

PD-ABD-468

100-70002

UNCLASSIFIED

BOTSWANA

PRIMARY EDUCATION IMPROVEMENT
PROJECT, PHASE II, [633-0240]

UNCLASSIFIED

MARCH 1986

DATE: March 27, 1986

ACTION MEMORANDUM FOR THE DIRECTOR, USAID/BOTSWANA

William S. Elliott
FROM: William S. Elliott, Project Development Officer

SUBJECT: Project Authorization - Primary Education Improvement
Project, Phase II, 633-0240

I. Problem: Your approval is required for a grant of \$8,034,000 from the Foreign Assistance Act (FAA), Section 531, Economic Support Fund appropriation, to the Government of Botswana (GOB) for the Primary Education Improvement Project, Phase II (PEIP II). It is planned that \$1,266,900 will be obligated in FY 1986.

II. Discussion: The purpose of the project is to strengthen the capacity of the Ministry of Education (MOE) and the University of Botswana (UB) to organize, revise and implement effective pre-service, in-service and curriculum programs for primary teacher education. PEIP II is designed to follow the first phase of PEIP (PEIP I, 633-0222, begun in 1981) which sought to establish a capacity within the UB to provide pre-service training through the creation of a four-year Bachelor of Primary Education degree (BED) and a two-year Diploma in Primary Education Program (DPE). In addition, the institutional contractor (IC) was to help strengthen the capacity of the MOE, in cooperation with UB, to organize and implement effective in-service programs for supervisory staff and head teachers involved in primary education. Through close cooperation involving the MOE, UB, USAID, and the IC, a Department of Primary Education in the Faculty of Education was created, and BED and DPE programs were put in place. To date, the in-service activities of PEIP I have proceeded on target.

The principal reason for the proposed Phase II project is to further institutionalize the pre-service and in-service programs initiated under PEIP I and permit their orderly expansion to meet country-wide needs. New demands to be addressed by PEIP II result from (1) the rapid expansion of primary school enrollment and the consequent need to upgrade the qualifications of more teachers; (2) recent policy decisions leading toward the integration of primary and junior secondary schooling into a nine year basic education program; and (3) some gaps in the institutional system which became apparent as PEIP I evolved and which now require attention.

PEIP II will improve teacher education by enlarging and improving pre-service and in-service programs established under the PEIP I. The proposed project will also establish a Master of Education degree with a primary education specialization at UB and develop a revised curriculum to be used by the Primary Teacher Training Colleges (PTTCs). The number of primary education degree and diploma graduates each year at UB will be

increased by almost 70% by the end of the project. In-service teacher training, which now reaches about 120 primary schools, will be extended to the 518 primary schools which currently exist. Project-funded participant training to the Master's and post-Master's levels will prepare Botswana educators to implement the project and carry on its activities upon the departure of the technical advisors.

The GOB and USAID will fund the construction of three regional education centers to carry out teacher training and the construction at UB of a student hostel and an addition to an existing Primary Education Center, to accommodate the University's expanded primary education programs. Commodities and equipment will be purchased for the PTTCs, the three education centers, and the Primary Education Center (PEC).

III. Financial Summary: The total cost of the project is \$10,748,000. Of this amount, AID will provide \$8,034,000 over the six year life-of-project. AID's contribution consists of the following components: technical assistance (\$4,736,000), training (\$510,800), commodities (\$415,000), and construction (\$851,400). The AID budget also includes inflation (\$1,090,700) and contingency (\$430,100). The GOB will contribute the remaining \$2,714,000.

IV. Socio-Economic, Technical and Environmental Considerations

A. Project analyses indicate that PEIP II is technically feasible. The objectives of the project are based upon a rationale which was proven, through the experience and outcomes of PEIP I, to be appropriate to Botswana as a valid framework for collaborative effort. As PEIP II moves from the BEd to the MED program development, from curriculum development in the primary schools to a focus on curriculum development in the primary teacher training colleges, and from in-service for primary teachers to in-service for teacher educators, the early pattern of close collaboration among all concerned segments of Botswana education will be maintained and strengthened, where necessary.

The assessment of the distribution of the social benefits of the project indicates that the social consequences will be strongly positive. The Administrative and Management Analysis detailing the project's implementation responsibilities concludes that effective means of coordination will be established and maintained among the project implementors. The base case economic analysis estimates the benefit/cost ratio at 1.84 and the internal rate of return (IRR) of the project to be 22 percent. A more conservative estimate of project benefits yields a benefit/cost ratio of 1.27 and an IRR of 15 percent. The key to the project's economic viability is a reduction in dropout and retention (repetition) rates and a maintenance of Standard 7 pass rates. The Cost Estimates and Financial Plan demonstrates that the GOB is in a position to absorb the recurrent expenditures, which result from project investment.

B. The Initial Environmental Examination (IEE) of the project identified no issues requiring further environmental study and recommended that a Negative Determination be made. This recommendation was approved by the Africa Bureau. (See IEE, dated 1/10/86, in Project Paper, Annex F.5.)

C. No human rights issues were raised.

V. Section 611(a)(1) of the FAA: The Cost Estimates and Financial Plan and the Engineering Analysis contained in the Project Paper reviewed all financial and construction plans and concludes that project planning is adequate and that costs are reasonably firm, thereby satisfying the requirements of Section 611(a)(1) of the Foreign Assistance Act.

VI. Implementation: The implementation arrangements described in the Project Paper were considered at the USAID/Botswana review and found to be both realistic and sufficient to carry out the project. Implementation responsibilities will be shared among the Ministry of Education, the University of Botswana, the AID-funded institutional contractor and USAID/Botswana.

VII. Review Committee Action: The Concept Paper submitted to AID/W was reviewed in April/May 1985 and approved by DAA/AFR E.L. Saiers, per STATE 132382. Through Delegation of Authority 140, project authorization was assigned to the Director, USAID/Botswana. The Project Paper was reviewed by USAID/Botswana on January 8, 1986 and found acceptable, conditioned on the inclusion of certain changes which have been made.

VIII. Justification to the Congress: A Congressional Notification (CN) was submitted on March 17, 1986 and no objections were raised during the 15 days which followed.

IX. Waivers: A waiver is requested to change the source/origin from AID Geographic Code 941 to AID Geographic Code 899 for commodities purchased under the project. The waiver is included in the Project Authorization and is justified in Annex K of the Project Paper. A waiver requesting a determination from the Assistant Administrator, Bureau for Africa (AA/AFR) that color television tubes be eligible for procurement under PEIP II was submitted to AID/W through GABORONE 0396. (Color television tubes are generally considered luxury goods and normally ineligible for procurement.) Such a determination was made by the AA/AFR as cited in STATE 109152.

X. Major Conditions Precedent and Covenants: As set forth in the attached Project Authorization, a Condition Precedent requires plans and specifications concerning construction activities, and covenants address requirements concerning a Department responsible for Teacher Education within the MOE, Batswana counterparts, candidates for long-term training (and teaching replacements for them), UB Faculty of Education staff to work on non-teaching activities, and resources for strengthening teacher education (including a staffing plan for education centers).

XI. Recommendation: That you sign the attached Project Authorization, and thereby approve life-of-project funding of \$8,034,000 for the Primary Education Improvement Project, Phase II, 633-0240.

Attachments:

1. Project Authorization
2. Project Paper

Drafted:WELLIOTT:PDO, 3-19-86 *WE*

Clearances: HRDO:ADomidion *AMD* 4/2/86
CONT:JBrody *JB* 4/2/86
DD:EButler *EB* 4/2/86
RLA:ESpriggs *ES* 3/27/86

PROJECT AUTHORIZATION

Name of Country: Botswana
Name of Project: Primary Education Improvement Project, Phase II
Number of Project: 633-0240

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Primary Education Improvement Project, Phase II, for Botswana (the "Cooperating Country"), involving planned obligations of not to exceed Eight Million Thirty-four Thousand United States Dollars (\$8,034,000) in grant funds over a five year period from the date of authorization, subject to the availability of funds in accordance with the AID OYB/allotment process, to help finance the foreign exchange and local currency costs of the Project. The planned life of the Project is six years from the date of initial obligation.

2. The Project will strengthen the capacity of the Ministry of Education and the University of Botswana to organize, revise and implement effective preservice, inservice and curriculum programs for primary teacher education. AID funding will finance long and short-term technical assistance, participant and local training, construction, and commodity support.

3. The Project Agreement which may be negotiated and executed by the officer to whom such authority is delegated in accordance with AID regulations and delegations of authority shall be subject to the following essential terms, covenants and major conditions, together with such other terms and conditions as AID may deem appropriate.

a. Source and Origin of Commodities, Nationality of Services

Commodities financed by AID under the Project shall have their source and origin in the Cooperating Country or countries included in AID Geographic Code 941, except as AID may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have as their place of nationality the Cooperating Country or countries included in AID Geographic Code 941, except as AID may otherwise agree in writing. Ocean shipping under the Project shall be financed only on flag vessels of the United States, other countries in AID Geographic Code 941, or the Cooperating Country, except as AID may otherwise agree in writing.

b. Conditions Precedent to First Disbursement

Prior to the first disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, the Cooperating Country will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID a statement of the person(s) representing the Cooperating Country for purposes of the Project, together with a specimen signature of each person specified in such statement.

c. Additional Disbursement: Construction Activities

Prior to the first disbursement under the Grant for construction, or to the issuance by AID of documentation pursuant to which such

disbursement shall be made, the Cooperating Country will, except as AID may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID final plans and specifications including cost estimates for such construction and evidence that appropriate sites have been made available by the Cooperating Country for such facilities.

d. Covenants

The Cooperating Country shall covenant that, except as AID may otherwise agree in writing:

(1) It will establish a Department responsible for Teacher Education within the Ministry of Education (MOE).

(2) It will make available qualified candidates for long-term academic training in the United States on a timely basis and to ensure by bonding or other means that such trainees are assigned upon their return to suitable positions within the MOE or the University of Botswana (UB) related to activities under the Project.

(3) It will ensure, through UB authorities, the availability of Botswana and Institutional Contractor (IC) staff within UB's Faculty of Education to work on non-teaching components of the Project.

(4) It will provide the necessary human, physical and financial resources, including appropriate staff for the educational centers, commensurate with strengthening MOE and UB's primary teacher education capacity and will submit to USAID/Botswana a staffing plan for the education centers within two months after the signing of the Grant Project Agreement.

(5) It will assign suitable counterparts for each long-term technician financed under the Project.

(6) It will ensure, through UB authorities, that a suitable teaching replacement will be provided from UB resources for each teacher undertaking long-term training financed under the Project.

4. Waivers

Based upon the authority and the justification set forth in Annex K of the Project Paper,

(1) I hereby approve a source/origin waiver from AID Geographic Code 941 to Code 899 in an estimated amount of \$26,000 for project commodities described in that Annex, and

(2) I hereby certify that exclusion of procurement from Free World countries other than the Cooperating Country and countries included in Code 941 would seriously impede attainment of U.S. foreign policy objectives and objectives of the foreign assistance program.

April 29, 1986
Date

Paul Guedet
Paul Guedet, Director
USAID/Botswana

Drafted by RLA/SA: G.Bisson (DRAFT, 1/31/86)
and RLA/SA: E.Spriggs ~~3/27/86~~.

Clearances:

PDO:	W.Elliott	<u>W. Elliott</u>	Date:	<u>4/1/86</u>
HRDO:	A.Domidion	<u>A.M. Domidion</u>	Date:	<u>4/2/86</u>
CONT:	J. Brody	<u>J. Brody</u>	Date:	<u>4/2/86</u>
DD:	E. Butler	<u>J. Brody</u>	Date:	<u>4/2/86</u>

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT DATA SHEET

1. TRANSACTION CODE **A** Amendment Number _____
 A = Add
 C = Change
 D = Delete

DOCUMENT CODE **3**

2. COUNTRY/ENTITY
Botswana

3. PROJECT NUMBER
633-0240

4. BUREAU/OFFICE
Africa **06**

5. PROJECT TITLE (maximum 40 characters)
Primary Education Improvement Project II

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)
 MM DD YY
05 12 92

7. ESTIMATED DATE OF OBLIGATION
 (Under 'B' below, enter 1, 2, 3, or 4)
 A. Initial FY **86** B. Quarter **3** C. Final FY **91**

8. COSTS (\$000 OR EQUIVALENT \$1 =)

A. FUNDING SOURCE	FIRST FY 86			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	942.4	324.5	1,266.9	5,976.0	2,058.0	8,034.0
(Grant)	(942.4)	(324.5)	(1,266.9)	(5,976.0)	(2,058.0)	(8,034.0)
(Loan)	(--)	(--)	(--)	(--)	(--)	(--)
Other U.S.						
1.						
2.						
Host Country	--	734.0	734.0	--	2,714.0	2,714.0
Other Donor(s)						
TOTALS	942.4	1,058.5	2,000.9	5,976.0	4,772.0	10,748.0

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ESF	620	634				8,034		8,034	
(2)									
(3)									
(4)									
TOTALS						8,034		8,034	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)
620

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	B. Amount
BR	5,034
BU	3,000

13. PROJECT PURPOSE (maximum 480 characters)

The purpose of the project is to strengthen the capacity of the Ministry of Education and the University of Botswana to organize, revise and implement effective pre-service, in-service and curriculum programs for primary teacher education.

14. SCHEDULED EVALUATIONS

Interim	MM	YY	MM	YY	Final	MM	YY
	01	89				08	91

15. SOURCE/ORIGIN OF GOODS AND SERVICES
 000 941 Local Other (Specify) **899**

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment.)

17. APPROVED BY
 Signature *Paul Guedet*
 Paul Guedet
 Title Director, USAID/Botswana
 Acting

Date Signed
 MM DD YY
01 42 91

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
 MM DD YY

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LIST OF ACRONYMS

ABS	Annual Budget Submission
ADB	Africa Development Bank
AID/W	Agency for International Development/Washington
ATC	Advanced Teachers Course
ATTS	Automotive Trades Training School
BEEd	Bachelor Education
BEHRSA	Botswana Education and Human Resources Sector Assessment
BIAC	Botswana Institute of Administration and Commerce
BRIDEC	Brigades Development Center
CDEU	Curriculum Development and Evaluation Unit/MOE
CDSS	Country Development Strategy Statement
CEO	Chief Education Officer
CEO-PTT	Chief Education Officer - Primary Teacher Training
CJSS	Community Junior Secondary School
COP	Chief of Party
COSC	Cambridge Overseas School Certificate
CTEO	Chief Technical Education Officer
DANIDA	Danish International Development Agency
DOP	Directorate of Personnel
DPE	Diploma in Primary Education or Department of Primary Education U/B
DSE	Diploma in Secondary Education
EC	Education Center
EO	Education Officer
EHR	Education and Human Resources
ETC	Elementary Training Certificate
FAP	Financial Assistance Policy
FAR	Fixed Amount Reimbursement
FTE	Full-Time Equivalent
FY	Fiscal Year
GDP	Gross Domestic Product
GOB	Government of Botswana
GPO	Government Printing Office
HBU	Historically Black University
IBRD	International Bank for Reconstruction and Development
IC	Institutional Contractor
IDM	Institute for Development Management
ISD	Instructional Systems Development
JC	Junior Cambridge (examination)
JC	Junior Certificate
JSEIP	Junior Secondary Education Improvement Project
JSS	Junior Secondary School
LT	Long Term

MCOE Molepolole College of Education
MEd Master of Education
MFDP Ministry of Finance and Development Planning
MLGL Ministry of Local Government and Lands
MOE Ministry of Education

NCTE National Council of Teacher Education
NDP National Development Plan
NFE Nonformal Education
NIR National Institute of Research
NLC National Literacy Campaign

OU Ohio University

PEC Primary Education Center
PEIP Primary Education Improvement Project
PL Primary Lower Teacher Training Certificate
PP Project Paper
PSLE Primary School Leaving Examination
PTC Primary Teacher Certificate
PTTC Primary Teacher Training College
PTU Primary Teachers' Union
P Pula

RCO Regional Contracting Officer
REDSO Regional Economic Development Services Office
REO Regional Education Officer
RFTP Request for Technical Proposal
RTC Research and Testing Center/MOE

SBU Schools Broadcasting Unit/MOE
SIDA Swedish International Development Agency
SS Secondary Schools
ST Short-term

TAFU Teaching Aids Production Unit/MOE, Francistown
TCM Teaching (er) Competency Model
TEC Total Estimated Costs

UB University of Botswana
UNESCO United Nations Educational, Social, and Cultural Organization
UNICEF United Nations Children's Fund
USAID United States Agency for International Development
UTS Unified Teaching Service

VTC Vocational Training Center

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1. SUMMARY

- A. GRANTEE: Government of Botswana (GOB),
Ministry of Finance and
Development Planning
- B. IMPLEMENTING AGENCY: Ministry of Education (MOE)
and the University of
Botswana (UB)
- C. PROPOSED AMOUNT OF GRANT: AID: \$ 8,034,000
GOB: 2,714,000
TOTAL: \$10,748,000
- D. TERM OF GRANT: Six Years from Date of
Initial Obligation
- E. PURPOSE OF GRANT: To strengthen the capacity of the
MOE and the UB to organize,
revise and implement effective
preservice, inservice and
curriculum development programs
for primary teacher education.

F. BACKGROUND OF PROJECT: Since Independence in 1966, the Government of Botswana has viewed primary education as a high national priority with a continuing emphasis upon the improvement of quality and the extension of access to primary education to all the children of the country. To make possible the extension of educational opportunity, the GOB undertook to increase the number of schools, classrooms and teachers to the necessary levels. Between the years 1975 and 1985, the number of primary schools increased from 323 to 518. Efforts were also increased in primary teacher training during the 1975-1985 period, the number of students in training at the four primary teacher training colleges growing from 489 to 1201.

The greatly increased efforts by the GOB to make primary education accessible to all children has resulted in 85% of the nation's children having enrolled in Standard I before the age of eight.

This success in extending access to all children has complicated the situation with respect to shortages of classrooms, the number of double shift classes, school retentions and student drop-out rates. As the GOB moves to implement a nine-year basic education plan for all students, the tying of primary education efficiency to junior secondary education preparation has become an important link in the universal education scheme.

The preparation of teachers for the primary schools has been of particular concern to the GOB. The primary teaching force grew from 3900 in 1976 to almost 6800 in 1984, but the percentage of untrained teachers remained at 30%.

The GOB and USAID, through a technical assistance contract, in 1981 undertook the first phase of the Primary Education Improvement Project (PEIP), 633-0222 to establish a capacity within the UB to provide preservice training through the creation of a four-year Bachelor of Primary Education Degree and a two-year Diploma in Primary Education Program. In addition,

the institutional contractor (IC) was to help strengthen the capacity of the MOE, in cooperation with UB, to organize and implement effective inservice programs for supervisory staff and head teachers involved in primary education. Through close cooperation involving the MOE, UB, USAID, and the IC, a Department of Primary Education in the Faculty of Education was created, and a BEd and Diploma of Primary Education (DPE) were put in place. The first twenty degree graduates have been assigned as tutors in the PTTCs or as education officers (EOs) in the MOE to serve in the districts. Diploma graduates, thirty so far, have been assigned mainly as head teachers in the primary schools.

To date, the inservice activities of PEIP I have proceeded on target or exceeded the output levels set in the original project proposal. The inservice teacher education program has increased from the training of ninety teachers and twenty-seven education officers in the first two years to training 1200 teachers in sixty schools during the fourth year of the project.

Despite the vigorous efforts in the inservice education of primary teachers, 80% of the primary teachers have not been reached. Therefore, the training of the current cadre of teachers is crucial to the improvement of quality primary education, the upgrading of those teachers, and the preparation for larger numbers of students who will be able to transfer from primary to junior secondary schools under the new nine-year plan of basic education.

G. DESCRIPTION OF PROJECT: The project will support the GOB's efforts to improve the quality and efficiency of its rapidly expanding basic education system. The project will improve teacher education by enlarging and improving preservice and inservice programs established under the predecessor, PEIP I (633-0222). Phase II of this activity will also establish a Master of Education degree with a primary education specialization at UB and develop an improved or revised curriculum to be used by the PTTCs.

Ohio University, which provided technical support for Phase I of the project under a collaborative assistance mode contract, after open competition, participated in the design of Phase II. It will also assist in implementation, subject to satisfactory contract amendment negotiations, under a second collaborative assistance mode contract.

Technical assistance services will include support for developing teacher education curriculum, institutionalizing UB's Bachelor's and Master's level primary education programs, working with faculty and graduate students in research design, and expanding the inservice teacher training network through fourteen centers to reach all of Botswana's primary school teachers. The number of primary education degree and diploma graduates each year at UB will be increased by almost 70% by the end of the project. Inservice teacher training, which now reaches about 120 primary schools, will be extended to the 518 primary schools, which currently exist. Project-funded participant training to the Master's and post-Master's levels will prepare Botswana educators to implement the project and carry on its activities upon the departure of the technical advisors.

The GOB and USAID will fund the construction of three regional education centers to carry out teacher training and the construction of a student

hostel and an addition to an existing Primary Education Center, both on the UB campus, to accommodate the UB's expanded primary education programs. Commodities and equipment will be purchased for the PTTCs, the three education centers, and the Primary Education Center (PEC).

