2	38	25	95	62
5. Teachers should ask more questions when students give incorrect answers.	2.9	67	43	72	46
6. Students like copying from the textbook or blackboard.	3.7	90	58	47	31
7. Teachers should use student ideas in their teaching.	4.2	128	83	16	10
8. Students should be taught to remember facts instead of learning to reason.	2.2	53	34	93	59
9. Students like to listen to the teacher talking to the whole class.	2.2	45	29	95	62
10. There is a best way to teach any topic.	3.8	92	59	42	27
11. Teachers should follow only the syllabus in planning their lessons.	1.9	21	13	130	82
12. Only students who have their hands raised should answer questions.	1.7	9	06	137	87
13. Planning teaching activities takes a lot of time.	4.0	117	74	34	21
14. Students should be penalized if they answer a question incorrectly.	1.2	6	04	151	95
15. Students should be frightened of teachers so as to accept instruction.	1.2	6	04	152	95

TABLE 3
WORKSHOP EVALUATION - MEDIAN VALUES

Statement	READING			MATH			ENGLISH		
	Positive Phrased	Negative Phrased	Diff.	Positive Phrased	Negative Phrased	Diff.	Positive Phrased	Negative Phrased	Diff.
1. I (do not) understand the content of the workshop.	4.3	4.6	.3	4.4	4.7	.3	3.9	4.2	.3
2. I will (not) be able to use the content of the workshop in my teaching.	4.7	4.7	—	4.5	4.8	.3	4.0	4.5	.5
3. I will (not) be able to teach the workshop to other teachers.	4.5	4.8	.3	4.6	4.6	—	4.2	4.3	.1
4. The workshop is (not) useful to teaching from the revised syllabus.	4.7	4.7	—	4.5	4.2	-.3	4.3	4.3	—
5. The workshop will (not) help me assess pupil learning.	4.6	4.7	.1	4.5	4.6	.1	4.4	4.5	.1
6. The workshop is (not) useful for teaching every standard.	4.8	4.9	.1	4.6	4.8	.2	4.6	4.6	—
7. The workshop will (not) help me to organize sports activities.	3.5	3.9	.4	1.9	4.0	2.1	2.1	4.0	1.9
8. Untrained teachers will (not) be able to use the workshop content.	4.5	4.3	-.2	4.7	4.4	-.3	4.5	4.3	-.2
9. The workshop will (not) help me talk to our ED about improving education.	4.3	4.7	.4	4.4	4.6	.2	4.0	4.7	.7
10. The workshop is (not) useful for teaching pupils of all ability levels.	4.5	4.8	.3	4.6	4.8	.2	4.5	4.6	.1

2/6

As seen in Table 3, the phrasing of the statements (positively or negatively) does produce changes in the evaluation: In 21 of 30 cases (the 10 statements for each of the 3 workshops) the statement received a higher endorsement when it was presented with negative phrasing; for 5 there was no difference; and for 4 the positive phrasing elicited higher endorsements. Statement 8 (untrained teachers using the workshop content) consistently drew higher endorsements when it was stated positively than when it was stated negatively. Possibly the participants do have doubts about the capability of untrained teachers to learn and to use the workshop material, and this doubt is easier to express when the question is asked in a negatively phrased fashion.

Statement 7 (organizing sports activities) showed the largest differences between positive and negative phrasing, especially for math and English. When phrased positively, this statement shows median ratings of 1.9 and 2.1, indicating the workshops would not help them organize sports, and this is the expected response. When phrased negatively, however, the medians become 4.0, indicating the workshop would indeed help organize sports: a very curious and confusing result.

When the negative phrasing was included in the evaluation statements, it was expected that this would "nudge" participants into making somewhat less positive evaluations. Not only was this expectation not supported, the "nudging" seems to be in the opposite direction.

The way in which attitude statements are phrased does influence the evaluative responses we receive, but clarifying the hows and whys will require more concentrated and specific investigations.

4/7

TEST--READING WORKSHOP, PHASE II, No. 2

TRUE--FALSE: Mark each statement either true or false.