H. SUMMARY OF FINDINGS: Project analyses indicate that PEIP II is technically feasible. PEIP II will provide an activity that will be highly efficient in the use of already established structures for cooperation, and built upon widely accepted assessment of needs and recent experience of successful accomplishment. The objectives of the project are based upon a rationale which was proven, through the experience and outcomes of PEIP I, to be appropriate to Botswana as a valid framework for collaborative effort. As PEIP II moves from the BEd to the MEEd program development, from curriculum development in the primary schools to a focus on curriculum development in the teacher training colleges, and from inservice for primary teachers to inservice for teacher educators, the early pattern of close collaboration among all concerned segments of Botswana education will be maintained and strengthened, where necessary.

The assessment of the distribution of the social benefits of the project indicate that the social consequences will be strongly positive. The Initial Environmental Examination (IEE) of the project identified no issues requiring further environmental study and recommended that a Negative Determination be made. This recommendation was approved by the Africa Bureau. The Cost Estimates and Financial Plan and the Engineering Analysis concluded that project planning was adequate and the costs were reasonably firm, thereby satisfying the requirements of Section 611 (a) (1) of the Foreign Assistance Act, as amended. The Administrative and Management Analysis detailed the project's implementation responsibilities and concluded that effective means of coordination will be established and maintained among the project implementors.

The base case economic analysis estimated the benefit/cost ratio at 1.84 and the internal rate of return (IRR) of the project to be 22 percent. A more conservative estimate of project benefits yielded a benefit/cost ratio of 1.27 and an IRR of 15 percent. The key to the project's economic viability is a reduction in dropout and retention (repetition) rates and a maintenance of Standard 7 pass rates. The Cost Estimates and Financial Plan also demonstrated that the GOB is in a position to absorb the recurrent expenditures, which result from the project investment.

I. PROJECT ISSUES: All issues raised in the AID/Washington guidance cable (ANNEX A, STATE 132382) have been addressed in the Project Paper (PP). An issue which arose during PP design is cited below:

External Developments That Could Adversely Affect Project Impact It should be recognized that other developments in the education sector during the course of PEIP II may affect the efforts to strengthen preservice and inservice programs for teacher educators. The Diploma program at the Molepolole College of Education may attract some of the better qualified graduates of Form V away from the Primary Teaching Training College (PTTC) Certificate programs. If the Junior Secondary Teacher Training program moves to become a degree program in the near term, it would present attractive options to qualified Batswana, who might otherwise pursue a career in the primary field. These prospects, and the continuing surge

of primary enrollments, may take a toll on the efforts to reduce the cadre of untrained teachers and to localize the professional staffs in PTTCs and education centers with the graduates of the BEd and Diploma programs in primary education.

J. WHETHER SMALL, DISADVANTAGED AND WOMEN-OWNED FIRMS HAVE BEEN CONSIDERED: The Contracting Plan found in Section VII complies with this requirement.

K. WAIVERS REQUESTED: A waiver is requested for commodities changing Source/Origin from AID Geographic Code 941 to AID Geographic Code 899. This waiver is justified in Annex K and is included in the Draft Project Authorization.

A waiver requesting a determination from the Assistant Administrator for AID's Bureau for Africa that color television tubes be eligible for procurement under PEIP II was submitted to AID/W through GABORONE 0396. Color television tubes are generally considered luxury goods and normally ineligible for procurement. Such a determination was made as cited in STATE 109152.

L. MAJOR CONDITIONS PRECEDENT AND COVENANTS: Conditions Precedent and Covenants address construction activities, the establishment of a Department responsible for Teacher Education within the MOE, the availability of (1) Batswana counterparts, (2) candidates for long-term training (and teaching replacements for them) and (3) UB Faculty of Education staff to work on non-teaching activities, and necessary human, physical and financial resources for strengthening teacher education (including a staffing plan for education centers). They are detailed in Section XI.

-v-

M. PROJECT TEAM:

Ann M. Domidion, Project Manager,
HRDO/USAID/Botswana

William S. Elliott,
Project Development Officer,
USAID/Botswana

Laurie Mailloux, Social Scientist,
USAID/Botswana

Frank Method, Education Policy Analyst,
AID/Washington

David Evans, Human Resources Economist,
AID/Washington

Gary Bisson and Edward Spriggs,
Regional Legal Advisors,
USAID/Swaziland

Laura McGhee,
Regional Contracting Officer,
REDSO/ESA

Pushkar Brahmhatt, Regional Engineer,
REDSO/ESA

Bruce Stader,
Regional Commodity Management Officer,
REDSO/ESA

Ohio University Design Team
Albert Leep
Milton Ploghoft
Max Evans

and

in collaboration with officials
from the GOB's Ministries of
Education and Finance and
Development Planning and the
University of Botswana

II. PROJECT BACKGROUND

A. Introduction

The Republic of Botswana, which until Independence in 1966 was the Bechuanaland Protectorate, occupies 582,000 square kilometers and lies at the center of the Southern African plateau at a mean altitude of 1,000 meters above sea level. In non-drought years, the average annual rainfall is only 538 mm and is both erratic and unevenly distributed. Moderately severe droughts occur every few years, and major droughts are believed to follow a twenty year cycle.

For eighty years, Bechuanaland was a British Protectorate. An administrative system termed "parallel rule" permitted a modified form of traditional chieftainship to control internal tribal matters, while the British administration, headquartered in Mafeking, controlled all external affairs.

Western formal education was introduced into Bechuanaland during the first half of the last century by the London Missionary Society. Early schools were limited almost entirely to the primary cycle. It was only after World War II that the rudiments of internal social services were developed. In 1957 there were only 166 primary schools in Botswana, with 29,000 pupils. At Independence there were 251 primary schools with a 72,000 enrollment and nine secondary schools with approximately 1,600 pupils.

Thus, Botswana began her nationhood under many severe handicaps, the principal one being the previous years of benign neglect. Nevertheless, the economy expanded markedly in post-Independence years. Economic growth vastly exceeded expectations and resulted in a Gross Domestic Product (GDP) which increased during the 1970s at an annual rate of 25% in nominal terms, and approximately 12% in real terms. Buoyant growth continued during the first half of this decade, averaging about 9% per annum (in real terms). This fortunate situation was attributed primarily to favorable returns from large mining investments. Botswana's mineral-led growth was also complemented by an unprecedented expansion in the cattle industry, which increased foreign exchange revenues. Similarly, progressive policies that encouraged an open market system resulted in a rapid expansion of Botswana's private sector.

During the past two decades, fundamental structural changes occurred in Botswana's economy, changes that mirrored growth patterns: agriculture's share of GDP (in current prices) declined from 45% in the 1960s to 7% in 1983, while the mining sector grew from 1% to approximately 30% of the GDP during that time period. Correspondingly, sectors that complemented and supported the mining and beef industries experienced vigorous growth. Manufacturing, water and electricity, transport, and services grew at an average of 10% or greater from 1973 through 1982.

This successful economic transformation was not without its dark side. Neither the mineral sector, the cattle industry nor the newly emerging private sector could provide sufficient jobs to keep pace with Botswana's growing number of unemployed. Present and future manpower projections indicate that the uneducated, the unskilled and individuals with low levels of education far outnumber available jobs within the country. Conversely, the change in the economy dramatically increased the demand for better educated and skilled employees, a requirement that far exceeds the available

citizen labor force. Today, Botswana is confronted with a long range challenge to create employment and to overcome manpower imbalances in the economy.

Sustainable employment growth is a function of buoyant economic development. To obtain the latter, access to skilled workers, technicians and managers is one of several prerequisites. Further growth for Botswana, growth which has the potential to generate employment, is in part contingent upon meeting the manpower requirements of the country. A well-designed basic education program is requisite for the preparation of all students whatever employment they attempt to find in the labor market.

B. Primary Education in Botswana

Since Independence in 1966, the Government of Botswana has viewed primary education as a high national priority with a continuing emphasis upon the improvement of quality and the extension of access to primary education to all the children of the country. Illustrative of the efforts to increase access was the enrollment of almost 210,000 pupils in the primary schools in 1984 compared with 116,000 in 1975 and 72,000 in 1966.

To make possible this extension of educational opportunity, the GOB undertook to increase the number of schools, classrooms and teachers to the necessary levels. Between the years 1975 and 1984, the number of primary classrooms was more than doubled, from 2000 to 4600. During that period the number of primary schools was increased from 323 to 512.

Efforts were increased in primary teacher training during the 1975 - 84 period, the number of students in training at the three colleges growing from 489 to 999. In 1985, a fourth primary teacher training college was opened at Tlokweng with a projected enrollment capacity of 300.

The greatly increased effort by the GOB to make primary education accessible to all children has resulted in 85% of the nation's children having enrolled in Standard I before the age of 8. This success in extending access to all children has complicated the situation with respect to shortages of classrooms and the number of double shift classes. In 1984 there was reported a shortage of nearly 1850 classrooms and the existence of about 1500 double shift classrooms.

Reports of educational statistics do not identify the incidence of outdoor classes created by the classroom shortages. It should be noted that the shortages and double shifts are much more serious in North West and Central Districts than in those districts in the eastern parts of the nation.

C. Retentions and Dropouts

Certain problems persist in any educational system, and the Botswana experience is not atypical. Dropouts and repeaters are continuing concerns that seem particularly significant when the resources that are available are limited. For example, in 1984 there were more than 12,000 repeaters in Standards 1 - 7 with highest frequencies occurring at Standards 4 and 7 at the completion of which examinations are set. Although the Standard 4 Attainment Test is really for diagnostic and remedial purposes, it is often used as a regular examination by teachers who do not understand the test's real function. Such a situation poses obvious questions relating

to the potential benefits that could be realized from emphasis upon earlier formative evaluations which could point to instructional intervention.

Of equal importance is the question regarding the demands placed on the primary teaching force to deal with repetitions at these two pressure points. Interventions to deal with learning deficiencies in language development and arithmetic are most appropriately placed at the earliest possible levels before the learning deficiencies become aggravated and compounded. (See Charts 1 and 2, Annex H.)

The matter of dropouts, reported to be nearly 5,000 for all seven standards for the 1984 period, appears to be moderate, given the total enrollment. However, when it is noted that 60% of such dropouts occur at, or before, Standard 4, there are implications for the basic functional literacy so essential in the work place today.

D. Over Age and Age Range

Factors of over age and the age range of pupils at each standard hold definite relationships to the complexity of the teaching situation. In those respects, the GOB has made important progress since 1966 when more than 65% of the pupils in Standard 1 were 8 years or older. In 1984 the median age of Standard 1 was 7 years 9 months. In Standard 7, the median age of pupils was 16 years in 1966, whereas in 1984 it was 14 years 2 months with less than 20% under the age of 14 years. The age range of pupils in Standard 7 in 1984 extended from 10 years to 17+ years with 1/4th of all Standard 7 pupils age 15 and above and more than 1/3 of them under age 13.

In addition to the increased complexities posed by such ranges in age, there is the question of appropriate social development within the classroom context, especially with respect to the occupational concerns of older pupils in Standard 7. This may be of particular interest in view of the fact that the percentage of pupils who pass the Standard 7 examination has declined over the years from 84% in 1966 to 76% in 1975 and, finally, to slightly less than 72% in 1985. The number sitting for their examinations, rose from slightly less than 5000 in 1968 to 14,000 in 1975 and, finally, to 30,780 in 1985.

As the GOB moves to implement the nine year plan for basic education, the tying of education efficiency and desired outcome solely to examination pass rates will become a question of great import. Career guidance, special education and consideration of basic competence are topics that have been identified for continued study which should be related to the problems cited here.

E. Teacher Education

The preparation of teachers for the primary schools has been the object of continued concern by the GOB. The three older teacher training colleges (Lobatse, Francistown, Serowe) increased enrollments from a total of 489 in 1975 to 999 in 1984. A new primary teacher training college (PTTC) was opened at Tlokweneng in January 1985. The primary teaching force grew from 3900 in 1976 to 6794 in 1984. The number of untrained teachers

was nearly 2000 in 1985 compared with 1400 in 1976,¹ but the percentage of the untrained remained near 30%, due in large part to the sharply rising demand for teachers as school enrollments jumped from 116,000 to 210,000 pupils. It might be observed that significant progress has been made in the teacher education sector; otherwise the situation would have been much worse in respect to untrained teachers. (See Table 1, Annex H.)

During the period just covered, the three teacher training colleges saw little change in the character of their faculties in respect to nationality and qualification. In 1984 there were 33 Botswana faculty members compared to 36 non-Botswana.

F. GOB and USAID Efforts

The GOB and USAID, through a technical assistance contract with Ohio University, in 1981 undertook a Primary Education Improvement Project (PEIP) to establish a capacity within the University of Botswana (UB) to provide preservice training through the creation of a four-year bachelor of education degree program and a two-year diploma program. In addition, the IC was to help strengthen the capacity of the Ministry of Education (MOE), in cooperation with UB, to organize and implement effective inservice programs for supervisory staff and teachers involved in primary education.

Through close cooperative activity involving the MOE, UB, USAID and Ohio University, a Department of Primary Education was created and a bachelor's degree program and a diploma program were put in place. The first 20 degree graduates have been assigned to PTTCs and to the MOE. Diploma graduates have been assigned mainly to head teacher positions in the primary schools of Botswana. An important part of the effort to establish a permanent capacity for providing preservice training in the UB was the training of participants in the U.S. to return to positions on the UB Faculty. As of April 1985, 11 participants had departed for such study. Currently, nine returned participants have taken up lecturer positions in the Faculty of Education at the UB, seven in the Department of Primary Education.

To date, the inservice activities of PEIP I have proceeded on target and, in some instances, exceeded the output levels set in the original project paper. The inservice teacher education program has increased from training ninety teachers and twenty-seven education officers in the first two years to training 1200 teachers in sixty schools during the fourth project year. Workshops for education officers (EOs) and regional education officers (REOs) have dealt with topics, such as the Botswana Teacher Competency Model and supervisory techniques.

Twenty-four workshops were held for all head teachers of primary schools during 1984/1985, dealing with the teacher competency model. Three workshops on the topic of guidance and counseling were held for the four teacher training colleges, and four orientation sessions have been conducted for principals and staff of the PTTCs on the topic of professional evaluation of teacher training institutions.

¹These teachers were serving without preservice, inservice, part-time or long-term training.

Despite the vigorous effort in the inservice education of primary teachers, less than 20% of the primary teachers had been reached by the end of the fourth project year. Part, but not all, of this shortfall in training is due to the increasing demand for teachers, which grew from 5140 in 1980 to 6794 in 1984, and to the fact that the number of PTTC graduates, which was 461 in 1984, has not matched the annual wastage and the increased demand. At the time of the development of the original PEIP project paper, it was calculated that 580 new teachers would be forthcoming from the PTTCs by 1984 and that the total teacher demand would be approximately 300 less than it actually was in 1984.

During the first four years of PEIP I, the Department of Primary Education of UB was established and developed with the support of Ohio University team specialists in Mathematics/Science, Reading/Language Arts, Social Studies, Administration/Supervision and English as a Second Language.

By the 1984-85 academic year, Botswana lecturers had returned from Master of Education degree (MEd) studies in the U.S. to fill positions in Math/Science, Reading/Language Arts, Administration/Supervision and Social Studies. These Botswana lecturers have, also, accepted responsibilities in the area of inservice education of primary teachers.

An inservice specialist on the contract team has continued to work in the MOE Inservice Division, and during the 1984-85 period has assumed the duties of the position of Inservice Leader in the MOE in the face of a long standing vacancy there. An important aspect of the inservice program was the development of a "spin-off" strategy whereby teams of EOs, head teachers and senior teachers in targeted schools would undergo inservice training in specific areas, such as mathematics, and then would provide inservice workshops to one or more primary schools nearby. Through this multiplier effect, many more teachers have been reached than would have otherwise been possible. PEIP evaluative studies of the "spin-offs" have shown that results are slightly lower for teachers who receive "spin-off" workshops, but the differences between PEIP staff workshop results and "spin-off" results were not statistically significant.

G. Junior Secondary Education Improvement Project (JSEIP)

A further collaborative effort between GOB and USAID launched in April 1985 is designed to strengthen the programs in junior secondary schools, to expand/improve inservice teacher education throughout the nation and to support the activity of the new College of Education at Molepolole which will prepare teachers for the junior secondary schools. The transition of the present 7-3-2 system to 7-2-3 and finally to a 6-3-3 system and the development of an integrated basic education program of nine years call for close articulation between PEIP and JSEIP, both in the designing of teachers college curriculum and in the coordinated use of new and existing education centers in the inservice offerings to teachers, head teachers and education officers throughout Botswana.

III. PROJECT RATIONALE

The Primary Education Improvement Project, Phase II (PEIP II) conforms with Botswana's National Development Plan 6, (NDP 6), USAID/Botswana's Country Development Strategy Statement, (CDSS), AID's Education and Human Resources Policy, and the AID/Africa Bureau's Basic Education and Technical Training Assistance Strategy Paper.

22-

A. Relationship to Botswana's National Development Plan 6, 1985-1991

A major educational goal of the GOB for the remainder of the decade is to increase access to and improve the basic education system, consisting of nine years of schooling. This decision involves a net increase of two years in Botswana's basic education system. The strategy for this expansion involves improving the quality of education throughout the cycle, making the curriculum of the system more relevant to workforce requirements and reducing inefficiencies in the utilization of resources within the system. Botswana has attained nearly universal access to primary schooling (seven years) with a participation rate of 85%. The completion rate for primary education is 89%. A major revision of the primary school curriculum has been completed, introduced into the schools, and partially tested to upgrade the quality and relevance of the studies to prepare the increasing numbers of primary school leavers (Standard 7) to enter Form I. Among the GOB's educational priorities in NDP 6 is the achievement of universal access to primary education during the Plan period; this will necessitate the building of more hostels and staff quarters on the sites of primary schools in the remote areas of Botswana where schools and formal education are not yet available. Improving the quality of the teaching-learning situation has become a major priority under the Plan through the inservice training of all primary teachers in the implementation of the newly revised curriculum. An annual increase of 3.5% of recurrent spending is estimated by the GOB under NDP 6 to support primary education.

PEIP I has been instrumental in helping the MOE to improve the preservice and inservice education of education officers and head teachers, working with the Curriculum Development and Evaluation Unit on primary curriculum panels, introducing/re-enforcing the revised curriculum in regularly scheduled workshops and preparing a select number of experienced primary head teachers and education officers to become tutors in primary teacher training colleges and key officers in the MOE, respectively. PEIP II will continue, as before, but expand its scope of work to include revision of the curriculum in the PTTCs, the upgrading of the Department of Primary Education (DPE) at UB from BED to MEd level, and participation in the setting up of a network of primary inservice education which will eventually involve all 518 primary schools. The activities under PEIP II will follow the primary education priorities under NDP 6 very closely.

B. Relationship to USAID/Botswana's Strategy Statement

USAID/Botswana's two interrelated program goals are to increase income opportunities and the supply of trained manpower equipped to participate productively in the public and private sectors of the economy. The strategy has three objectives:

1. To improve the quality and efficiency of the primary and post-primary education systems to better meet projected workforce requirements;
2. To provide advanced training for administrators and technical personnel to help increase and diversify employment opportunities;
3. To strengthen selected institutions which are directly responsible for increasing agricultural and off-farm productivity and incomes in the rural areas.

While PEIP I is already addressing the first strategic objective through inservice teacher education and helping to localize lecturers at UB, it has been able to reach only one-fourth of the existing primary schools and train only 30 teacher educators per year, thus creating a need for a follow-on project. Further program expansion of UB's Department of Primary Education and its continued localization are also deemed necessary.

Phase II of PEIP is therefore required to set up a graduate level degree in primary education at UB to ensure the inservice upgrading of key personnel in the MOE and the PTTCs. With the additional training of lecturers in the Faculty of Education to the doctoral level, the Department of Primary Education will be effectively localized. With the formation of a network linking 14 education centers under PEIP II, the existing primary schools will be reached.

C. Relationship to AID and AFR Education and Human Resources Policy

AID's education and human resources policy is outlined in the December, 1982 Policy Paper, Basic Education and Technical Training. This paper states that AID will focus on increasing (1) the efficiency with which education resources are used, (2) the quantitative and qualitative outputs of education and training investments, and (3) the effectiveness of the education and training systems in supporting economic and social development objectives. It notes that priority attention will be given to improving the efficiency and distribution of existing basic education and skills training systems. The same policy objectives and their strategy implications for the problems of Africa are discussed in the Africa Bureau Basic Education and Technical Training Assistance Strategy Paper of March, 1984.

Both the AID Policy Paper and the Africa Bureau Strategy Paper emphasize the importance of taking an integrated approach to the resolution of key problems affecting the efficiency and effectiveness of basic education systems. The Africa Bureau Paper stresses the importance of sector assessments in assisting Missions to identify key constraints and project interventions to assist developing countries to overcome them. In line with the Bureau's strategy, USAID/Botswana and the GOB conducted, in late 1983, a comprehensive Botswana Education and Human Resources Sector Assessment (BEHRSA), which identified, as a major problem, the growing number of primary school graduates who do not have the requisite knowledge and skills for further education, training or employment while shortages of secondary graduates persist.

Since no specific recommendations were made in the original Assessment for the improvement of the basic education curriculum, the BEHRSA Update (Draft) of May, 1985 devoted an entire chapter to the current curricula to include nine years of basic education, the necessary criteria with which to guide decisions, the organization or structure of the curricula, the methodology to be used and evaluation. The teacher education chapter was updated to reflect more recent changes and needs arising from the nine-year basic education expansion to be inaugurated in January, 1986.

The USAID/Botswana education and human resources strategy highlights the importance of improving the efficiency and effectiveness of the basic education system starting with improvements that can be made in the education currently offered by primary schools. There is a need to increase the number of primary classrooms, expand the inservice training of teachers,

and teach practical knowledge and skills necessary for future employment. As indicated in the AID Basic Education Policy document, investments which improve existing systems realize the highest marginal returns. PEIP I has for four years worked toward the upgrading of preservice and inservice education; PEIP II will complete the cycle of reform.

D. Overview

Progress under the PEIP project has been periodically assessed by a permanent PEIP Advisory Committee, supplemented by USAID, semi-annual reviews and regular external evaluations. USAID and the principal GOB participants in these reviews (i.e., U.B., Ministry of Education, Unified Teaching Services and the Ministry of Finance and Development Planning) have concluded that an additional five years will be needed to assure the continued and sustained improvement of the quality of primary school teaching and administration. The principal reason for the proposed Phase II project is to further institutionalize the preservice and inservice programs initiated under PEIP I and permit their orderly expansion to meet country-wide needs. New needs to be addressed by PEIP II result from (1) the rapid expansion of primary school enrollment and the consequent need to upgrade the qualifications of more teachers, (2) recent policy decisions leading toward the integration of primary and junior secondary schooling into a nine year basic education program and (3) some gaps in the institutional system which became apparent as PEIP I evolved and which now need attention. These factors are discussed in more detail below.

E. Expansion of the Primary School System

Enrollment increased by approximately 67% during the 1976 to 1984 period, from 125,500 to 209,345 pupils. Enrollment will continue to expand at about 10% per annum over the next five years. The training of teachers, head teachers, teacher trainers, education officers, and supervisors has not kept pace. Of the approximately 6,800 primary school teachers, about 30% are untrained. Only 461 teachers graduated from the three primary teacher training colleges (PTTCs) last year. While a fourth PTTC was recently opened with an enrollment of 162, the project output of teacher graduates will not be sufficient to significantly ameliorate the problem of unqualified¹ teachers until 1991 at the earliest. Inservice education is the most effective means to address this problem in the short to medium term. The current inservice program, initiated in 1981 under PEIP, has reached 124 of the 518 schools, and nearly 20% of the teachers. Clearly this effort must be expanded in order to capture the several thousand inadequately trained primary teachers in 518 schools.

The PEIP project set up the preservice training program which now produces approximately 20 Bachelor of Education (BEd) graduates per year to teach in the PTTCs and serve as EOs to replace expatriates and ten Diploma of Education (DPE) graduates per year to fill posts as head or senior teachers

¹An unqualified primary teacher has not attended the two-year PTTC program and passed the Certificate examination. See Annex H for definitions of trained and qualified teachers.

in primary schools. This output will have to increase from 20 to 35 (BEd) and 10 to 15 (DFE) yearly by 1990 to address teacher training requirements adequately.

The larger increase in enrollment in the BEd program will help to localize the PTTCs whose staffs are currently 50% expatriate. The proposed preservice program under PEIP II will increase student intake, consolidate and refine the systems established under PEIP I, and introduce a master's level educational component to meet these increased demands. Similarly, the inservice program will have to be expanded under PEIP II to reach the bulk of untrained teachers nationwide. This proposed consolidation and expansion of preservice and inservice activities will require a limited amount of additional facilities, and a slightly modified mix of technical assistance and participant training than that provided under PEIP I. This proposed mix will address certain gaps identified in Phase I of the PEIP project and is responsive to new GOB program and policy initiatives in basic education.

F. Gaps in the Institutional System and New Policy/Program Initiatives in Basic Education

In its Executive Summary, the Botswana Education and Human Resources Sector Assessment (BEHRSA), June 1984, recommended that the GOB "raise the instructional skills of (primary) teachers trained at the PTTCs, evaluate and improve the inservice teacher training program, improve and expand radio support for direct instruction and inservice teacher training (distance teaching in remote areas)." (p. 1-26) The PEIP BEd preservice program is the principal vehicle for the provision of trained Botswana tutors in the PTTCs. The longer term development of this program is dependent on Botswana's in-country capacity to increase and improve the quality of the University's Primary Education Department faculty. A Master's of Education Degree program was introduced at U.B. in 1981, principally to meet the requirements of the secondary school system. At present, there is no Master's level specialization in primary education, thus limiting in-country capabilities to further develop personnel needed for UB's Primary Education Department and high level administrative and management posts in the primary education field. This gap will be addressed through the participant training and technical assistance proposed under PEIP II.

Newly revised primary school curricula are now being used after initial field-testing and feedback; it is essential that preservice and inservice programs move quickly to help primary teachers use the revised curricula. Their curricula are also the bases for the development of revised junior secondary school curricula which will be addressed under the Junior Secondary Education Improvement Project (JSEIP). The new curricula are placing increased demands on the PTTCs, which must revise their curricula, accordingly, to train teachers in the use of the new primary school curricula. To date, the PEIP I contract team has only advised on primary school and PTTC curricula development on an informal basis since such assistance was not contemplated under PEIP I. The importance of PTTC curriculum development to improved teaching, the current weakness of PTTC curricula and the complexity of integrating primary and junior secondary school curricula under the recently expanded GOB basic educational system are factors which led USAID and the GOB to include assistance in this area under PEIP II.

In its chapter on Primary Education, the BEHRSA emphasized that "the education centers, in coordination with existing inservice programs and PEIP, offer an excellent opportunity to consolidate efforts to improve teaching skills of qualified and unqualified teachers in the system" (page 4-56). As noted previously, the inservice training program is in a more incipient stage of development than the preservice program. Inservice training, however, offers the greatest potential, in the short-term, for upgrading the quality of teaching, given the predominance of unqualified teachers now serving in the system. The program has reached only 1,200 of the primary teachers and must be expanded as rapidly as possible while maintaining adequate controls, accountability and methods for evaluating the progress of teachers, head teachers, and local education officers. The task is further complicated by the need to familiarize teachers with the new primary school curricula. More concentrated technical assistance is proposed under PEIP II for the management and implementation of this program. Of equal importance to the expansion of inservice training is the further development of the regional educational training centers' network which provides the material resources and facilities necessary for decentralized training. These facilities are also shared for junior secondary inservice training. Under PEIP II, the construction of three centers is proposed to complete the infrastructure requirements of the nationwide, inservice teacher training network.

In its working linkages with the Junior Secondary Education Improvement Program, PEIP II will seek to address the problems associated with the move to a nine year basic education program, a program that is intended to alleviate some of the high unemployment rate of primary school graduates. The surplus of such graduates and the shortage of junior secondary school leavers, discussed in the Country Development Strategy Statement, Botswana, FY 1985, (AID), points to the need for the preparation of teachers who are capable of dealing with teaching techniques and materials that are more realistically geared to the manpower needs and employment opportunities of the nation.

PEIP II will respond to the GOB concerns for improvement of primary education as expressed in the National Development Plan 6, December 1985, which identified 1) graduate programs for PTIC tutors, 2) the creation of a delivery system for inservice education based on needs assessment, curriculum development and management of education centers, and 3) the training of head teachers and other educational administrators in educational management. In later sections of this project paper, the anticipated outcomes will be seen to be directly related to these GOB concerns.

IV. PROJECT DESCRIPTION

A. Project Goal

The goal of this project is to increase the access, efficiency and relevance of primary education in Botswana.

The high priority which the GOB has assigned to basic education is reflected in plans to provide nine years of schooling for all youth by the mid-1990s and to increase the numbers of qualified teachers and classrooms to meet this need. Evidence of the success of the GOB in moving toward the achievement of this long-range goal is reflected in the fact that in 1984

some 85% of children 7 to 13 years of age were enrolled in primary education¹ and that the percentage of untrained teachers at the primary level was reduced from 41% in 1977 to 31% in 1984.² Inasmuch as the project addresses itself to the need for increasing the quality and quantity of qualified teachers and the establishment of an on-going system for upgrading programs and instruction, the availability and effectiveness of education will be affected.

Measures of goal achievement include increased numbers and percentages of primary school age children attending primary school (i.e. lower dropout rates), lower retention (repetition) rates and increased scores on the Primary School Leaving Examination. The benefits resulting from these achievements are discussed in Section X.B.

B. Project Purpose

The purpose of the project is to strengthen the capacity of the Ministry of Education (MOE) and the University of Botswana (UB) to organize, revise and implement effective preservice, inservice and curriculum programs for primary teacher education. There are four elements which fall within the purpose of this project:

1. To establish in UB the permanent capacity to provide appropriate graduate training in primary education;
2. To expand and improve the preservice primary education training at the University of Botswana (UB) in both the four-year professional Bachelor of Education degree program and the two-year Diploma in Primary Education program;
3. To establish an institutional network for providing inservice education;
4. To coordinate and assist in the evaluation, revision and implementation of PTTC curricula appropriate to the training needs of primary teachers.

The elements set forth here are interrelated and reflect the need for inter-institutional cooperation.

Both preservice and graduate education of PTTC tutors and other educational leaders are primarily the responsibility of UB. An element of this responsibility is one of providing for an increased annual intake of both BEd and Diploma students from 20 to 35 BEd and 10 to 15 DPE, respectively, yearly and the development of the Primary Education Specialization under the MEd program at UB. A majority of the BEd and MEd (Primary) graduates will join the staffs of PTTCs, and the remainder will assume roles of educational

¹At the Service of the Nation, 1984 Annual Report of the Ministry of Education, Page 5.

²Ibid., Page 6.

responsibility as directors of education centers, education officers or serve in MOE main office positions. These are deemed to be the most critical spots for university-educated Batswana to upgrade the national primary education network.

Inservice education is primarily the responsibility of the MOE with the support of education centers and staffs of PTTCs and UB. The establishment of a network to reach all primary teachers will be pursued through the development of an interrelated system for inservice training, utilizing the linkage among MOE divisions, education centers, regional education officers, and PTTCs with support of the Faculty of Education at UB. Such a network will include all dimensions of the educational system and thereby reach all primary schools to make efficient use of the country's educational resources and provide a communication linkage among different levels of the educational structure.

The BEHRSA prepared in 1983 calls for an appropriate and common curriculum at all PTTCs. The achievement of this goal will require the cooperation of many groups and agencies under the direction of the proposed Department responsible for Teacher Education within the MOE. Curriculum development activities of the PTTCs will be pursued in a systematic manner which will begin with the staffs of PTTCs and involve appropriate curriculum panels, MOE officers, UB staff and the coordination and support services of PEIP II personnel. Throughout these activities, communication and collaboration with JSELP will be important since both projects are deeply involved in assisting in the preparation of teachers who are trained to meet the basic education needs of the country. These efforts will contribute to the development of PTTC training programs which meet the preservice needs of primary teachers and relate directly to the basic education programs of primary schools.

C. Specific Project Outputs

The outputs which are expected to result from the attainment of the project purpose are as follows:

1. Preservice

a. An established two-year Primary Education Specialization under the MEd Program at UB.

b. A gradual increase in the number of students taken in BEd and DPE programs at UB from the current number of 30 up to 50 per year in 1990 (from 20 and 10, respectively, to 35 and 15).

c. A professional, experienced staff of Batswana in the Department of Primary Education in which

(1) all members have the equivalent of an MEd degree, and some have earned doctorates in areas appropriate to department needs;

(2) a core of the staff have sufficient training and research experience to provide leadership in research activities pertinent to the educational needs of Botswana.

d. A core of staff at PTTCs sufficiently prepared to assume greater responsibility for the delivery of the Diploma in Primary Education.

2. Inservice

a. An established institutional network for the systematic inservice training of classroom teachers and head teachers in all the 518 existing primary schools and the inservice development of EOs and staff at PTTCs.

b. A cadre of resource persons experienced in the delivery of inservice programs.

3. Curriculum

a. A revised and operating core PTTC curriculum appropriate to the training needs of primary teachers.

b. An upgraded and more fully localized staff at PTTCs who are experienced in curriculum development and implementation.

D. Elements of the Project

The project will respond to several areas of critical need through an approach that will integrate technical assistance, participant training, commodity support and construction with existing resources and programs. The response is expected to result in a series of outputs supportive of the project goals. The project elements are described below and a proposed schedule of events spanning the entire life of the project can be found in Section VII.

1. Technical Assistance

An estimated 28 person years (py) of long-term technical assistance and 36 person months of short-term consultants will be provided to the MOE, UB and PTTCs in support of project activities through the assignment of the following U.S. contract team specialists and project evaluators:

- a. Supervision/Administration Specialist, 5 py
- b. Specialist in Primary Inservice Education (MOE), 5 py
- c. Math/Science/Teacher Competency Specialist, 3 py
- d. Social Studies Specialist, 2 py
- e. Primary Education Specialist, 3 py¹
- f. Research Methods and Design Specialist, 5 py
- g. Curriculum and Instructional Design Specialist (UB and PTTCs),
5 py
- h. Short-term Consultants (32 months)
- i. Project Evaluators (4 months)

¹Area of Specialization required will depend on Botswana counterpart selected for advanced training in U.S.

Each of the long-term positions listed is vital to the achievement of the outputs identified in the project. (See Annex I.)

The Supervision/Administration Specialist will serve as Chief-of-Party, assist with teaching and advising in the MEd program and oversee all elements of the project. He/she will also be Head of the Department of Primary Education, UB, a position which carries responsibility in the Faculty of Education for the different primary education programs.

The Specialist in Primary Inservice Education will be responsible for helping to develop the inservice education network in the education centers (EC). As the only full-time MOE advisor on the IC team, this specialist has essential duties linking Faculty of Education efforts with those of the MOE and the PTTCs in expanding primary inservice workshops throughout the country.

The Math/Science/Teacher Competency Specialist, Social Studies Specialist and Primary Education Specialist will help maintain the teaching capacity of the Primary Education Department at UB during the time that their Botswana counterparts are engaged in graduate programs in the U.S. These specialists will assist also with inservice and curriculum development activities. Each of these will depart from Botswana soon after the counterpart returns from post-master's study.

The Social Studies Specialist has a unique responsibility. Social Studies is a new component of the primary education curriculum, and there is an expressed need to define the nature of social studies education and determine the training needed to prepare social studies teachers.

The Research Methods and Design Specialist has a key role throughout the life of the project. In addition to teaching research methodology and other research related courses, he/she will work closely with other departments at UB to develop courses for the MEd (primary) program, serve on the Faculty Graduate Studies Committee and, in the latter capacity, contribute to the development of policies and procedures related to the MEd program. The specialist will be responsible for working with the primary education graduate students and the DPE staff in the areas of research methodologies, including the use of computers and statistics. He/she will also take the initiative in identifying and securing needed resources for use in educational research, especially for an MEd in Primary Education. While taking leadership in the development of the Primary MEd program, he/she will coordinate with the PTTCs and the MOE to help determine special course designs and needs. An essential task will be to weave the new Primary MEd specialization into the existing MEd program as effectively and harmoniously as possible.

Knowledge of needed and proposed educational research projects in Botswana will be essential in order to facilitate advising MEd students on topics for their own research. It is expected that the specialist will be an active member of the Botswana Education Research Association. This will enable him/her to assist in-country MEd students in their choice of research topics, pertaining to the educational concerns of Botswana, and in the selection of research methodologies and designs appropriate to those topics. The specialist will also be available to serve as a member of the faculty dissertation committee assigned to each MEd student.

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Particular attention will be given by the Research Specialist to assisting the post master's candidates both before their departure for study in U.S. universities and upon their return to conduct field research in Botswana. The Research Specialist will keep in close contact with the students in the U.S. both before and after the period of research activities in-country. In summary, the expert will supply the leadership needed for practical research in education in the areas of student/staff counseling, MEd course design and coordination.

The Curriculum and Instructional Design Specialist will be assigned to the Faculty of Education at UB and will spend 75% of the time assisting PTTCs in curriculum development and inservice activities. It is important that there be one specialist who provides the linkage between UB and the PTTCs and coordinates the curriculum development activities among the PTTCs. A person will be needed in this position for the five years of the project.

All long-term specialists with the exception of the Primary Inservice Education Specialist will join the UB's Faculty of Education and will assist in instruction for the MEd (Primary Education Specialization), BEd, Diploma and the inservice programs. U.S. Institutional Contractor (IC) specialists will have both preservice and inservice teaching-responsibilities and assist in curriculum development activities at PTTCs. The exact mix for U.S. IC specialists teaching at UB, teaching within the inservice workshops and assisting curriculum development at PTTCs, will vary. The "mix" over the life of the project is estimated to be 50% preservice and 50% inservice/curriculum development.

Short-term consultants will play important supportive roles in the overall primary education programs at UB, the PTTCs and the MOE. Thirty-two person months will be allocated for individual experts to work with regular staff in such areas as needs assessment, program evaluation, special education, guidance and counseling, materials production and distribution. (See Annex I.)

2. Participant Training

The project provides for a total of 12 long-term participants, distributed as follows: six who will pursue post-master's study in the U.S. and return to assume roles as primary education staff members in the Faculty of Education (UB); six who will study for the Master of Education Degree in the U.S. and will return to resume roles at PTTCs and in the Ministry of Education. In addition, there will be approximately four participants who will enroll in short-term courses of four to six months in the U.S. or in third world countries.

Planned fields of specialization for post master's programs for participants returning to Primary Education (UB) will be in areas, such as the following:

- a. Teaching English as a Second Language
- b. Reading/Language Arts
- c. Science Education
- d. Mathematics Education
- e. Social Studies Education
- f. Research Methods and Design
- g. Administration/Supervision
- h. Instructional Design Systems
- i. Curriculum/Instruction Development

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Planned fields of specialization for the MEd program for participants returning to PTTCs and the MOE will be in areas of specialization not available in the UB program. Likely areas of specialization will be in one of the following areas:

- a. Special Education
- b. Remedial Education
- c. Early Childhood Education
- d. Education Assessment and Management
- e. Teacher Education Administration
- f. Guidance and Counseling

Three of the participants to study under the MEd program are currently principals of PTTCs who need specializations in the management and administration of primary teacher training colleges. As an increasing number of BEd graduates of UB become tutors at the PTTCs, it will become necessary for the principals to have MEd degrees which are related to one or more of the six areas listed above. Since diploma programs may be transferred from UB to one or more of the PTTCs, it is essential that principals have the necessary expertise to backstop the training of head teachers and education officers in the two-year diploma program as well as the two-year primary teacher preservice program.

The other three participants to be scheduled under the MEd program in the U.S. are MOE officials who require graduate study in one or more of the six areas listed above, particularly in special education and guidance and counseling. Course work will begin for all six, if possible, in Botswana to save time away from their essential jobs. It is hoped that one calendar year in the U.S. will be sufficient for completion of the MEd degree. Short-term studies will be in fields such as planning, inservice education, curriculum development, test construction/development, supervision, and school broadcasting; all could be conducted in the U.S.

3. The Project's In-Country Training Program

a. Preservice

During the life of the project, six of seven long-term technical assistants for a total of 28 person years will join the UB Faculty of Education. Five of the specialists will devote 50% of their time to preservice and 50% to inservice/curriculum development. One specialist for five years will be assigned 25% of the time to preservice and 75% to curriculum development/in-service at the PTTCs. The assistance provided to the preservice programs at UB will make it possible to establish a two-year MEd program with a Primary Education Specialization which will prepare persons to serve in leadership roles in PTTCs and as MOE specialists. Plans for the program with appropriate UB approval are expected to be completed during the first year of the project, and the initial intake of four to six students is planned for 1987 with a second intake of six to eight students in 1989.

The assistance provided will allow six Botswana members of the Faculty of Education to depart on a staggered schedule for post-master's programs in the U.S. and return to assume roles as teachers in both the undergraduate and graduate programs and to provide leadership in guiding and conducting research at UB.

Three primary teacher training college principals will be trained to the MEd level in teacher education administration and supervision so they will be ready to manage the more complex programs designed for the PTTCs. Three other MOE officers will be trained in primary education in such areas as special education, guidance and counseling and primary teacher training.

The services provided by PEIP II will make it possible for the intake to the BEd and Diploma programs in Primary Education to be increased from 20 to 35 in the BEd and 10 to 15 in the Diploma program by 1990. Plans are underway for a review and possible modification of each of these programs to serve the needs of teachers in the planned expanded nine-year basic education program.

b. Inservice

The current inservice program, initiated in 1981 under PEIP I, has reached 124 of the 518 primary schools, and approximately 20% of the teachers. PEIP II provides the opportunity to develop a network delivery system under the direction of the Inservice Education Unit in the MOE, which will utilize the education centers in cooperation with PTTCs and the Faculty of Education at UB to reach the existing primary schools, EOs and the staff at PTTCs. Approximately 100 workshops will be offered during the life of the project.