- _____ 1. The directed reading lesson method is more effective than other methods of teaching reading.
- _____ 2. The directed reading lesson helps teachers focus on specific objectives in their preparation for teaching reading.
- _____ 3. A directed reading lesson includes both silent and oral reading.
- _____ 4. The enrichment activity step in a directed reading lesson is less important than other steps in the lesson.
- _____ 5. Children in the upper standards of the primary school should be asked to do an increasing amount of oral reading.
- _____ 6. The skills used in oral reading are the same as those used in silent reading.
- _____ 7. Children should be given an opportunity to read a passage silently before being asked to read it orally.
- _____ 8. It is important that pupils read each reading passage orally.
- _____ 9. An effective method of teaching spelling is to introduce the words at the beginning of a reading lesson.
- _____ 10. Games which are used to give children practice in spelling should ask children to write the words rather than to spell them orally.
- _____ 11. Children learn to spell quickly and easily by learning a large number of spelling rules.
- _____ 12. Spelling rules should be memorized.

COMPLETION: Fill in the missing word in each statement.

- _____ 13. In teaching guided silent reading, the teacher gives the child a _____ for reading all or part of a reading passage.
- _____ 14. Giving attention to each and every word in a reading passage is important in _____ reading.
- _____ 15. Words ending in a consonant preceded by a single vowel usually require that the consonant be _____ before adding an ending.

UNIVERSITY OF BOTSWANA
DEPARTMENT OF PRIMARY EDUCATION
April; 1985: Workshop - Review Quiz

Your name is NOT required.

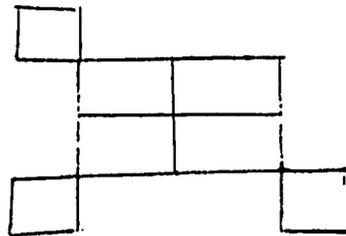
1. Rational numbers can be what kind of fractions _____
2. To teach rational numbers a teacher could use the game of _____

3. _____ is a game to teach the multiples
of _____.
4. List 2 activities or devices used in the workshop (and not in your
earlier answers) to assist in the teaching of addition.

5. List 2 devices to teach multiplication that you learned about in this
workshop.

6. Short Essay
Describe how to teach the use of the two (2) you listed in question 4

7. Insert numbers and solve.



- 8 (Tick one)
Alphabet numbers is useful for teaching:

_____ addition _____ subtraction
_____ multiplication _____ rational numbers

/...2

9. (Tick one)

Subtraction is the inverse of:

multiplication

division

addition

non of above

10. Solve for the missing addends when the sum is 13 and the product 42

11. With the cross number puzzle for the subtraction problem $17 - 8$, the diagonal would add up to _____

12. Draw the lines and complete the sums in this familiar 3×3 array

2

9 5

4

13. With family addends, how many problems fit one board? _____

14. Put in the proper match of dots to this figure and total the points.



15. Complete the rows and columns for this problem.

0	0	1	2	3	4	5	6	7	8	9
3										
4										

16. If $A = 36$, $D = 81$, $E = 24$ then put the proper letter in the box for each problem.

$4 \times 6 = \square$

$9 \times 9 = \square$

$4 \times 9 = \square$

PEIP WORKSHOP
VOCABULARY

QUIZ

Do NOT put your name on this paper. Please answer all the questions to the best of your ability.

I. Complete each sentence below with a word from the following list. You may not use any word more than once. You will not use all the words.

never	connotes	function	collocates
passive	understand	respond	content
repeat	active	occasionally	frequently

1. Mpho said, 'I have a new blue skirt.' Blue is part of her _____ vocabulary.
2. Teachers should _____ translate new English vocabulary into the first language.
3. When learning a new word, pupils must first _____ the word.
4. In English, we call the light from the sun "sunshine" but we don't call the light from the moon "moonshine". This is because "shine" _____ with "sun" but not with "moon".
5. _____ words have very little meaning by themselves but are necessary to the meaning of a sentence.

II. Multiple choice. Place an "X" in the blank before the word, phrase, or sentence that best completes each sentence or answers each question. Only one answer is correct for each question.