Inservice training will be delivered through a network of fourteen functioning education centers located in twelve districts of Botswana. Each center will be assigned to work with one of the four PTTCs in the provision of inservice. The staff of the education centers, in cooperation with the affiliated PTTC, EOs and head teachers, will assess local, regional and national needs for inservice training for educators of the district and utilize resources from the region, PTTC staff, MOE, JSEIP, UB and PEIP II to deliver the program needed.

Operation of the network will require coordinating committees at the national, regional and district levels to plan and monitor the inservice activities. A fully functioning system will not be in place until a total of fourteen education centers are completed in 1990, staffed with appropriately trained personnel and organized to work closely with a PTTC and coordinating committees.

To assist with these efforts, PEIP II will provide a specialist in primary inservice education assigned to the MOE, commodities and the assistance of technical specialists assigned to UB but designated to provide service to both inservice activities and curriculum development activities at the PTTCs.

Although all elements necessary for a fully functioning network will not be in place at the beginning of the project, the development of the network can begin at the education centers which are functioning, and the model of operation devised can be used at other centers as they are constructed and staffed. Using this approach, the initial organizational/delivery activities will be at Lobatse EC/Lobatse PTTC, Tlokwen EC/Tlokwen PTTC, Serowe EC/Serowe PTTC and Maun EC/Francistown PTTC. (A description of education centers functioning for inservice is provided in Annex J).

PEIP I provided inservice training for the improvement of primary education by concentrating the attention on those persons who occupied leadership

positions at the school level. The head teachers, deputy head teachers and senior teachers returned from inservice to instruct the teachers under their direction and teachers in a neighboring school.

There will be a period of transition from the inservice plan used in PEIP I to the operation of a network system as described above. During this transitional period, PEIP II will continue to follow the inservice pattern established in PEIP I, which consisted of concentrating inservice training on selected school leaders and utilizing the multiplier concept to extend the benefits of improved teaching to a large number of pupils.

In December 1986, a workshop will be held in each region, four in all, at Maun, Serowe, Lobatse and Tlokweng. The participants will be Directors of Education Centers, EOs, PTTC Principals and representatives of the PTTCs' staff and selected head teachers. The purpose of the workshop will be three fold:

- 1) To explore the diversity among schools in the region;
- 2) To identify areas of most immediate need for inservice; and
- 3) To organize a one year plan for delivering inservice in one or more of the identified areas, utilizing resources of the PTTC, PEIP II, MOE and local personnel. The delivery plan would include (a) training for selected EOs, head teachers, deputy head teachers and senior teachers, (b) trial and follow-up activities and (c) spin-off workshops for neighboring schools.

At the end of the year, the regional group who met in December 1986 will meet again to assess the progress made and to plan the next round of activities.

In addition, during the first year there will be training workshops for EOs and Directors of Education Centers.

Where appropriate, in the first two years of the project, while the inservice network is getting underway, the PEIP II team will provide inservice training to selected groups of head teachers, deputy head teachers and lead teachers in areas pertaining to the primary school curriculum. In addition, attention will be given to the inservice needs of EOs and staff of the established education centers.

4. Curriculum Development at PTTCs

A major component of the project will relate to the revision and further development of a core PTTC curriculum. To achieve this project output will require both training and developmental activities that will utilize a systematic approach to curriculum development.

Curriculum review and development activities at the PTTCs will move forth on two fronts, both of which are interrelated but may be dealt with separately. The first gives primary emphasis to activities related to the identification of the characteristics of the "ideal" primary teacher. The Botswana Teacher Competency Model will be the vehicle used in initiating

activities on this topic. The second front devotes attention to activities related to the review of content syllabi and instructional materials, giving particular concern to the relevancy of the content and the appropriateness of the teaching materials to the needs of students.

The UB is responsible for the syllabi used within the PTTCs and therefore will participate in the curriculum review and development activities. However, the responsibility for curriculum review and development rests primarily with the PTTCs. Successful curriculum improvement begins with the direct involvement of those affected in the processes used and decisions made concerning those improvement efforts.

The curriculum development process will begin with the establishment of a PTTC Curriculum Development Coordinating Committee organized under the Board of Affiliated Institutions (PTTCs). This committee will need to have a wide representation of members drawn from UB (particularly from UB staff currently serving on curriculum panels), the principal of each of the four PTTCs, the MOE, the Curriculum Development Unit (MOE), the Chief of Party/JSEIP, the Chief of Party/PEIP and the Curriculum and Instruction Design Specialist (PEIP) who is assigned primarily to assist in curriculum development activities at the PTTCs. The initial charge to the committee will be to establish a work plan and a monitoring system which takes into account the need to accomplish the following:

- 1) To identify common areas of agreement among the PTTCs as to the characteristics of the "ideal" primary teacher in Botswana and the nature of content needed to prepare teachers with these desired skills, knowledge and attitudes;
- 2) To plan for inservice activities for the staffs of PTTCs which upgrade their abilities to undertake a systematic approach to curriculum review and design;
- 3) To develop a schedule of activities which takes into account the desire to develop an appropriate and common curriculum at all PTTCs and, at the same time, allows for some diversity among the four PTTCs;
- 4) To draw on the potential for research activities by MEd (PE) students and PTTC staff to generate data pertaining to the on-going activities;
- 5) To coordinate the examinations and moderation procedures with the revised curriculum; and
- 6) To build a review and curriculum evaluation procedure into the on-going process, using, as appropriate, elements of the "Model for the Professional Evaluation of the Teacher Training Colleges."

In addition, these plans should take into account the need for PTTCs to develop instructional materials which place content in the cultural context of Botswana and therefore can be related to more readily by Botswana students. To address this important need in a pilot effort, it is proposed in the third, fourth and fifth years of the project that one staff member from each PTTC who has the talent and interest be released from regular

duties at the PTTCs for four to six weeks to participate as a member of a writing team to develop instructional materials in an area of common need to all PTTCs.

During this period of reassignment, in-country replacements will be provided with GOB support to the PTTCs to assume the duties of the reassigned staff members. A short-term specialist (FEIP) will be provided each year to assist the writing team. The materials developed can be locally printed and distributed at cost.

These pilot efforts may provide suggestions for dealing with the continuing need to find instructional materials which are geared to levels of educational development and cultural experiences of PTTC students.

5. Commodities

The necessary commodities will be dictated by three major areas treated within the scope of PEIP II. These areas are (1) the establishment of the Primary Education Specialization under the MEd program and the increased intake of students into the BEd and DPE at the University of Botswana; (2) the need for additional materials and equipment to support curriculum development activities at the PTTCs; and (3) the requirement of a wide range of equipment, didactic and reference materials, for use in the various facets of the inservice education programs, including the provision of some materials to the new education centers.

The new primary specialization at the MEd level and the increased intake of primary education students at UB will require additional professional books and reference materials which pertain to these programs. The materials will be housed in both the University library and the Primary Education Center with most of the books, references and periodicals being placed in the University library when the construction of additional library facilities is completed. New equipment will also be required to update that provided by PEIP I and to support the increased research activities associated with the MEd program and staff development. See Annex K, AID's Commodity Procurement Plan.

6. Construction

The construction component of the project will consist of the following: three education centers, an enlargement of the Primary Education Center at UB, and a 108-bed hostel at UB. The three new centers will complete the network of education centers expanded under the JSEIP project. With an eventual 14 center network in place, the existing primary schools can be reached, including those in remote areas. The overcrowded situation at the PEC with the increase in the number of students in primary education has hampered the program. Three additional rooms will alleviate the problem. The 64-bed hostel, constructed under Phase I of PEIP, will prove to be inadequate for the expanded BEd and Diploma program, especially when MEd students are admitted, beginning in 1987, to the Primary Education program. Thus a larger hostel will be urgently needed to accommodate increases in student enrollment.

The Fixed Amount Reimbursement (FAR) procedure will be utilized with AID assuming 60% and the GOB contributing 40% of construction costs. The PEIP II contractor will have no responsibility for construction.

V. DEVELOPMENT ACTIVITIES OF OTHER DONORS

The donor community in Botswana has been making a concerted effort to combine human and financial resources, to communicate with one another to avoid redundant efforts and to work closely with the GOB to obtain the greatest return on funds allocated to education and manpower development. AID is the principal donor in primary education in Botswana. However, the Swedish International Development Authority (SIDA), in its Education Sector Support Grant #7, is providing ten million pula for a three-year period to continue its support and expansion of the MOE (Primary) Teaching Aids Production Unit (TAPU) in Francistown. Plans are also being made by SIDA to erect a building on the Radio Botswana compound to house the Primary/Secondary Schools Broadcasting Section of the Curriculum Development Unit to alleviate loss of time traveling to and from the radio station. SIDA will continue to support the school radio advisor for the next several years and help with distance education when the MOE is ready to begin such a program.

A new PTTC was completed under an IBRD loan at Tlokweng near Gaborone and opened in January, 1985, with 162 students. In the Fourth Education Project, November, 1985, IBRD will provide about five hundred classrooms and related facilities and provision for the production and distribution of the first editions of new textbooks and teachers' guides developed for the revised curriculum. The Africa Development Bank helped finance the College of Education at Molepolole which opened in March, 1985 with 170 students. AID has four contract advisors assigned to the college under JSEIP.

The United Kingdom, Sweden, Germany, Canada, Norway, Denmark, the Netherlands, and India have supplied teachers for the Primary TTCs as well as junior secondary schools. They have also arranged for the services of their nationals as heads of education centers, education officers and planning officers in the MOE until positions are localized. Expatriate personnel comprise about fifty percent of the staff of the PTTCs, education centers, and the UB.

Although national and multinational organizations, such as IBRD, have played very supportive roles in the development of education in Botswana, their efforts have concentrated on technical assistance for vocational/technical areas and secondary education and in capital assistance for primary and secondary school construction. In addition to the U.S., Sweden is probably the largest donor in primary education.

VI. COST ESTIMATES AND FINANCIAL PLAN

The total cost of PEIP Phase II activity is estimated to be \$10,748,000 over the proposed six year project; \$8,034,000 (75%) by AID and \$2,714,000 (25%) contributed by the GOB. Table I presents a summary of costs and a financial plan. This is followed by Table II which presents project inputs and costs by line item for each fiscal year of the project. Annex F.2. provides detailed cost estimates and an overall assessment of the financial procedures used by the GOB.

The basic assumptions made in preparing the budget include a compounded 5% annual inflation rate for goods and services procured in the United States and 10% compounded per annum inflation rate for goods and services purchased

in Botswana. In addition, a 5% contingency factor is used for all items except the construction component (10%) in the AID budget to cover unexpected changes in the estimated level of goods and services. Annex F.2. presents inflation rates and contingency factors used for AID financed goods and services. Contingency factor of 10% is employed for the GOB budget items to reflect fluctuating exchange rates in Botswana and the Republic of South Africa (RSA), and the uncertainty in costs of imported goods from the RSA, Botswana's major supplier. An exchange rate of one Botswana Pula equals U.S. dollar 0.55 is used in budget calculations.

The Financial Plan assumes that procurement of services for technical assistance, United States participant training and procurement of certain commodities will be under an institutional contractor. The USAID/Botswana Field Support Office will procure selected commodities and provide contractor support. All construction activities will be contracted to local firms by the GOB.

Procurement of goods and services requiring local currency will be handled by the GOB and will follow the Government's standard competitive procurement practices, which are managed by the GOB's Central Tender Board. The GOB will effect payment for locally procured goods and services and, wherever applicable, request reimbursement from USAID/Botswana for items that have been identified as an AID contribution to the project. Construction activities will utilize AID's Fixed Amount Reimbursement (FAR) procedures.

USAID/Botswana will maintain administrative control over funds for technical assistance, training in the United States and selected commodities. Project Implementation Orders for Technicians (PIO/T) and participants (PIO/P) will be issued to initiate contracts for these services. Listed below are the major project components and cost estimates for each item, less inflation and contingency factors.

A. Technical Assistance

The project will require 28 person years of long-term technicians and an estimated 36 person months of short-term consultants. This latter category will reserve four person months for the scheduled external evaluations and an audit, if deemed appropriate. Total technical assistance requirement is estimated at \$5,090,000. AID's share of this projected cost is estimated at \$4,736,000 and the GOB's contribution is \$354,000.

B. Training

There will be 18 person years of long-term and 24 person months of short-term training in the United States, representing an estimated cost of \$494,400 and \$92,000 respectively. Approximately one hundred inservice workshops (\$550,000) will be conducted over the life of the project. AID will provide an estimated \$510,800 for these training elements and the GOB's contribution will be \$625,600.

C. Commodities

Library references and materials (\$192,000), equipment, furniture and procurement services (\$427,000), supplies for inservice workshops (\$50,000), and eight vehicles (\$96,000) will be supplied to the project. AID will provide an estimated \$415,000 towards the cost of these items and

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the GOB will assume \$350,000 of the total cost of commodities.

D. Construction

These components consist of three education centers (\$814,000), one hostel (\$550,000), an expansion of the Primary Education Center at UB (\$55,000), and construction related professional fees (\$73,700). FAR procedures will be used with AID assuming 60% of the construction costs and the GOB covering 40% of the costs, plus the professional fees. Construction of these buildings should require 12 months for the hostel, six months for an addition to the Primary Education Center at UB, and six months for each of the three proposed rural education centers.

E. Recurrent Costs

PEIP II is included in NDP 6 and the GOB will assume recurrent costs at the conclusion of the project. Annual recurring costs (attributed to the project) at project completion are estimated at \$300,000. This amount is less than 2% of primary education's projected share of total GOB recurrent education expenditures in 1990/91. The GOB's proposed recurrent education budget appears adequate to maintain this activity.

The above cost estimates and financial plan reflect preliminary project planning and current cost estimates necessary to supply inputs to this proposed project. USAID/Botswana has determined that the project design is feasible and the cost estimates are reasonably firm for the project elements, thereby satisfying the requirements of Section 611(a)(1) of the Foreign Assistance Act, as amended.

It is proposed that the following AID incremental obligation schedule be accepted in order to ensure forward funding and successful implementation of this project. Total funding is estimated at \$8,034,000 over five years of obligations with the proposed initial obligation of \$1,266,900 in FY 1986, followed by \$2,988,000 in FY 1987; \$1,500,000 in FY 1989; \$1,300,000 in FY 1990 and \$979,100 in FY 1991.

TABLE I
SUMMARY OF COST ESTIMATES AND FINANCIAL PLAN
(\$000)

Budget Items and <u>Uses of Funds</u>	AID			GOB			TOTAL		GRAND <u>TOTAL</u>
	<u>FX</u>	<u>LC</u>	<u>SUB Total</u>	<u>FX</u>	<u>LC</u>	<u>SUB Total</u>	<u>FX</u>	<u>LC</u>	
Technical Assistance	4176.0	560.0	4736.0	--	354.0	354.0	4176.0	914.0	5090.0
Training	460.8	50.0	510.8	--	625.6	625.6	460.8	675.6	1136.4
Equipment & Commodities	329.0	86.0	415.0	--	350.0	350.0	329.0	436.0	765.0
Construction	--	851.4	851.4	--	641.3	641.3	--	1492.7	1492.7
Sub-Total	4965.8	1547.4	6513.2	--	1970.9	1970.9	4965.8	3518.3	8484.1
Inflation	725.6	365.1	1090.7	--	496.0	496.0	725.6	861.1	1586.7
Contingency	284.6	145.5	430.1	--	247.1	247.1	284.6	392.6	677.2
GRAND TOTAL	5976.0	2058.0	8034.0	--	2714.0	2714.0	5976.0	4772.0	10748.0
			75%			25%	56%	44%	

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TABLE II

PROPOSED BUDGET
(\$000)

	Year One			Year Two			Year Three			Year Four			Year Five			Year 1-5		
	AID	GOB	Total	AID	GOB	Total	AID	GOB	Total	AID	GOB	Total	AID	GOB	Total	AID	GOB	Total
Technical Assistance:																		
Long Term, 28py @ \$155,000/yr.	930	74	1004	930	74	1004	930	74	1004	775	66	841	775	66	841	4340	354	4694
Short term, 36 m @ \$11,000/mo.	99	—	99	132	—	132	99	—	99	33	—	33	33	—	33	396	—	4694
Training:																		
LT Overseas, 18 py @ \$21,600/yr	43.2	10.8	54	86.4	24.4	110.8	129.6	35.2	164.8	86.4	21.6	108	43.2	13.6	56.8	388.8	105.6	494.4
ST Overseas, 24 pm @ \$3,000/mo	—	—	—	18	5	23	18	5	23	18	5	23	18	5	23	72	20	92
Inservice Workshops, @ \$5500 ea.	10	100	110	10	100	110	10	100	110	10	100	110	10	100	110	50	500	550
Commodities:																		
Library References & Materials	192	—	192	—	—	—	—	—	—	—	—	—	—	—	—	192	—	192
Equipment & Procurement Services	137	—	137	—	—	—	—	—	—	—	—	—	—	—	—	137	—	137
Equipment & Furniture	—	110	110	—	180	180	—	—	—	—	—	—	—	—	—	—	—	137
Workshop Supplies	10	—	10	10	—	10	10	—	10	10	—	10	10	—	10	—	—	290
Vehicles (8 @ \$12,000 ea)	—	36	36	36	24	60	—	—	—	—	—	—	—	—	—	36	60	96
Construction:																		
Education Centers (3)	—	—	—	488.4	325.6	814	—	—	—	—	—	—	—	—	—	488.4	325.6	814
Hostel (108 beds)	330	220	550	—	—	—	—	—	—	—	—	—	—	—	—	330	220	550
Primary Edu. Center Expansion	.33	22	55	—	—	—	—	—	—	—	—	—	—	—	—	33	22	55
M&E Professional Fees	—	33.7	33.7	—	40	40	—	—	—	—	—	—	—	—	—	—	—	73.7
Sub total	1784.2	606.5	2390.7	1710.8	773.0	2483.8	1196.6	214.2	1410.8	932.4	192.6	1125.0	889.2	184.6	1073.8	6513.2	1970.9	8484.1
Inflation	114.4	60.7	175.1	246.8	162.3	409.1	212.9	70.9	283.8	230.8	89.4	320.2	285.8	112.7	398.5	1090.7	496.0	1586.7
Contingency	114.4	66.8	181.2	127.4	93.7	221.1	70.5	28.9	99.4	58.8	28.0	86.8	59.0	29.7	88.7	430.1	247.1	677.2
Grand Total	2013.0	734.0	2747.0	2085.0	1029.0	3114.0	1480.0	314.0	1794.0	1222.0	310.0	1532.0	1234.0	327.0	1561.0	8034.0	2714.0	10748

Note: Cost estimates before inflation are in 1985 prices.

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VII. IMPLEMENTATION PLAN

A. Contracting Plan

During the formative process leading to the decision to initiate PEIP II, a determination was made by GOB and USAID/Botswana (and subsequently approved by the Regional Contracting Officer) that a collaborative relationship involving an educational institution, the GOB and USAID would be essential for the project. The collaborative assistance mode was employed successfully for the design and implementation of PEIP I and, for reasons more fully addressed in the Administrative Analysis, this mode continues to be the key to realizing the full potential of a primary education improvement project in Botswana.

A request for technical proposals (RFTP Botswana 85-001) was developed, seeking a U.S. educational institution to design PEIP II and, subject to USAID and GOB approval of that design, to implement the project in collaboration with USAID and GOB. Following a notice in the Commerce Business Daily, the RFTP was issued to all who requested a copy. In July 1985, Ohio University submitted a proposal which provided a critique of the project as described. No other proposals were received.

Following GOB/USAID technical evaluation of Ohio's proposal, the RCO obtained a cost proposal and negotiated a contract with Ohio University for the design of PEIP II which included an unpriced option to extend the contract for implementation of the project. Following project authorization, and with the concurrence of the GOB, the RCO will ask Ohio University to submit a cost proposal, and a contract amendment will be negotiated for implementation of PEIP II.

Ohio University's existing relationship with Central State University, an HBU, will be more fully explored as candidates are nominated to fill long-term technical assistance positions and throughout the term of the contract as short-term technical assistance requirements are identified. Central State has recently assisted Ohio University in locating a short-term (six months) social studies specialist under PEIP I. Although an exact definition of Central State's involvement is not possible at this stage, the contract amendment adding responsibility for PEIP II implementation will include Ohio University's subcontracting/utilization plan for Central State and other entities covered by the Gray Amendment. Ohio will be required to report such utilization on a periodic basis to enable USAID/Botswana to provide information to AID/W regarding the Mission's contribution to the Agency's goal.

Additional opportunities for Gray Amendment entities are covered in the Commodity Procurement Plan in Annex K. The IQC book contractor may be an 8(a) firm as are several of the PSA contractors which may be used for procurement of commodities under the project.

Since it was decided to restrict competition for the institutional contract to educational institutions, this precludes using a Section 8(a) set-aside on a prime contracting basis.

B. Implementation Procedures

The IC will administer the contract through the College of Education of Ohio University. A project coordinator (the IC's Chief of Party) will liaise with USAID's Project Manager to insure timely implementation of the project. The coordinator will be responsible for requesting specialists for assignment to the project team, for maintaining records as required for periodic audit, and for assuring that fiscal procedures are consistent with institutional practices.

Teaching responsibilities of the U.S. team assigned to UB will be established by the Dean of the Faculty of Education and the IC Chief of Party. The portion of the team time (approximately 50%) assigned to curriculum development and inservice activities will be assigned by the Chief of Party in consultation with the appropriate agencies. The team's Inservice Adviser will be assigned to the MOE and will work directly for the Chief Education Officer but will still be under the overall administrative guidance of the IC Chief of Party.

Participants for training in the U.S and other countries will be selected by the MOE and/or UB in consultation with USAID and the project team. Institutions for training will be selected to assure that the training to be provided is of high academic and technical quality.

Where appropriate, a period of overlap will be provided to assure that participants who return from training will be appropriately oriented to the position which they are assuming or resuming.

A description of the implementation responsibilities to be assumed by various organizations (e.g., the MOE, the Ministry of Works and Communications, UB, IC, and USAID/Botswana) is found in Section VIII.

C. Schedule of Events

Major events are listed on the following pages in outline form, showing the month and year in which they should occur and specifying the organization(s) responsible for their implementation. While some proposed activities are illustrative and dates in some cases must be regarded as tentative, the sequence of events will provide a useful guide to the U.S. and GOB implementors and evaluators of the project. This list is not meant to be exhaustive, but does highlight the major project implementation events. Summary charts reflecting the technical assistance and participant training schedule can be found in Annex L.

PROPOSED SCHEDULE OF EVENTS

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations*</u>
Jan 1986	PP Completed	PP Team, <u>USAID</u> , GOB
Feb 1986	PP Submitted for Review	USAID
Apr 1986	PP Authorized	USAID
Apr 1986	Project Grant Agreement Negotiated and Signed	USAID, GOB
May 1986	AID/RCO Signs Amendment to Collaborative Assistance Mode Contract	AID/RCO, IC
Jun-Aug 1986	Preparation for Transfer of PEIP I to PEIP II	IC, USAID, GOB
Jun 1986	Architect Appointed to Do Final Design for PEC Expansion	GOB
Jun 1986	FAR Established for Hostel	USAID, GOB
Aug 1986	FAR Established for PEC	USAID
Aug 1986	PEIP II Officially Begins Chief of Party at Post Specialist in Primary Inservice Education at Post Math/Science/Teacher Competency Specialist at Post Social Studies Specialist at Post	<u>IC</u> , USAID
Aug 1986	Construction Contract Awarded for Hostel on UB campus	GOB
Sep-Dec 1986	Research Methods and Design Specialist at Post Curriculum and Instructional Design Specialist at Post	<u>IC</u> , USAID/B
Sep 1986	First Participant Trainee in U.S. (post-Master's)	UB, USAID/B, IC
Sep 1986	Development of Project Evaluation Criteria	UB, MOE, IC, USAID

*Where appropriate, the organization which has the major responsibility for the action is underlined.

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<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
Sep 1986	Establishment of (or continuation of) an Inservice Network Coordinating Committee	<u>MOE</u> , JSEIP, PTTCs, ECs PEIP, EOs, NCTE
Sep 1986	Three Vehicles Ordered and Delivered for PEIP Team	GOB, UB
Sep 1986	Establish Committee to Make Recommendations on MEd (PE)	<u>UB</u> , <u>MOE</u> , PTTCs, PEIP
Oct 1986	Establish PTTC Curriculum Development Coordinating Committee	<u>MOE</u> , PTTCs, UB, <u>PEIP</u>
Oct 1986	National Conference on Education Centers for EOs, TIC staff, UB and MOE Representatives	MOE
Oct 1986	Video Cassette Machines and Monitors, Overhead Projectors, and 16mm Movie Sound Projectors Ordered for PTTCs	<u>IC</u> , USAID
Oct 1986	Carousel Slide Projector (for UB), and 4 Microcomputers with Printers and Software Ordered for UB (2) and PTTCs (2).	<u>IC</u> , USAID
Oct-Dec 1986	Establish Policies for Guiding the Functioning of Education Centers and Linkages with MOE, TTCs, EOs, UB, PEIP, JSEIP and NCTE	<u>MOE</u> , PTTCs, EOs
Nov 1986	Construction Contract Awarded for PEC Expansion	GOB
Nov 1986	Texts, Reference Books, Periodicals Ordered for PTTCs and UB	<u>IC</u> , USAID
Nov 1986	Filmstrips, Films, Teaching Aids, Tapes and Transparencies Ordered for PTTCs and UB	<u>IC</u> , USAID

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
Dec 1986	Four Regional Workshops (Serowe, Lobatse, Tlokweng, Maun)	PEIP, MOE UB, PTTCs, EOS
Dec 1986	Delivery of Overhead Projectors, Sound Projectors, Video Cassette Machines and Slide Projectors for PTTCs and a Carousel Slide Projector for UB.	IC, USAID
Dec 1986- Aug 1987	Conduct Inservice for PTTC Staff Two Workshops - One Week Each; Participant Support Funded by GOB	PEIP, UB, MOE
Jan-Aug 1987	Design MED (PE) Program with Appropriate Senate Approval; Develop Courses for First Intake	UB
Jan-Dec 1987	Establish District Inservice Coordinating Committees in Connection With Each of Four Education Centers. Plan, Conduct and Evaluate a Minimum of Two Workshops at Each Center	EC, PTTC, EO, MOE, PEIP
Jan-Dec 1987	Four Short-term Consultants, One-Three Months Each: Program Evaluation, Materials Distribution, Primary Education, Materials Writing	IC
Jan 1987	Delivery of 4 Microcomputers, with Printers and Software for UB (2) and PTTCs (2)	IC, USAID
Jan 1987	External Evaluator for Baseline Data at Post: Two Weeks	USAID
Jun or August 1987	Three Participant Trainees to U.S. (one post-Master; two MED*)	UB, PTTCs, USAID IC
Jun 1987	Delivery of Texts, Reference Books and Periodicals for PTTCs and UB	IC, USAID
Jun 1987	Delivery of Filmstrips, Films, Teaching Aids, Tapes and Transparencies for PTTCs, UB	IC, USAID

*If in-country training prior to departure can be provided by O.U., training period in U.S. can be shortened by one quarter.

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
July 1987	Construction of PEC Expansion Completed	Local Building Contractor
Aug 1987	Construction of Hostel Completed	Local Building Contractor
Aug 1987	Intake of Four to Six Students into MEd (PE)	UB
Aug-Dec 1987	Establish Plan for Departure of Four Short-term Trainees	MOE, PEIP, USAID
Aug 1987- Aug 1988	Conduct One On-going Curriculum Study Activity at Each PTTC; Conduct Two Workshops Related to On-going Activities	<u>PTTCs</u> , UB, <u>PEIP</u>
Aug 1987 - Aug 1988	Establish a Study Committee in Cooperation with JSEIP to Review Current BEd in Primary Education in Light of Possible Modifications Needed to Prepare Teachers for Nine-year Basic Education Program	<u>UB</u> , <u>JSEIP IC</u> , <u>PEIP IC</u>
Sep 1987	Two vehicles Ordered and Delivered for PEIP Team	GOB, UB
Sep 1987	FAR Established for Three Education Centers: Tsabong, Kasane, Mochudi	USAID
Oct 1987	Texts, Reference Books and Periodicals Ordered for ECs	<u>IC</u> , USAID
Oct 1987	Filmstrips, Films, Teaching Aids, Tapes and Transparencies Ordered for ECs	<u>IC</u> , USAID
Oct 1987	Typewriters, Duplicating Machines Portable Generators, Desk Top Photocopiers Ordered for ECs	<u>IC</u> , USAID
Dec. 1987	Four Follow-up Workshops on Inservice Activities; Plans for Inservice in 1988	PEIP, MOE, EC, PTTCs, ECs, UB
Dec 1987 Dec 1988	Prepare for Pilot Part-time Diploma Program to Be Offered by UB/Tlokweng Beginning in 1989	MOE, UB
Jan 1988	Contract Awarded for Three ECs (Tsabong, Kasane, Mochudi)	GOB

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
Jan-Dec 1988	Four Short-term Consultants, Two-Three Months Each: Special Education, Remediation, Primary Education, Guidance and Counseling	IC
Jan-Dec 1988	Continue Inservice Plan With Appropriate Modification at Four Established Centers; Use Inservice Network Model Developed in 1987 at Three New Centers	<u>EC</u> , <u>PTTCs</u> , <u>EO</u> , <u>MOE</u> , <u>PEIP</u>
Mar 1988	External Evaluator Visit and Report: Two Weeks	USAID
Mar or Jun 1988	Return of One Participant Trainee (post-Master)	IC
Apr 1988	Overhead Projectors, 16mm Movie Sound Projectors, Video Cassette Machines with Monitors, Carousel Slide Projectors, Cassette Recorders and Film Strip Projectors Ordered for ECs	<u>IC</u> , USAID
Jun or Aug 1988	Return of Two MED Participant Trainees	IC
Jun 1988	ECs (Tsabong, Kasane, Mochudi) Completed.	GOB, USAID
Jun 1988	Three Vehicles Ordered and Delivered for ECs	GOB, USAID
Jun 1988	Delivery of Texts, Reference Books, Periodicals for ECs	<u>IC</u> , USAID
Jun 1988	Delivery of Filmstrips, Films, Teaching Aids, Tapes and Transparencies for ECs	<u>IC</u> , USAID
Jun 1988	Delivery of Overhead Projectors, 16mm Movie Sound Projectors, Video Cassette Machines and Monitors, Carousel Slide Projectors, Cassette Recorders, and Film Strip Projectors for ECs	<u>IC</u> , USAID
Jun 1988	Delivery of Typewriters, Duplicating Machines, Portable Generators and Desk Top Photocopiers for ECs	<u>IC</u> , USAID

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
Jun or Aug 1988	Four Participant Trainees to U.S. (two post-Master; two MEd)	UB, PTTCs, USAID, IC
Jun 1988-Aug 1989	Use Recommendations of BEd Study Committee to Make Appropriate Changes in BEd (PE)	UB
Aug 1988	Departure of Social Studies Specialist	USAID
Aug 1988	Arrival of Primary Education Specialist to Replace Participant Trainee	IC
Aug 1988-Aug 1989	Conduct One On-going Curriculum Study Activity at Each PTTC; Conduct one PTTC Materials Writing Team Activity, Four to Six Weeks; Conduct Two Workshops Related to On-going Activities	<u>PTTCs</u> , UB, <u>PEIP</u> , GOB, TAPU
Dec 1988	Hold National Conference (two days) to Evaluate Progress of Inservice Network	MOE
Jan-Jun 1989	Review MEd (PE) Program and Prepare for Second Intake of Students in August, 1989	UB
Jan-Dec 1989	Three Short-term Consultants Two to Three Months Each: Correspondence and Part-time Instruction, Materials Production, Teacher Competency Model	IC
Jan 1989	Mid-Point Evaluation	<u>USAID</u> , REDSO, GOB AID/W
Jun 1989	Graduation of First MEd (PE) Students	UB
Aug 1989	Increase Intake into BEd (PE) to 25 Increase Intake into Diploma (PE) to 15	UB GOB
Aug 1989	Place Four New MEd (PE) Graduates at Tlokweng	MOE

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
Jan-Dec 1989	Continue Inservice Plan with appropriate modification at Seven Established Centers; Use Inservice Network Model at Three New Centers	<u>EC, PTTCs, EO, MOE, PEIP</u>
Jun or Aug 1989	Two Participant Trainees to U.S. for Post-Master Programs Return of Three Participant Trainees (one post-Master; two MEd)	UB, USAID, IC
Aug 1989	Accept 15 Part-time Students into the Pilot UB/Tlokweg Pilot Diploma (PE) Program	UB, Tlokweg PTTC, MOE
Aug 1989- Aug 1990	Conduct One On-going Curriculum Study Activity at Each PTTC; Conduct Two Workshops Related to On-going Activities	<u>PTTCs, UB, PEIP USAID/B, TAPU</u>
Sep 1989	Departure of Science/Math/Teacher Competency Specialist	USAID
Dec 1989	Hold National Conference (two days) to Evaluate Progress of Inservice Network	MOE
Jan-Dec 1990	One Short-term Consultant to Assist Materials Writing Team: Three Months	IC
Jan-Dec 1990	Continue Inservice Plan With Appropriate Modification at Ten Established Centers; Use Inservice Network Model at Remaining Newly Constructed Centers	<u>EC, PTTCs, EO, MOE, PEIP</u>
Jun or Aug 1990	Two Participant Trainees to U.S. for One-year MEd	UB, USAID, IC
Aug 1990- Aug 1991	Conduct One On-going Curriculum Study Activity at Each PTTC; Conduct One PTTC Materials Writing Team Activity Four to Six Weeks; Conduct Two Workshops Related to On-going Activities	<u>PTTCs, UB, PEIP, GOB, TAPU</u>
Sept 1990	External Evaluator Visit and Report	USAID

<u>Date</u>	<u>Major Action</u>	<u>Responsible Organizations</u>
Dec 1990	Return of Two Participant Trainees (post-Master's)	IC
Dec 1990	Hold National Conference (two days) to Evaluate Progress in Inservice Network	MOE
Jan-Jun 1991	Do Follow-up of MEd (PE) Graduates of 1989 and Current Graduates to Evaluate Program	UB, PEIP
Jan-Jun 1991	One Short-term Consultant to Assist Materials Writing Team: Two Months	IC
Jan-Aug 1991	Fully Functioning Inservice Network	EC, PTICs, EO, MOE, PEIP
Mar 1991	National Workshop to Review, Evaluate and Set Forth Plans for the Future of the Fully Functioning Inservice Network	MOE
Jun or Aug 1991	Return of Four Participant Trainees (If two of these are in PhD programs, they may need to be extended to December, 1991 in order to finish all requirements.)	IC
Aug 1991	Final Project Evaluation by External Evaluators Completed	<u>USAID</u> , REDSO, AID/W
Aug 1991	Departure of U.S. Team	IC
Apr 1992	Project Assistance Completion Date	-
May 1992	Project Completion Report	USAID

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VIII. ADMINISTRATIVE AND MANAGEMENT ANALYSIS

A. Roles and Relationships

The Primary Education Improvement Project, Phase II (PEIP II) requires a continuing cooperative effort among the Ministry of Education (MOE), the University of Botswana (UB), the USAID-funded contractor and USAID/Botswana. Each agency has certain unique tasks and responsibilities for cooperating with and assisting others in the development and implementation of certain project activities.

1. Government of Botswana

a. Ministry of Education

The Government of Botswana (GOB) will assign the operational responsibility for carrying out PEIP II to the MOE. (See Annex E, Chart A.) The MOE has overall responsibility for primary and secondary education in Botswana. PEIP II will be coordinated for the MOE by the Chief Education Officer, Primary and Teacher Training (CEO-PTT). The Department of Primary and Teacher Training, under the direction of the CEO, is responsible for the Inspectorate of the primary schools, the primary teacher training colleges (PTTCs), the currently functioning education centers, and the primary schools. The Unified Teaching Service (UTS) is responsible for the posting of staff to the schools and PTTCs and for the release of staff for short-term inservice education activities and for further long-term studies. The Curriculum Development and Evaluation Unit (CDEU) has responsibilities for the following functions: development and implementation of the primary curriculum; examination development; research and testing; teaching aids production; and schools broadcasting. The MOE will have a major responsibility for selecting participants who will return to fill MOE positions, and it will also have a collaborative role in facilitating training for UB participants.

The Policy Advisory Committee (PAC) of the MOE has approved in principle the establishment of a Department responsible for Teacher Education which would incorporate responsibility for all preservice and inservice teacher education in the primary and secondary schools. When this unit becomes operational, the preservice and inservice components of PEIP II would come under its general administrative responsibility. It should be anticipated that an organizational change of this magnitude would be accompanied by some adjustments in the on-going management and liaison relationships among the various parties to PEIP II while new roles and relationships are being established. The Planning Office of the MOE will also play an important role in PEIP II implementation and coordination through its general responsibility for educational planning and its representation on the PEIP Advisory Committee.

b. Ministry of Works and Communication

The Ministry of Works and Communication through the Chief Architect's office will have oversight of the construction activities of PEIP II relating to the three proposed education centers, just as it has had for the six centers constructed under JSEIP. The MOE Planning Office must liaise with the Ministry of Works and Communication to ensure that the three Education Center facilities are constructed in accordance with the

agreed-upon educational and engineering specifications. The Government Chief Architect also sits on the UB Development Committee which will have general oversight of the design and construction of the addition to the Primary Education Center and the student hostel.

c. University of Botswana

The University of Botswana, through the Faculty of Education, has responsibility for implementing the Diploma and BEd programs in primary education which were established under PEIP I. (See Annex H, Chart B.) The Faculty of Education will also be the focus for the development of the MEd program with a specialization in primary education. The PTTCs are affiliated with UB through an Affiliation Agreement which makes possible systematic consultation and participation in decision-making between the MOE and UB on the range of matters related to the education and training of primary teachers. The Affiliation Agreement permits the UB certification of the PTTC teacher candidates. The PTTC Board of Affiliation will establish the PTTC Curriculum Development Coordinating Committee which will have overall responsibility for implementing the PEIP II PTTC curriculum development activities.

The proposed PEIP II MEd program (primary specialization) will be developed as an integral component of the already existing MEd program. The UB will participate in and approve the selection of Botswana lecturers for the post-master's and doctoral level studies in the United States.

The UB will be responsible for the design and construction of the addition to the Primary Education Center and the student hostel through its Development Committee, a standing committee of the University Council. This body selects consultants, approves plans, receives tenders and approves contractors on all major capital projects. The Physical Planner, who reports to the Vice Chancellor, and is assisted by the Clerk of Works, is responsible for the implementation of the capital projects.

2. The Institutional Contractor

The Institutional Contractor (IC) will be responsible for all technical assistance, participant training and the procurement of certain commodities. The IC will provide seven long-term specialists, six of whom will serve as faculty members at UB and one who will be assigned to the MCE Inservice Education Unit. The specialists attached to UB will have responsibilities for providing leadership in the development and implementation of the M.Ed program, working with the PTTCs in the development of the teacher education curricula, collaborating in the development of the inservice education network, assuming teaching responsibilities for PEIP II participants on study leave and working collaboratively with their Botswana counterparts.

In cooperation with the MOE, UB and USAID/Botswana, the IC will facilitate the participant training program in its various phases of selection, training, and assumption of on-the-job responsibilities. In addition, the IC will procure suitably appropriate commodities for PEIP II, such as library reference materials, curriculum materials, teaching aids, and equipment.

3. USAID/Botswana

USAID/Botswana will be responsible for the overall monitoring of PEIP II. The Project Manager will be the Human Resources Development Officer (HRDO). The HRDO will serve as the primary contact for the contractor's team leader and the contract team. The logistical support for the contractor's technicians after arrival in country will rest with the Field Support Office (FSO), which currently has support responsibility for all contract personnel. (In addition, the FSO will provide support services, as appropriate, relating to commodity procurement.) The Training Officer will prepare PIO/Ps for all long and short-term training. REDSO will provide engineering services for the project construction activities. GOB/USAID implementation procedures, established under the first PEIP project, will be continued under the proposed PEIP II.

B. Project Coordination

In order to achieve the project's purpose of strengthening the capacity of the MOE and UB to organize, revise and implement effective preservice, inservice and curriculum programs for primary teacher education, effective means of project coordination must be established and maintained. The striving toward the goal of increased access, efficiency and relevance of primary education must continue to be viewed as a shared responsibility by the MOE and UB and their respective units and personnel.

There are a number of reasons to expect full cooperation and collaboration among the various units responsible for implementing PEIP II. First, an excellent record of cooperation among the MOE, UB, the IC and USAID/Botswana has already been developed under PEIP I. Second, during the development of the Concept Paper leading to PEIP II, there was substantial consultation and agreement among representatives of the MOE, UB, and USAID/Botswana concerning the continuing and emerging priorities for primary education which should be addressed in PEIP II. Third, since 1973, USAID has had a productive record of involvement in the education and human resources sector of Botswana. This has included training (over 480 long and short-term participants), the provision of operational experts (approximately 74), educational program development (as in PEIP I and JSEIP) and the provision of educationally related physical facilities.

Finally, there is recognition by those involved in PEIP II that the current thrust by the GOB to develop both primary and junior secondary education, which includes two USAID institutional contractors, will require that particular attention be given to developing structures which will ensure that efforts are cooperatively marshalled toward agreed-upon ends.

It is proposed that the Advisory Committee established under PEIP I be continued with the provision that a representative of JSEIP be included on the Committee. The membership of the PEIP Advisory Committee as now constituted consists of the CEO-PTT (Chairperson), the Dean of the Faculty of Education at UB, the CEO for the Curriculum Development and Evaluation Unit (CDEU), the Director of UTS, the Senior Planning Officer, a representative of the principals of the PTTCs, a Botswana lecturer from the Department of Primary Education at UB, the MOE PEIP coordinator, the MOE Inservice Leader, a representative from the Ministry of Finance and Development Planning, the IC Chief of Party and the USAID/Botswana HRDO. (See Annex H, Chart C.) Representation from the PEIP II Advisory

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Committee to the proposed JSEIP Planning Committee would assist the coordinative aspects of both projects. It is proposed that the PEIP II Advisory Committee continue meeting regularly at approximately four month intervals with additional meetings being called by the chairperson as needed to deal with emergent issues. The role of the Advisory Committee is to provide counsel and advice relating to PEIP II's implementation and to facilitate cooperation and communication among units of the MOE, UB and other agencies having a role to play in the improvement of primary education.