1. New vocabulary items should be introduced in _____.
 a. isolation
 b. familiar structures
 c. new structures
2. A person's active vocabulary is ____ his or her passive vocabulary.
 a. the same as
 b. smaller than
 c. larger than
3. A teacher wants to teach her pupils the noun "sample". What should she do first?
 a. Use the word in several sentences.
 b. Have the children repeat the word several times.
 c. Point out the similarity between "sample" and "example" which the children already know.
4. The least effective technique for teaching new words is _____.
 a. classification
 b. translation
 c. demonstration

5. Teaching a familiar word with a new meaning _____.

___ a. requires less time than teaching a completely new word

___ b. is usually confusing to the students

___ c. is just like teaching a new word

III. If the statement is usually true, write "true" in the blank. If it is usually false, write "false".

_____ 1. Emphasizing correct spelling in written work encourages vocabulary growth.

_____ 2. Reading aloud to children is a good way to increase their vocabulary.

_____ 3. Learning the most common affixes helps develop vocabulary.

_____ 4. Asking students to use words which say precisely what they mean will discourage vocabulary development.

_____ 5. In any two languages, such as English and Setswana, most words have the same denotations and connotations, so we only need to teach the denotations.

IN SERVICE
MINISTRY OF EDUCATION
WORKSHOP EVALUATION

Title of Workshop _____

Dates of Workshop _____ TO _____

Your Position:

- _____ Head Teacher
- _____ Deputy Head Teacher
- _____ Senior Teacher
- _____ Assistant Teacher
- _____ Other _____

I teach standard _____

On the following pages we want you to give your ideas about the value of this workshop. For each of the statements given please indicate how much you agree with the statement as it applies to this workshop. There are no right or wrong answers - we want to know your ideas.

EXAMPLE

If the workshop was about "How to drive a car"

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. I know how to start the motor.	(SA)	A	U	D	SD
2. I know the hand signals.	SA	(A)	U	D	SD
3. I can teach another to drive.	SA	A	U	D	(SD)

For statement 1, the circle around SA means that you are quite confident you can start the motor; the circle around A for statement 2 would mean that you do know the hand signals, but are less confident; the circle around SD for statement 3 would mean that the workshop did not prepare you to teach others how to drive.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. I do <u>not</u> understand the content of the workshop.	SA	A	U	D	SD
2. I will be able to use the content of the workshop in my teaching.	SA	A	U	D	SD
3. I will <u>not</u> be able to teach the workshop to other teachers.	SA	A	U	D	SD
4. The workshop is useful to teaching from the revised syllabus.	SA	A	U	D	SD
5. The workshop will <u>not</u> help me assess pupil learning.	SA	A	U	D	SD
6. The workshop is useful for teaching every standard.	SA	A	U	D	SD
7. The workshop will <u>not</u> help me to organize sports activities.	SA	A	U	D	SD
8. Untrained teachers will be able to use the workshop content.	SA	A	U	D	SD
9. The workshop will <u>not</u> help me talk to our EO about improving teaching.	SA	A	U	D	SD
10. The workshop is useful for teaching pupils of all ability levels.	SA	A	U	D	SD

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. Teaching should take place in the classroom using the blackboard.	SA	A	U	D	SD
2. Students should be encouraged to explain things in their own words.	SA	A	U	D	SD
3. Students can explain some ideas to other students.	SA	A	U	D	SD
4. Students should take dictation most of the time.	SA	A	U	D	SD
5. Teachers should ask more questions when students give incorrect answers.	SA	A	U	D	SD
6. Students like copying from the textbook or blackboard.	SA	A	U	D	SD
7. Teachers should use student ideas in their teaching.	SA	A	U	D	SD
8. Students should be taught to remember facts instead of learning to reason.	SA	A	U	D	SD
9. Students like to listen to the teacher talking to the whole class.	SA	A	U	D	SD
10. There is a best way to teach any topic.	SA	A	U	D	SD
11. Teachers should follow only the syllabus in planning their lessons.	SA	A	U	D	SD
12. Only students who have their hands raised should answer questions.	SA	A	U	D	SD
13. Planning teaching activities takes a lot of time.	SA	A	U	D	SD
14. Students should be penalized if they answer a question incorrectly.	SA	A	U	D	SD
15. Students should be frightened of teachers so as to accept instruction.	SA	A	U	D	SD