Opportunities for further communication and coordination with relevant education bodies are enhanced by the fact that several members of the PEIP Advisory Committee (CEO-PTT; Dean, Faculty of Education at UB; and the IC Chief of Party, among others) also serve on the National Council for Teacher Education (NCTE). The Council, established in 1969, is a broadly representative body which advises the MOE on issues relating to the education of teachers.

USAID/Botswana also has a responsibility for ensuring a coordinated and cooperative effort between the two USAID-funded institutional contractors.

C. Capacity to Fulfill Responsibilities

The previous sections have addressed the specific roles assigned to various institutions as well as the way in which they will coordinate their activities. This section will discuss the likelihood of each institution to meet its respective responsibilities.

1. Government of Botswana

The MOE, UB and the Ministry of Works and Communications have collaborated successfully in the past on several development projects with USAID/Botswana. The PEIP I external evaluator, who has assessed project performance four times, has stated that the participating GOB institutions have demonstrated a willingness and ability to meet their commitments. The GOB continues to emphasize the development of the education sector and has allocated sufficient funds in the National Development Plan 6 to meet its obligations. The GOB has contributed more than the AID required 25% share of project funding for PEIP I.

The MOE's commitment has been manifested in PEIP I through their consistent provision of candidates for participant training and release of teachers and education officers to attend inservice training workshops which they have logistically and financially supported. Based on the GOB's performance under PEIP I and other AID-funded projects, USAID/Botswana has determined that the GOB is capable of (1) providing the required number of training candidates who are qualified and proficient in the English language and (2) retaining and utilizing AID-trained staff in the fields and positions for which they were prepared. A covenant (See Section XI) calling upon the GOB to meet the responsibilities cited above appears in the Project Authorization and Grant Project Agreement.

The recruitment of UB staff to fill vacancies resulting from the departure of participants for long-term training may present difficulties for the University. If UB is not successful in recruiting staff on a timely basis, then either the instruction will suffer or IC team members will have to fill in, thus taking time from their other duties. For this reason, a covenant will be placed in the Grant Project Agreement regarding the availability of Botswana and IC University staff for non-teaching components of the project.

2. Institutional Contractor

Ohio University has been awarded a collaborative assistance mode contract for the design of PEIP II. In the opinion of USAID/Botswana and the GOB, OU has performed well under its contract for PEIP I, helping the project meet and, in some cases, surpass its goals.

OU has proposed to fill three of the seven long-term TA positions with individuals who have worked on PEIP I, including the Chief of Party, the inservice coordinator and the math/science specialist. This will provide excellent long-term continuity. The IC team provided for PEIP I attests to OU's ability to provide academically qualified and culturally sensitive professionals.

3. USAID

USAID is well equipped to successfully implement this project. The Mission has considerable experience in the education sector dating back to the mid-1970s. Working relationships with individuals in the different institutions have been established through the implementation of PEIP I that will facilitate the execution of PEIP II.

Like any AID Mission, staff changes do occur, but the record indicates that, in the case of USAID/Botswana, the transition from one Human Resource Development Officer (HRDO) to another has not jeopardized past education projects. Regardless of staff changes in the Mission, the HRDO position is expected to remain in the staffing pattern since the Mission's major strategic focus is on human resources development.

IX. Monitoring Plan

Project monitoring involves constant knowledge and supervision of all activities, including funding levels, personnel levels and status, training activities, construction, commodity procurement and overall performance. Project monitoring is the direct responsibility of the Project Manager, in this case, the USAID/Botswana Human Resource Development Officer (HRDO). The HRDO will work closely with other USAID staff personnel with responsibilities related to project activities: the AID Regional Engineer on matters related to all construction activities, the Controller and Assistant Director for Program on funding levels, the Training Officer on long-term training, and supply management personnel on activities related to commodities. Overall management aspects are the Project Manager's direct responsibility.

To maintain a good record of the project's activities, status, and plans, the Project Manager will prepare semi-annual reports. They will show the financial status of all activities: obligations, expenditures, and commitments. The report will indicate the status and projections of all construction activities. A schedule of all training activities will be maintained and included in the semi-annual report, with status and location of all long-term trainees, and indication of completed, ongoing, and upcoming short-term training (including seminars-conferences/workshops) and the participants.

Commodity procurement and disposition records will be maintained by the Project Manager and the FSO/USAID. An inventory will be kept of goods procured and being used, goods on order, and goods to be procured.

To monitor all these activities, the Project Manager will need to rely heavily on the reports submitted by the project Chief of Party and the assistance of other USAID/Botswana personnel. The following supervisory methods and mechanisms are recommended:

- maintain personal liaison with key officials at the MOE, UB, PTTCs and all IC personnel;
- hold periodic meetings with key personnel;
- analyze financial and reporting documents;
- visit building sites and project facilities;

The plan for monitoring the PEIP II provides for the USAID Human Resources Development Officer to assume primary responsibility for assuring that the monitoring process is comprehensive in nature, that appropriate sources of information are drawn upon, and that the perceptions of key officials in the MOE, UB and the PTTCs are included, specifically through the PEIP II Advisory Committee.

The contractor's Chief of Party will have initial responsibility for providing the HRDO with complete information and appropriate documentation in respect to the status of technical assistance personnel under the contract, participant training, commodity procurement, and the progress of activities within the scope of work, this in support of the monitoring process.

Appropriate records will be maintained by the Chief of Party, and these will constitute the basis of the semi-annual reports that will be made to USAID/Botswana and to the contractor's Campus Coordinator. Of course, the Campus Coordinator will provide current information regarding the progress of participants who are receiving training under the contract at any U.S. institution.

In as much as the PEIP II activity moves across three distinct, but closely related aspects of preservice and inservice teacher education and leadership development, the monitoring of activities will require specific attention to the proportions of technical support time and resources devoted to each segment of the scope of work. It is recognized that, when the services of project technicians are divided among teaching duties at the UB, inservice consultation with PTTCs and education centers, and curriculum development, there will be inevitable, and entirely expected, problems that will arise regarding the infinite needs of each component and the limited resources of the project team.

Early in the life of the PEIP II, the work plans of technicians will require monitoring to assure that the several target activities are being pursued with appropriate balance. Furthermore, in situations where the phasing in of a particular activity may not occur until year two, the monitoring process will insure that appropriate shifts are made in respect to team support of the emerging activity.

The monitoring process, approached as a joint responsibility of the HRDO and the Chief of Party with appropriate inputs from other sources, will help prevent conflicts that may otherwise arise over priorities and assignment of resources. In this respect, it is expected that the articulation of PEIP II objectives and activities will be an item to be regularly included in the monitoring process although primary responsibility for coordination of PEIP II will be vested in a formal group created for that purpose by USAID in consultation with the MOE/UB.

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X. SUMMARIES OF ANALYSES

A. Technical Analysis

This section will examine the technical feasibility of the Primary Education Improvement Project II (PEIP II) as a means to address the problems of educational access and quality through interventions in the system of teacher education and leadership. Consideration will be given to the rationale underlying project goal and purpose which have been selected. The appropriateness of the project design will be addressed.

1. Project Basis

The continuing problem which confronts Botswana in respect to nation-wide efforts to achieve universal primary education and to improve the quality of educational opportunities provided to young Batswana is the basis for the proposed project. An analysis of data which were presented in the publication, Education Statistics, Part I, 1984, Ministry of Education, Botswana, identifies the continuing needs in the areas of teacher preparation, inservice programs and curriculum development. The report of the National Commission on Education, Education for Kagisano, April 1977, affords important reference points for assessing the extent and impact of the national effort since 1977 to deal with access and quality in the move toward universal primary education. The Botswana Education and Human Resources Sector Assessment of June 1984 and the Botswana IEES Country Plan of June 1985 provide further documentation and analyses of the current problems in the primary education area.

A combination of problems has led to serious constraints in primary education. One constraint, related to the quality of instruction, involves the problem of teacher training. The present system for preparing teachers does not seem to facilitate improved classroom achievement as measured by the PSLE. A second constraint is the high cost of reaching the 15% of primary school age children not now enrolled. In spite of a lack of classrooms and staff housing, marginally low salaries, untrained teachers and limited facilities for teacher training, the MOE has taken some practical steps to alleviate the situation. The primary school curriculum has been revised and is being introduced into the schools through inservice workshops with the help of PEIP. A new PTTC has been built to provide approximately 150-175 more primary teacher graduates per year. Under PEIP II, the PTTC curriculum will be revised to mesh with the revised primary curriculum. The World Bank and the ADB will be building more primary classrooms, and the Faculty of Education at UB is being strengthened to accommodate more BEd and DPE candidates who will become tutors in the PTTCs, education officers and head teachers in the primary schools. Through a mature age entry system, MOE officials and experienced teachers are admitted to advanced programs to upgrade their skills as supervisors and education officers.

To coordinate the MOE/UB efforts to improve educational opportunities for children and teachers, the MOE has proposed the creation of a Department responsible for Teacher Education, which has been approved in principle, but has not yet become a reality. Such a department would improve managerial effectiveness of both inservice and preservice education and revise the structure and staffing responsible for system-wide operations.

The project plan takes into full account the intentions of the GOB in the area of primary education as stated in the National Development Plan 6. In the Education Chapter of that document, the needs of children with special learning problems were identified as requiring attention at the regular school level rather than in special institutions.

Improvement of the skills of teachers through continuation of inservice programs was viewed as a continuing priority with a call for emphasis upon nine year basic education as an inservice theme. The GOB intends to proceed with the establishment of nine new education centers as key sites for intensified inservice education.

The NDP 6 calls for the continuation and extension of the "multiplier effect" strategy for the offering of inservice workshops across the nation, a strategy that was initiated early in PEIP I as a collaborative effort by the MOE, UB, the PTTCs, and the IC team. PEIP II will continue to assist in the effort to maximize the use of the multiplier strategy through the wider involvement of PTTC faculty in coordinated activities sited at the education centers and colleges.

2. Goal and Purpose. The goal of PEIP II is derived from the continued commitment of the GOB and USAID/B to increase the access, efficiency and relevance of primary education. The purpose of PEIP II is to strengthen the capacity of the Ministry of Education and the University of Botswana to organize, revise and implement effective preservice, inservice and curriculum programs for primary teacher education. PEIP II seeks to assist the UB in developing a permanent capability to prepare, to the MED degree, Botswana primary teacher educators who will assume key leadership roles in both preservice and inservice education.

The inservice dimension of PEIP II is highly relevant to the stated intention of the GOB in NDP 6 to decentralize inservice, and other educational decisions and actions, and to include a new system of education centers which will be built under both JSEIP and PEIP II. This aspect of PEIP II will extend the activity of PEIP I which implemented inservice training of primary teachers using a multiplier effect to involve EOs, head teachers and other staff in the effort to reach untrained teachers. Curriculum development in the PTTCs is another aspect of PEIP II that will respond to the NDP 6 aim to move toward an integrated nine year basic education program.

3. Rationale for Project Objective: In order to move toward the nine year basic education program and decentralize inservice education to better meet local needs throughout Botswana, the GOB looks to teacher education to provide the leadership training and organization that will maximize the use of all appropriate human and physical resources. Hence, the PEIP objectives are concerned with the development of the primary specialization in the MED degree program, with the national network scheme for inservice education, and with the development of an integrated PTTC curriculum that will contribute to the support of the nine year basic education program. In all respects, PEIP II objectives are consistent with GOB and USAID development plans and are built on the base of PEIP I accomplishments.

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As PEIP II moves from BEd program development to MEd program development, from curriculum development in the primary schools to a focus on curriculum development in the primary teacher training colleges, and from inservice for primary teachers to inservice for all primary teacher educators, the early pattern of close collaboration among all concerned segments of Botswana education will be maintained and strengthened where necessary.

4. Technical Strengths. The highly coordinated nature of the activities of PEIP I will be carried on in PEIP II and is seen as a critical success ingredient. To begin with, PEIP II will have continuing operational relationships with all institutional components of preservice and inservice teacher education. At the UB, at the MOE Inservice Unit, and at the PTTCs, PEIP II staff will have working relationships on a continuing basis. On another level of collaboration, the Batswana who hold positions in the DPE, will be working with PEIP II in all aspects of the project, particularly in the PTTC curriculum development, in the MEd primary education specialization, and in the implementation of the inservice network.

The research component of the new MEd primary education specialization and the research projects of participants selected for out-of-country training will be coordinated to focus upon research needs of Botswana primary education. A PEIP II team member will have special responsibility for this element. Participants will be selected and trained to fill specific positions in the DPE that will contribute to a viable graduate program. These participants, in combination with the participants of PEIP I, will effectively localize the control and direction of the primary education program at the UB.

5. Practicality and Suitability. PEIP II will be practical to Botswana since it will build upon the experience base of PEIP I where the successful activities and strategies were identified and the not so successful ones, eliminated. The project is suitable in its high degree of compatibility with both GOB and USAID/Botswana development goals.

The objectives of PEIP II are derived from the educational needs which have been documented and verified through numerous studies, and recommendations drawn, since the 1977 Education for Kqisano, report. The continuing goal of the GOB regarding universal primary education is supported by the project objectives, thus assuring understanding and commitment of the Batswana.

As has been stated earlier, the design team has worked closely and extensively with a broad spectrum of Botswana education and has drawn on the experiences of the PEIP I for guidance. The project will use approaches that have been proven practical in the Botswana context; it will pursue objectives proven to be suitable to the educational goals of the nation.

6. Special Considerations. It is appropriate to point out those aspects of the PEIP II activity that are linked closely to other developments in the education sector. First, the development of the inservice network and the move to a nine year basic education plan will require a new and greater involvement of the PTTCs. Hence, the PEIP II team will be allocating time and resources to that development while assisting with the creation and offering of the new MEd degree specialization at the UB. MOE support for additional staff at the PTTCs and UB's consideration of the greater responsibilities of both the PEIP staff and Batswana lecturers will be essential to the full attainment of project goals.

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Finally, there is the critical nature of linkages between JSEIP and PEIP II in respect to both the development of the education centers as part of the network and the development of a teacher training curriculum that will support the nine year basic education program. USAID/Botswana will assist in the coordination of the two projects to avoid the detrimental effects of duplication of effort or operating at cross purposes.

7. Project Efficiency. The design provides for utilization of all appropriate resources across a complex, but highly integrated, set of project activities. Participant training, commodities and the scheduling of IC staff have all been planned to insure maximum efficiency and effectiveness.

In summary, PEIP II will provide an activity that will be highly efficient in the use of already established structures for cooperation, to be built on widely accepted assessments of needs and recent experience of successful accomplishment. The design responds realistically to the Botswana situation and, finally, exploits in a complete fashion the resources of the contractor's main campus which is perhaps best demonstrated by the long term relationship between UB and the IC.

Within the life-of-project, it is expected that the project goal and purpose will be attained. It is premature to judge at this time the needs of the primary education subsector that will exist by the end of the project. However, it is anticipated that any further need for technical assistance could be satisfied through the services of directly employed consultants.

At this time, it would appear that the inservice network scheme which will serve the primary school system will be functioning in 1991 although some education centers will not have been built and staffed. The continuing development of the nine year basic education plan may also produce continuing challenges to the teacher training curriculum which may justify some measure of external support.

It should be recognized that other developments in the education sector during the course of PEIP II may affect the efforts to strengthen preservice and inservice programs for teacher educators. The Diploma program at Molepolole may attract some of the better qualified graduates of Form 5 away from the PTTC Diploma programs. If the Junior Secondary Teacher Training program moves to become a degree program in the near term, it would present attractive options to qualified Botswana, who might otherwise pursue a career in the primary education field. These prospects, and the continuing surge of primary enrollments, may take a toll on the efforts to reduce the cadre of untrained teachers and to localize the professional staffs in PTTCs and education centers with the graduates of the BEd and Diploma programs in primary education.

The project aims at increasing both the quantity and quality of Botswana primary school educators at the most critical levels--UB primary education specialists, PTTC staff, head teachers, education officers--where leverage and the multiplier effect are greatest.

B. Economic Analysis

The economic analysis treats PEIP II as a package of inputs intended to effect quality and efficiency improvements during a period of

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rapid expansion. The outputs of PEIP II are treated as intermediate outputs rather than as outputs of the primary education system as a whole.

In addition to the general problems of assessing project impacts on system performance, two particular characteristics of primary education in Botswana are noted. First, the system already accommodates 85% of the relevant age cohort. Expansion to reach the remaining 15% may be expected to have higher unit costs and fewer marginal social benefits than the current system. Second, there is already a surplus of primary educated workers. Thus, the appropriate measures of economic value are mainly savings due to efficiency changes within the system and economic gains to be realized through subsequent secondary education.

For a base case economic analysis (see Annex F.3.), three types of quantifiable benefits attributable to quality and efficiency changes have been selected and at least one form of significant cost savings can be predicted. The quantifiable benefits are 1) reduction in repetition, 2) reduction in dropout, and 3) maintenance of an acceptable pass rate on the Standard 7 exam. The main cost saving will be in obviating the need for expatriate educators or technicians in a number of positions.

1. Benefits

a. Benefit 1: Reductions in Repetition

The expected impact of PEIP II activities is to reduce repetition throughout the system by 5,000 student years below the level of 1984 and to ensure that repetition rates do not increase again after 1991. This is approximately half the current repetition but less than that required to meet the MOE projection for 1991.

Five thousand years equivalent of cost savings at P180 per unit yields a benefit of P900,000 by 1991. This is projected to grow incrementally from 1987 through 1991.

b. Benefit 2: Reduced Dropout

It is estimated that PEIP II will have an impact in reducing dropouts by 2,093 for each entering cohort, equivalent to the difference between early dropout 1980-1984 (before PEIP I began to take effect) and that projected for 1985-1989 when PEIP I and II impacts will begin to be fully realized. In later years, PEIP II will enable dropouts to be kept to at least 2,093 less than what it would be without PEIP II.

For ease of calculation and to bias conservatively, the dropout estimate is rounded to 2,000. Assuming two years per dropout, this yields a benefit stream of 4,000 years of unit costs saved or approximately P720,000 annually each year from 1989. One half of this benefit (P360,000) may be obtained by 1987 and three-fourths (P540,000) by 1988.

c. Benefit 3: Maintaining Standard 7 Examination Pass Rates

It is projected that the examination administered in 1991 will be an acceptably valid testing instrument measuring accomplishments under the revised curriculum and thus the instructional quality and

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effectiveness of the capacity of the education system being developed for 1985-1991.

As completion of senior secondary requires an additional 5 years, the additional private economic benefit for an individual passing the PSLE is assumed, very conservatively, to be one-fifth of the difference in income expectations between a secondary school graduate and an individual with less than primary completion. Thus, an increase in lifetime earnings stream of 30 Pula a month or 360 Pula a year is assumed as a benefit for each additional pass due to maintaining quality and instructional effectiveness.

d. Benefit 4: Cost-Savings of Localization

A conservative savings of \$20,000 annually is estimated for each localized position. Six of the long-term trainees will return to their present positions but with advanced training and enhanced professional capacities. Six will fill new positions. It is estimated that seven positions will be localized which would otherwise be occupied by higher cost expatriates.

Thus, a benefit of three positions filled by 1989, two more by 1990 and two more by 1991 is taken into account. Savings are estimated at \$60,000 for 1989, \$100,000 for 1990 and \$140,000 for 1991 and subsequent years.

2. Summary Base Case

The four benefit streams, 1) reduced repetition, 2) reduced dropout, 3) maintenance of PSLE pass rate and 4) cost savings of localization are distributed over 20 years. At 10% discount (the estimated opportunity cost of capital), the present value of the sum of the costs is \$6,720,000 and the present value of the sum of the benefits is \$12,335,000. This yields a benefit/cost ratio of 1.84. The IRR is calculated as 22%. This is an extremely positive result using relatively conservative estimates and excluding other possible benefits.

3. Alternative Analysis

In the event that the Botswana system does not reach its ambitious growth targets, an alternative analysis was employed using more conservative assumptions.

Alternative assumptions are as follows:

--Benefit 1: Reduce the estimated reduction in repetition to 3,000 student years annually;

--Benefit 2: Reduce the estimated reduction in dropout to 1,000 annually;

--Benefit 3: Beginning in 1991, use only the difference (3,268) between the projected Form I capacity (23,000) and 72% of Standard 7 enrollment (72% of 36,484 equals 26,268) rather than the difference between a 72% pass rate and the absolute number of passes in 1985; and

--Benefit 4: Same as Base Case

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With these changes, the Alternative Case yields a discounted benefit stream of \$8,533,000 versus discounted costs of \$6,720,000. The Benefit/Cost ratio is 1.27 and the IRR is 15%. Thus, even with more conservative benefits, the project is economically viable.

C. Social Soundness Analysis

1. Socio-Economic Environment

The Republic of Botswana has made great strides in economic growth since Independence in 1966. At that time, Botswana was considered one of the poorest nations in the world, with a \$60 per capita annual income. Today per capita income is approximately \$700.

The economy of Botswana is dominated by minerals and commercial beef production. These two sectors are largely responsible for the spectacular rate of economic growth. Access to the economic benefits that emerge from these sectors, however, is not distributed equally among the population. Furthermore, job opportunities for the uneducated and the untrained are limited. The result is a highly stratified class structure in which large cattle owners and educated wage earners comprise the upper strata of society.

Botswana's population is divided into a number of ethnic groups, the largest of which are Tswana in origin. These groups are characterized by cultural, and to a lesser degree, economic differences. Nevertheless, ethnicity in Botswana is not politicized.

The relationship between class and education is complementary and mutually reinforcing. At present there is an acute shortage of educated Batswana to meet the demands of the country's expanding economy. Lack of education gives rise to unequal opportunities among members of the workforce in securing well paying jobs. Individuals with little or no schooling are the least likely to be in formal employment; only 20% of the labor force with no schooling are wage employed.

Achievement levels, as measured by test scores, do not vary according to gender, at the primary level. However, regional differences in achievement levels have been documented. This substantive disparity between regional achievement is cause for concern.

2. Beneficiaries

The direct beneficiaries of the project will be the Batswana who enter and graduate from the Diploma, the Bachelor's and the Master's in Primary Education programs at the University of Botswana. It is expected that the first two groups (combined) will increase in number from the current level of 30 per year to reach a new level of 50 per year by 1990. The MEd graduates will increase from 4 to 8 per year during the life of the project.

Additional direct beneficiaries will include 12 Batswana who will receive long-term overseas training (12 person years of post-Master's training and six person years of Master's training) and those Batswana who will receive the four to six months of short-term overseas training.

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Through inservice workshops conducted by the Department of Primary Education and the MOE, direct benefits will flow to 37 education officers. Indirect returns from the workshops will be channeled to 518 head teachers, 522 deputy head teachers, 878 senior teachers and over 6800 classroom teachers.

Other beneficiaries of the project will be the students enrolled in primary schools. It is projected that there will be approximately 230,000 students in these grades during 1986. This number is estimated to increase to 286,000 within the life of the proposed project.

3. Social Feasibility

The social feasibility of the project has been demonstrated by the progress made under PEIP I, progress attributable not only to the contract team but to direct GOB participation. GOB receptivity is further demonstrated by NDP 6 objectives for primary education which include goals for physical and personnel expansion and upgrading and goals directly related to quality and equity.

Particular caution is needed in curriculum development, and in the selection of forms of instruction, to ensure against western technicians unknowingly fostering cognitive styles derived from their own group socialization. The social consequences of entirely changing Batswana cultural patterns of cognition could be staggering and could result in underachievement, and an inherent bias against Batswana students.

4. Social Impact

Both the project itself and its spread to the wider population will affect different groups in different ways. Those individuals trained should receive fairly immediate benefits. It is also expected that the project will have a favorable impact on women. By improving the quality of primary education and by focusing on the need for the learning environment to be conducive to the culturally cognitive styles of Batswana, the project should impact favorably on the performance of all primary pupils.

5. Conclusion

This assessment of the distribution of benefits and burdens of the project indicate that the social consequences will be strongly positive. While ultimate success necessarily depends on the quality of project implementation, analysis of the project in terms of the social factors involved, indicates that the project is soundly designed to meet its stated objectives.

D. Environmental Analysis

The education, technical assistance and training components of the project are not considered to have any direct effects on the environment. Environmental impacts will be limited to land utilization by construction of physical facilities and demand on services such as water supply, sanitation and community facilities by small population increases. The Initial Environmental Examination (IEE) explained GOB procedures for land use planning and the insignificance of the small population increases in relationship to sizes of the towns where project activities will take place. The IEE identified no issues requiring further environmental study

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and recommended that a Negative Determination be made. This recommendation was concurred in by the Africa Bureau Environmental Officer and cleared by the Regional Legal Advisor for Southern Africa.

E. Engineering Analysis

Construction of both a three-room expansion to the existing PEC and a new 108-bed hostel at UB (to support expanded enrollment in preservice and inservice programs) as well as three education centers (for inservice training of teachers), is planned for the project. Construction costs will be shared 60% by AID and 40% by the GOB. In addition, the GOB will contribute professional fees for design and supervision. The detailed Engineering Analysis in Annex F.6. explains the requirements for new facilities, planned standards and specifications, contracting and payment procedures, AID monitoring plans, projected implementation schedule and cost estimates. Standard GOB specifications and procedures for local contracting are planned to ensure smooth implementation of the program and to minimize construction and recurrent maintenance costs. USAID/Botswana will utilize FAR payment procedures to reimburse the GOB for AID's share of costs. The REDSO/Engineer concluded that the planning and cost estimates for the construction program meet all 611 (a) (1) requirements of the FAA Act of 1961, as amended.

XI. CONDITIONS AND COVENANTS

A. Conditions Precedent

The following two conditions precedent are proposed for the Project Grant Agreement:

1. Conditions Precedent to First Disbursement

Prior to the first disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, the Cooperating Country will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID a statement of the person(s) representing the Cooperating Country for purposes of the Project, together with a specimen signature of each person specified in such statement.

2. Additional Disbursement: Construction Activities

Prior to the first disbursement under the Grant for construction, or to the issuance by AID of documentation pursuant to which such disbursement shall be made, the Cooperating Country will, except as AID may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID final plans and specifications including cost estimates for such construction and evidence that appropriate sites have been made available by the Cooperating Country for such facilities.

B. Covenants

In addition to the standard covenant for evaluations, the following six covenants are proposed for the Project Grant Agreement:

The Cooperating Country shall covenant that, except as AID may otherwise agree in writing:

1. It will establish a Department responsible for Teacher Education within the Ministry of Education (MOE).
2. It will make available qualified candidates for long-term academic training in the United States on a timely basis and to ensure by bonding or other means that such trainees are assigned upon their return to suitable positions within the MOE or the University of Botswana (UB) related to activities under the Project.
3. It will ensure, through UB authorities, the availability of Botswana and Institutional Contractor (IC) staff within UB's Faculty of Education to work on non-teaching components of the Project.
4. It will provide the necessary human, physical and financial resources, including appropriate staff for the educational centers, commensurate with strengthening MOE and UB's primary teacher education capacity and will submit to USAID/Botswana a staffing plan for the education centers within two months after the signing of the Grant Project Agreement.
5. It will assign suitable counterparts for each long-term technician financed under the Project.
6. It will ensure, through UB authorities, that a suitable teaching replacement will be provided from UB resources for each teacher undertaking long-term training financed under the Project.

XII. EVALUATION ARRANGEMENTS

The evaluation of PEIP II will be tied directly to those activities that are mounted in pursuit of the agreed upon project goal and purpose. Accordingly, the formative evaluations of project activity will be concerned with progress that is being made toward attaining the following outputs:

- An established MEd specialization in primary education at the UB.
- An established inservice network of institutions for the systematic inservice training of teachers in the existing 518 primary schools and the inservice development of education officers and PTTC staff.
- A revised and operating PTTC core curriculum.

Summative evaluations will be concerned with attainment at the end of the project, or at the end of any distinct project activity.

A. Evaluative Scope

The several elements which are set forth in the scope of work will serve to identify those specific items which will be considered in both formative and summative evaluations. The schedule, or timetable of activities during the life of the project, will provide the time frame

during which certain evaluations will be carried out. For example, the participant training of UB education lecturers to the doctorate level is tied closely to the establishment of the MEd degree specialization as a permanent element in the UB; hence the evaluation of progress toward that end will require that consideration be given to the timely identification of participants. By 1991, evaluation will be concerned with the extent to which the Primary Education Department is localized, with the output of MEd degree graduates, and with the capacity of the faculty to deal with all aspects of academic administration of the MEd degree program within the organization of the Faculty of Education and University. In like manner, other elements of the project will be evaluated to provide information as to progress, clues as to unanticipated constraints, and information regarding the overall success of the project at its conclusion. In a project which requires such extensive coordination of many units, it is necessary that the process of implementation be evaluated as well as the products.

In addition, special attention will be given during evaluations to changes in the repetition and dropout rates of primary school children to see whether reduction in rates can be attributed to project-related activities. Similarly, the maintenance and/or improvement of Standard 7 pass rates will be examined to determine the extent to which project implementation has influenced those rates.

B. Criteria

During the first six months of PEIP II, the evaluative criteria will be completely developed within the framework suggested here, and the dates and topics for formative evaluation will be specified. This task will be carried out by a joint committee comprised of USAID, MOE, the PTTCs, UB representatives, the PEIP II team, and an external evaluator, with responsibility for initiation assigned to the contract team. This joint committee will be a working reference group which will be involved at other stages of continuous assessment of the project.

C. Formative Evaluations

Evaluations of a formative nature will serve two purposes: to provide information relative to the progress to date and to provide the basis for further planning which may call for revisions and adjustments. Formative evaluations will be scheduled on a continuing basis and will involve the reference group identified in the Criteria Section. Periodic formative evaluations will be executed by an external evaluator selected by USAID after consultation with the MOE, UB and PEIP II contractor. This aspect will be related to the continuous assessments, using data as appropriate from such assessments. The results of the external evaluations will be given to the reference group as the basis for appropriate project actions.

It seems reasonable that external evaluations should be scheduled at or near the end of 18 and 48 month periods of the project.

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D. Summative Evaluations

Summative evaluations will be scheduled at those points during the life of the project when a specific outcome of major proportion is scheduled to be accomplished. An example would be the planning and implementation of the MEd degree program. Since the first intake is tentatively set for August 1987, it would be reasonable to have a summative evaluation of this project component set for 1989, shortly after the graduation of the first class.

A mid-point evaluation will be conducted by AID on or about the 30th month of the project and a final project evaluation will take place about the 60th month. The final evaluation will be comprehensive in scope, addressing the entire range of project goal and purpose. The evaluator(s) for the mid-point and final evaluations will be external, selected by USAID/Botswana in consultation with the reference group cited earlier.

E. Data Collection and Organization

The Project Manager will assume responsibility for the collection and organization of data, much of which will be derived from PEIP II semi-annual contract reports and from MOE and UB statistical reports. It is expected that another source of data for evaluation purposes will be the research studies that will be carried out by MEd degree students in the UB and in U.S. universities and by the doctoral and post master's students who study abroad. Of course, the evaluation component will not be dependent upon such studies, but intentional efforts will be made to relate the research projects of Batswana to the problems that call for investigation here. Where such studies relate to project objectives, they will be regarded as data sources for evaluation purposes.

PEIP II ANNEXES

ANNEX A

PID Approval Cable

VV 0R0763
 OO RUEHOR
 DE RUEHC #2382/21 1202158
 ZNR UUUUU ZZH
 O 012153Z MAY 85
 FM SECSTATE WASHDC
 TO RUEHOR/AMEMBASSY GABORONE IMMEDIATE 6561-62
 INFO RUEHNR/AMEMBASSY NAIROBI IMMEDIATE 3370
 RUEHRB/AMEMBASSY MBABANE IMMEDIATE 5333
 BT
 UNCLAS... STATE 132382

IMMEDIATE

AIDAC NAIROBI FOR RCO, MBABANE FOR RLA

E.O. 12356: N/A

TAGS:

SUBJECT: BOTSWANA - PRIMARY EDUCATION IMPROVEMENT PROJECT,
 PEIP II 633-0240, CONCEPT PAPER REVIEW, ECPR GUIDANCE CABL

REFTEL: (A) STATE 112462 (B) STATE 122592
 (C) GABORONE 01733 (D) STATE 114101

1. AID/W APPRECIATES MISSION'S TIMELY RESPONSE TO REFTELS A AND B. DAA/AFR. L. SAJERS HAS APPROVED THE CONCEPT PAPER WITH CHANGES TO GOAL, PURPOSE AND OUTPUTS AND ADDITION OF EOPS AS DETAILED IN REFTEL C. AS AN AID TO ASSISTING FUTURE EVALUATORS IN MEASURING PROJECT IMPACT, ONE ADDITIONAL POINT SHOULD BE ADDRESSED DURING PROJECT PAPER DESIGN: THE END-OF-PROJECT-STATUS SHOULD PROVIDE INDICATORS DEMONSTRATING WHETHER A SATISFACTORY LEVEL OF INDIGENOUS CAPABILITY HAS BEEN DEVELOPED UNDER THE PROJECT, WITH A CORRESPONDING REDUCTION OF RELIANCE ON DONOR ASSISTANCE FOR THE ON-GOING EXECUTION OF THE PRE-SERVICE, IN-SERVICE AND CURRICULUM PROGRAMS. THE PROJECT PAPER WILL BE APPROVED IN THE FIELD UNDER THE PROVISIONS OF DOA 140. USAID/BOTSWANA MAY PROCEED WITH

ISSUANCE OF RFTP, INCORPORATING GUIDANCE IN PARAGRAPH 2 D REGARDING THE INCLUSION OF HISTORICALLY BLACK COLLEGES AND UNIVERSITIES (HBCUS) IN THE PROJECT.

2. DESIGN GUIDANCE

A. THE ECPR RAISED THE ISSUE OF HOW THE PROJECT WILL ENSURE CONSISTENCY IN CURRICULA AND APPROACH TO TEACHER TRAINING IN PRIMARY AND JUNIOR SECONDARY EDUCATION AND DEAL WITH THE CONFLICTS THAT WILL ALMOST CERTAINLY ARISE BETWEEN THE DIFFERENT CONTRACTORS IMPLEMENTING PEIP, PHASE II AND JSEIP (JUNIOR SECONDARY EDUCATION IMPROVEMENT PROJECT). PAST EXPERIENCE HAS SHOWN THAT WHEN TWO U.S. CONTRACTORS WORK IN THE SAME DEVELOPMENT SECTOR WITH THE SAME GOVERNMENT MINISTRY, JURISDICTIONAL CONFLICTS MAY EMERGE THAT IMPEDE PROGRESS ON ALL FRONTS. AN EVALUATION OF A NIGERIAN EDUCATION PROJECT WHERE THIS PROBLEM AROSE SUGGESTED AVOIDING FUTURE USE OF TWO SEPARATE CONTRACTORS WITH POTENTIALLY OVERLAPPING TASKS.

WHILE IT IS NOT POSSIBLE IN THIS SITUATION TO HAVE BOTH PROJECTS IMPLEMENTED BY ONE CONTRACTOR, THE PROJECT SHOULD ENSURE THAT OVERLAPPING OF CONTRACTOR RESPONSIBILITIES IS AVOIDED BY IDENTIFYING POTENTIAL AREAS OF CONFLICT, BOTH TECHNICAL DISPUTES AND OVERLAPS IN THE RESPECTIVE SCOPES OF WORK AND BY ESTABLISHING A MECHANISM THAT WILL ENABLE THE GOB TO RESOLVE CONFLICTS, WITH MINIMUM ADMINISTRATIVE BURDEN ON THE GOVERNMENT, MISSION AND CONTRACTORS.

FOR EXAMPLE, PEIP PHASE II PROPOSES TO ASSIST IN THE REVISION OF PTTIC CURRICULA. THIS WILL INFLUENCE HOW AND WHAT TEACHERS TEACH IN THE CLASSROOM AND MAY WELL CONFLICT WITH THE JSEIP REVISION OF CLASSROOM CURRICULA, UNLESS SOME FUNDAMENTAL DECISIONS REGARDING OVERALL CURRICULA FOR THE FIRST NINE YEARS ARE MADE AT THE VERY START OF THE PROJECT AND CAREFUL COORDINATION IS EXERCISED THROUGHOUT PROJECT LIFE. CURRICULA FOR SEVENTH YEAR, NOW PART OF PRIMARY EDUCATION BUT DUE TO SHIFT TO JUNIOR SECONDARY AFTER 1991, IS A SPECIFIC AREA OF CONTENTION THAT MAY ARISE BETWEEN THE TWO CONTRACTORS.

B. AID/W RECOGNIZES THAT USAID HAS SELECTED THE EDUCATION SECTOR AS A MAJOR FOCUS OF ASSISTANCE. WHILE PEIP, PHASE II OUTPUTS MAY BE ACHIEVED BY 1990, FURTHER ASSISTANCE MAY BE PRUDENT. MISSION'S STRATEGY FOR PRIMARY EDUCATION BEYOND THE LIFE OF PHASE II PROJECT SHOULD BE DISCUSSED.

C. THE PROJECT SHOULD INCLUDE A PROCESS THROUGH WHICH RETURNING PARTICIPANTS WILL GAIN EXPERIENCE, WORK IN

TANDEM WITH AND, ULTIMATELY, REPLACE CONTRACT PERSONNEL WHO CURRENTLY HOLD KEY UNIVERSITY OF BOTSWANA POSTS. SINCE NO MOTSWANA WILL HAVE THE DOCTORATE AND SEVEN YEARS OF EXPERIENCE REQUIRED TO BECOME A HEAD OF DEPARTMENT, IT APPEARS THAT AN EXPATRIATE WILL STILL BE NEEDED AFTER THE COMPLETION OF THE PROJECT. WHAT EFFECT THIS WILL HAVE ON ESTABLISHING A PERMANENT CAPACITY IN THE UNIVERSITY OF BOTSWANA TO PROVIDE PRE-SERVICE TRAINING SHOULD BE ADDRESSED.

D. THE ECPR NOTED THAT THE PROJECT OFFERS OPPORTUNITIES FOR HISTORICALLY BLACK COLLEGES AND UNIVERSITIES (HBCUS). THROUGH A SUB-CONTRACT OR JOINT VENTURE, AN HBCU MIGHT BE GIVEN RESPONSIBILITY FOR A SPECIFIC ELEMENT OF THE PROJECT, SUCH AS IN-SERVICE TRAINING. THE MISSION SHOULD PLACE THE STRONGEST LANGUAGE LEGALLY PERMISSIBLE IN THE RFTP REFLECTING THE DESIRE TO INVOLVE HBCUS: GC/CCM FINDS THE FOLLOWING STATEMENT ACCEPTABLE: "RESPONDING INSTITUTIONS ARE STRONGLY ENCOURAGED TO INCLUDE A HISTORICALLY BLACK COLLEGE/UNIVERSITY (HBCU) IN THEIR PROPOSAL, FOR EXAMPLE, USING A SUB-CONTRACT OR JOINT VENTURE THAT ASSIGNS RESPONSIBILITY TO THE HBCU FOR A SPECIFIC ELEMENT OF THE PROJECT."

ECPR APPROVES IMPLEMENTATION OF PROJECT THROUGH COLLABORATIVE ASSISTANCE MODE AND SUPPORTS MISSION'S PREPARATION OF RFTP AT THIS TIME. WHILE OFFICE OF MANAGEMENT AND BUDGET (OMB) HAS APPROVED COLLABORATIVE ASSISTANCE PROCEDURES AS AN INTERIM RULE (REFTEL D), SUGGEST MISSION STAY IN TOUCH REGARDING ANY CHANGES RESULTING FROM COMMENT PROCESS.

E. BOTH PEIP, PHASE I AND THE CONCEPT PAPER FOR PHASE II PLACE GREATER EMPHASIS ON B.ED. GRADUATES THAN DIPLOMA GRADUATES.

PHASE II SHOULD PROVIDE A RATIONALE FOR THIS ALLOCATION OF FUNDS, SINCE IN TRYING TO REDUCE THE NUMBER OF UNQUALIFIED TEACHERS, A CASE COULD BE MADE FOR MORE DIPLOMA GRADUATES.

F. PROJECT ANALYSIS SHOULD IDENTIFY THE RECURRENT COSTS THE COE WILL NEED TO SUSTAIN DURING AND AT THE COMPLETION OF THE PROJECT AND DISCUSS THEIR ABILITY TO MEET THESE OBLIGATIONS. THIS IS AN AID/W CONCERN THAT WAS RAISED

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DURING JSEIP REVIEW AND EXTENDS TO THE ENTIRE EDUCATION BUDGET. THE IMPLICATIONS OF SUCCESSFULLY IMPLEMENTING BOTH PROJECTS, ESPECIALLY UPGRADING TEACHER SKILLS (AND COSTS ASSOCIATED THEREWITH), NEEDS THOROUGH TREATMENT. THIS SHOULD BE DISCUSSED IN LIGHT OF PROJECTED LEVELLING

OFF OF GOB REVENUES OVER THE NEXT FIVE YEARS AND INCREASED BUDGETARY DEMANDS FROM OTHER SECTORS.

G. A STRONG RATIONALE IS NOT GIVEN FOR THE TWO NEW LONG-TERM TA POSITIONS, SOCIAL STUDIES SPECIALIST AND GRADUATE ADVISOR. PROJECT ANALYSIS SHOULD ASSESS WHETHER THESE POSITIONS ARE NEEDED AND CONSIDER USE OF SHORT-TERM CONSULTANTS IN LIEU OF LONG-TERM. IF LONG-TERM ASSIGNMENTS CAN BE JUSTIFIED, JOB DESCRIPTIONS FOR THE NEW POSITIONS SHOULD BE ANNEXED TO THE FINAL PROJECT DOCUMENT.

H. ECPR CONSIDERS PROJECTIONS FOR INFLATION AND CONTINGENCY SOMEWHAT HIGH. MISSION IS BEST JUDGE OF LOCAL COSTS AND INFLATION RATES, BUT AID/W DRAWS MISSION'S ATTENTION TO HANDBOOK 3 GUIDELINES FOR COST ESTIMATING AND FINANCIAL PLANNING AND OFFERS SEVERAL SPECIFIC SUGGESTIONS:

WITH REGARD TO INFLATION, HANDBOOK 3, APPENDIX 3B, PAGES 3B-2,3 STATES THAT "THE ANNUAL RATE(S) OF INFLATION MUST BE ESTIMATED FOR THE PERIOD(S) DURING WHICH PURCHASES WILL BE MADE, SEPARATELY FOR FOREIGN EXCHANGE PURCHASES AND LOCAL COSTS. . . . IN LARGE PROJECTS, IT IS ADVISABLE TO CALCULATE THE AMOUNT TO BE ALLOWED SEPARATELY FOR EACH YEAR DURING WHICH PURCHASES ARE EXPECTED TO BE MADE." THEREFORE, THE APPROPRIATE INFLATION RATES SHOULD BE APPLIED SEPARATELY TO FOREIGN EXCHANGE PURCHASES AND LOCAL COSTS ON A YEARLY BASIS. THIS WOULD RESULT IN A LOWER INFLATION RATE IN YEARS THREE, FOUR AND FIVE, SINCE MOST OF THE LOCAL COSTS (I.E., CONSTRUCTION COSTS), SUBJECT TO A HIGH INFLATION RATE, WILL HAVE BEEN INCURRED IN YEARS ONE AND TWO.

PPC/ECONOMIC AFFAIRS ECONOMIST REPORTS THAT FORECASTERS IN GENERAL EXPECT U.S. INFLATION BETWEEN 1986 AND 1990 TO AVERAGE 5 PERCENT. WITH REGARD TO LOCAL INFLATION RATE, PPC ECONOMIST NOTES THAT EXCHANGE RATE ADJUSTMENTS MAY COMPENSATE IN TIME FOR HIGH INFLATION.

AID/W SUGGEST THAT YEAR ONE COSTS NOT BE 1985 COSTS SUB-TOTALED AND INCREASED BY AN INFLATION FACTOR, BUT THAT EACH LINE ITEM APPEAR AS AN ESTIMATED 1986 COST. U.S. INFLATION IN 1985 IS EXPECTED TO BE 4 PERCENT.

I. AN IEE SHOULD BE COMPLETED AND SUBMITTED TO THE AFRICA BUREAU ENVIRONMENTAL OFFICER AS SOON AS POSSIBLE, AND, IN ANY CASE, PRIOR TO COMPLETION OF PROJECT DESIGN. DAM
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ANNEX B

Log Frame Matrix

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Botswana Primary Education Improvement, Phase II (633-0240)

Life of Project:
From FY 86 to FY 92
Total US Funding \$8.034 million
Date Prepared: 12/11/85

NARRATIVE SUMMARY

OBJECTIVELY VERIFIABLE INDICATORS

MEANS OF VERIFICATION

IMPORTANT ASSUMPTIONS

Program Goal:

Measures of Goal Achievement:

Assumptions for Achieving Goal Targets:

Increase the access, efficiency and relevance of primary education.

Increased numbers and percentages of primary school age children attending primary school.
Students completing additional years of primary education.
Reduction in retention and dropout rates.
Increased scores on Primary School Leaving Examination (PSLE).
Better qualified primary education teaching and supervisory personnel.
Increasing numbers of students and higher achievement at the Junior Secondary level.

MOE national primary school statistics; Standards 4 & 7 and JC test score results.

Expansion of primary education remains a top priority with the GOB.

Project Purpose:

End of Project Status:

Assumptions for Achieving Purpose:

To strengthen the capacity of the Ministry of Education and the University of Botswana to organize, revise and implement effective preservice, inservice and curriculum programs for primary teacher education.

The Ministry of Education and the University of Botswana have the capability (1) to produce qualified MEd degree graduates with a specialization in primary education (five Botswana professors with a PhD); (2) to supply trained manpower to conduct inservice training reaching 85% of all primary schools; and (3) to implement, and periodically update, the revised curriculum at the Primary Teacher Training Colleges.

UB records and reports; Project evaluations; MOE records and evaluation of inservice program and curriculum.

Expansion of primary education remains a top priority with the GOB.
UB will establish regulations regarding MEd specialization in primary education by 1987 in time for the first intake of students.
MOE and UB will support allocation of staff time to inservice and curriculum development.
MOE and UB will give attention to counterpart relationships.

1.1

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title and Number: Botswana Primary Education Improvement, Phase II (633-0240)

Life of Project:

From FY 86 to FY 92

Total US Funding \$8.034 million

Date Prepared: 12/11/85

Assumptions for Achieving Outputs:

Outputs:

Magnitude of Outputs:

A. Preservice:

(1) An established two-year primary education specialization under the MEd program at the University of Botswana.

Regulations of UB governing program established and published in catalog; intake of students: 4-6 in 1987, 6-8 in 1988; graduation of first students in 1989.

UB records for Primary Education Report; Project evaluations; Reports of U.S. university contractor.

GOB will assign participants returning from U.S. with MEd degrees to appropriate positions in the MOE, UB, and the PTTCs.

(2) A gradual increase in the number of students taken in BEd and DPE programs at UB from the current number of 30 up to 50 per year in 1990.

By 1990, BEd and Diploma intake will have increased from 20 to 35 and 10 to 15, respectively.

UB records.

MOE continues to consider this a high priority. Construction of new hostel and PEC extension at UB is completed to accommodate increase in student intake.

(3) A professional, mature staff of Botswana in the Department of Primary Education.

All Botswana staff have MEd degree and five have PhD degree with thesis. Research courses taught; research component accepted by DPE/UB; three research projects in cooperation with MEd students doing field work at PTTCs by 1988; studies related to PTTC curriculum, inservice training, nine-year transition, rural vs. urban schools and other issues by 1991.

UB records and reports of U.S. university contractor.

(4) A core staff at PTTCs sufficiently prepared to assume greater responsibility for the delivery of the Diploma in Primary Education.

All staff have BEd and 20% have MEd; a majority are Botswana.

PTTC records.

GOB will continue to assign BEd degree graduates to PTTCs.

Handwritten initials or mark.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Botswana Primary Education Improvement, Phase II (633-0240)

Outputs: (Continued)

Magnitude of Outputs: (Continued)

Life of Project:

From FY 86 to FY 92

Total US Funding \$8.034 million

Date Prepared: 12/11/85

Assumptions for Achieving Outputs:
(Continued)

B. Inservice:

(1) an established institutional network for the systematic inservice training of teachers in the 518 existing primary schools and the inservice development of education officers and staff at the Primary Teacher Training Colleges (PTTC).

Inservice network in place in four locations by 1987; in 14 locations by 1991 with regional inservice committees organized and functioning, workshops held twice per year with accompanying spin-off workshops.

Reports of U.S. university contractor. MOE inservice records.

The GOB (MOE) fully staffs ECs; After 1987, nine new ECs are constructed (three under PEIP II, six under JSEIP) as scheduled. PTTCs have adequate staff to participate in network; GOB provides logistical support of network activities.

(2) A cadre of resource persons experienced in the delivery of inservice programs.

300 individuals will have participated in staff role in a network workshop or other activity; a majority are Batswana.

Head teachers and senior teachers receiving inservice training under the project will in turn effectively pass on their newly learned teaching techniques to individual teachers serving under them in primary schools throughout the country.

C. Curriculum:

(1) Revised operating core PTTC curriculum.

Core Syllabi at PTTCs have been written in at least one curriculum area by 1987. Core curriculum in all PTTCs and supportive courses of study and instructional materials being used by 1991.

Botswana Teaching Competency model integrated into the teaching methods course and as a guide for teaching practice by 1987.

GOB (MOE and local government authorities) will distribute requisitioned teaching materials, books and supplies to primary schools, especially rural schools, on a timely basis. Affiliated institutions approve curricula.

(2) An upgraded and more fully localized staff at PTTCs who are experienced in curriculum development and implementation.

All staff have BEd; 20% have MEd; a majority are Batswana

PTTC records.

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 86 to FY 92
Total US Funding \$8,034 million
Date Prepared: 12/11/85

Project Title & Number: Botswana Primary Education Improvement, Phase II (633-0240)

NARRATIVE SUMMARY

OBJECTIVELY VERIFIABLE INDICATORS

MEANS OF VERIFICATION

IMPORTANT ASSUMPTIONS

Inputs:

Implementation Target (Type and Quantity):

Assumptions for Providing Inputs:

Technical Assistance:

Long-term Advisors - 28 py

1. Supervision/Administration Specialist, 5 py
2. Specialist in Primary Inservice Education, 5 py
3. Math/Science/Teacher Competency Specialist, 3 py
4. Social Studies Specialist, 2 py
5. Primary Education Specialist, 3 py
6. Research Methods and Design Specialist, 5 py
7. Curriculum and Instructional Design Specialist, 5 py

MOE and UB records;
Progress reports by U.S. university contract team and short-term consultants;
Semi-annual USAID project reviews;
Progress reports by U.S. university contract;
Semi-annual USAID project reviews;
PES and outside project evaluations.

U.S. university contractor will be able to furnish the long-term advisors and consultants required on a timely basis.

Short-term Consultants-36 pm

Training

Long-term

Six Batswana receive 12.0 py of post-Master's training;
Six Batswana receive 6.0 py of MED training.

USAID participant training records.

GOB and UB will be able to identify and release qualified participants as scheduled for long-term training in U.S.

Short-term

Four Batswana receive four to six months each, totaling 24 pm (to be decided in August-December, 1987).

-5-
PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 86 to FY 92
Total US Funding \$8.034 million
Date Prepared: 12/11/85

Project Title & Number: Botswana Primary Education Improvement, Phase II (633-0240)

Commodities:

Books, reference materials;
Instructional aids and
equipment;
Supplies

Commodities procured on a yearly basis
according to procurement and implemen-
tation plan.

Commodity supplies;
Invoices and receipts;
Periodic reviews of
procurement timetable
and records.

Commodity selection and effective
procurement and shipping done on
schedule.

Construction:

Three education centers, one
hostel, and an extension of
the PEC at UB.

Construction completed according to
implementation plan.

Building contractor
records;
Periodic reviews of
construction by AID
engineer.

Site selection and architectural
and engineering studies begun
well in advance of conditions
precedent.

SC(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable generally to FAA funds, and criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 481(h)(1); FY 1985 Continuing Resolution Sec. 528. Has it been determined or certified to the Congress by the President that the government of the recipient country has failed to take adequate measures or steps to prevent narcotic and psychotropic drugs or other controlled substances (as listed in the schedules in section 202 of the Comprehensive Drug Abuse and Prevention Control Act of 1971) which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully?

No such determination or certification has been made.

2. FAA Sec. 481(h)(4). Has the President determined that the recipient country has not taken adequate steps to prevent (a) the processing, in (a) No. whole or in part, in such country of narcotic and psychotropic drugs or other controlled substances, (b) the (b) No. transportation through such country of narcotic and psychotropic drugs or other controlled substances, and (c) (c) No. the use of such country as a refuge for illegal drug traffickers?

3. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government? (a) No. (b) No.
4. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? No.
5. FAA Sec. 620(a), 620(f), 620(D); FY 1985 Continuing Resolution Sec. 512 and 513. Is recipient country a Communist country? If so, has the President determined that assistance to the country is important to the national interests of the United States? Will assistance be provided to Angola, Cambodia, Cuba, Laos, Syria, Vietnam, Libya, or South Yemen? Will assistance be provided to Afghanistan or Mozambique without a waiver? No. No. No.
6. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property? No.

7. FAA Sec. 620(l). Has the country failed to enter into an agreement with OPIC? Yes. This has been taken into consideration by the Administrator in establishing OYB levels.
8. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters? (a) No.
- (b) If so, has any deduction required by the Fishermen's Protective Act been made? N/A
9. FAA Sec. 620(c); FY 1985 Continuing Resolution Sec. 518. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any AID loan to the country? (a) No
- (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the appropriation bill (or continuing resolution) appropriates funds? (b) No.
10. FAA SEC. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the amount of foreign exchange or other resources which the country has spent on military equipment? Yes. Historically only 8.5% of the GOB's total budget has been spent on military equipment and no money has been spent on sophisticated weapons systems.
- (Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

11. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?

No.

N/A.

12. FAA Sec. 620(u) What is the payment status of the country's U.N. obligations? If the country is in arrears were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? (Reference may be made to the Taking into Consideration memo.)

As of June ,1984, Botswana was slightly in arrears of its UN contribution, but was not delinquent for purposes of Article 10 of the UN Charter. This was taken into consideration at the FY85 OYB Approval. (November 1984).

13. FAA Sec. 620A; FY 1985 Continuing Resolution Sec. 521. Has the President determined that the country (a) grants sanctuary from prosecution to any individual or group which has committed an act of international terrorism, or (b) otherwise supports international terrorism? Has the government of the recipient country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed or is being sought by any other government for prosecution for any war crime or act of international terrorism?

(a) No.

(b) No.

No.

14. ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures?

No.

15. FAA Sec. 666. Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA? No.
16. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.) No.
17. FAA Sec. 670. If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported illegally (or attempted to export illegally) from the United States any material, equipment, or technology which would contribute significantly to the ability of such country to manufacture a nuclear explosive device? No.

18. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. of Sept. 25 and 28, 1981, and failed to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.)

Botswana was present at such a meeting and has not subsequently taken steps to disassociate itself from the communique. (This was taken into consideration at the time of the last OYE approval).

19. FY 1985 Continuing Resolution. If assistance is from the population functional account, does the country (or organization) include as part of its population planning programs involuntary abortion?

Not applicable

20. FY 1985 Continuing Resolution Sec. 530. Has the recipient country been determined by the President to have engaged in a consistent pattern of opposition to the foreign policy of the United States?

No.

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria

Not a DA country.

FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

Not applicable.

2. Economic Support Fund
Country Criteria

FAA Sec. 502B. Has it been
determined that the country
has engaged in a consistent
pattern of gross violations
of internationally
recognized human rights?

If so, has the country
made such significant
improvements in its human
rights record that
furnishing such assistance
is in the national interest?

No.

Not applicable.

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: B.1. applies to all projects funded with Development Assistance loans, and B.3. applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes. Yes.

A. GENERAL CRITERIA FOR PROJECT

1. FY 1985 Continuing Resolution Sec. 525; FAA Sec. 634A.

Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project.

The CN was submitted on March 17, 1986 and the waiting period expired on April 1, 1986 without objection.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

(a) Yes.

(b) Yes.

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No further legislative action is required.

4. FAA Sec. 611(b); FY 1985
Continuing Resolution Sec.
501. If for water or
water-related land resource
construction, has project met
the principles, standards,
and procedures established
pursuant to the Water
Resources Planning Act (42
U.S.C. 1962, et seq.)? (See
AID Handbook 3 for new
guidelines.) Not applicable.
5. FAA Sec. 611(e). If project
is capital assistance (e.g.,
construction), and all U.S.
assistance for it will exceed
\$1 million, has Mission
Director certified and
Regional Assistant
Administrator taken into
consideration the country's
capability effectively to
maintain and utilize the
project? Yes. See PP 611(e) Certification
Attachment.
6. FAA Sec. 209. Is project
susceptible to execution as
part of regional or
multilateral project? If so,
why is project not so
executed? Information and
conclusion whether assistance
will encourage regional
development programs. No.
Not applicable
Not applicable
7. FAA Sec. 601(a). Information
and conclusions whether
projects will encourage
efforts of the country to:
(a) increase the flow of
international trade; (b)
foster private initiative and
competition; and (c)
encourage development and use
of cooperatives, and credit
unions, and savings and loan
associations; (d) discourage
monopolistic practices; (e)
improve technical efficiency
of industry, agriculture and
commerce; and (f) strengthen
free labor unions. The Project will strengthen the
capacity of the Ministry of Education
and the University of Botswana to
organize, revise and implement effect-
ive preservice, inservice and curriculum
programs for primary teacher education.
Indirectly, these efforts should
result in improvements in (a) thru (f).

8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- The project will fund U.S. technical assistance and training.
9. FAA Sec. 612(b), 636(h); FY 1985 Continuing Resolution Sec. 507. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.
- The GOB will contribute approximately 25% of the total project costs, in spite of the fact that Botswana is a RLDC.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- Botswana is not an excess foreign currency country.
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?
- Yes
12. FY 1985 Continuing Resolution Sec. 522. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?
- Not applicable.

13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16. Does the project or program take into consideration the problem of the destruction of tropical forests?

Yes. See PP Section X

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

Not applicable.

15. FY 1985 Continuing Resolution Sec. 536. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution?

No.

16. ISDCA of 1985 Sec. 310. For development assistance projects, how much of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)?

Not applicable to ESF projects, but Gray amendment entities will be actively sought for subcontracting opportunities.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance
Project Criteria

Not a DA project.

- a. FAA Sec. 102(a), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status, (e) utilize and encourage regional cooperation by developing countries?

N/A

- b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? N/A
- c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? N/A
- d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed country)? N/A
- e. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth? N/A

f. FAA Sec. 128(b). . If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

N/A

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

N/A

2. Development Assistance Project
Criteria (Loans Only)

Not a DA loan funded project.

- a. FAA Sec. 122(b).
Information and conclusion on capacity of the country to repay the loan, at a reasonable rate of interest. N/A
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan? N/A

3. Economic Support Fund Project
Criteria

- a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of part I of the FAA? Yes.
- b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities? No.
- c. ISDCA of 1985 Sec. 207. Will ESF funds be used to finance the construction of, or the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified No.

that such country is a party to the Treaty on the Non-Proliferation of Nuclear Weapons or the Treaty for the Prohibition of Nuclear Weapons in Latin America (the "Treaty of Tlatelolco"), cooperates fully with the IAEA, and pursues nonproliferation policies consistent with those of the United States?

- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

Not applicable.

SC(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? Yes.
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?? Yes.
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? Not applicable to Botswana.
4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.) Not applicable to project.

5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries which receive direct economic assistance under the FAA and which are otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? Do these countries permit United States firms to compete for construction or engineering services financed from assistance programs of these countries?

No.

6. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates?

Shipping will comply with said requirement.

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

Yes.

No PASA/RASA's are contemplated.

8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available?

Yes.

9. FY 1985 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States?

All direct AID contracts will so provide.

B. Construction

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used?

No. Construction activities to be jointly financed by the U.S. and GOB will be undertaken under FAR procedures with local construction firms. There are no U.S. firms resident in the area.

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?

Yes.

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)?

Not applicable.

C. Other Restrictions

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? Not applicable.

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? Not applicable.

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? Yes.

4. Will arrangements preclude use of financing:
 - a. FAA Sec. 104(f); FY 1985 Continuing Resolution Sec. 527. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo Yes.

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sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion?

(3) Yes.

(4) Yes.

- b. FAA Sec. 488. To reimburse persons, in the form of cash payments, whose illicit drug crops are eradicated? Yes.
- c. FAA Sec. 620(g). To compensate owners for expropriated nationalized property? Yes.
- d. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes.
- e. FAA Sec. 662. For CIA activities? Yes.
- f. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes. Southern Africa CY86 light weight vehicle waiver applies.

- g. FY 1985 Continuing Resolution, Sec. 503.
To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel? Yes.
- h. FY 1985 Continuing Resolution, Sec. 505.
To pay U.N. assessments, arrearages or dues? Yes.
- i. FY 1985 Continuing Resolution, Sec. 506.
To carry out provisions of FAA section 209(d) (Transfer of FAA funds to multilateral organizations for lending)? Yes.
- j. FY 1985 Continuing Resolution, Sec. 510.
To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields? Yes.
- k. FY 1985 Continuing Resolution, Sec. 511.
Will assistance be provided for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? No.
- l. FY 1985 Continuing Resolution, Sec. 516.
To be used for publicity or propaganda purposes within U.S. not authorized by Congress? Yes.

ANNEX D

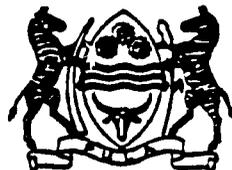
Grantee's Request for Assistance

TELEPHONE

TELEGRAMS FINANCE

REFERENCE

FDP 71/4/3 IV



REPUBLIC OF BOTSWANA

MINISTRY OF FINANCE AND DEVELOPMENT PLANNING

PRIVATE BAG 008

GABORONE

ANNEX D

4th March, 1986

The Director
USAID
P.O. Box 90,
Gaborone.

Dear Sir,

REQUEST FOR PHASE II, PEIP

Please refer to our letter of even reference dated 3rd August 1984.

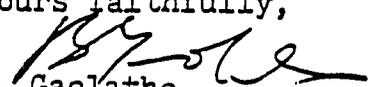
Further consideration has been given to our previous request and following discussions with USAID officers on the most appropriate project design we are now submitting for USAID consideration the PEIP II request with the following broad objectives:

- a) Develop and implement a Master's of Education Programme in Primary Education at the University of Botswana.
- b) Train at least six staff members of the Department of Primary Education at the University of Botswana at a Post Masters level and six staff members of the Ministry of Education at a master's level.
- c) Gradually increase the intake of the Bachelor of Education degree candidates in Primary Education from 20 to 35 and Diploma in Primary Education intake from 10 to 15.
- d) Develop a research programme in the Department of Primary Education of the University of Botswana.
- e) Establish the feasibility and develop a pilot project for a part time Diploma in Primary Education at a Primary Teacher Training College.
- f) Develop revised curricula for Primary Teacher Training Colleges.

It is also requested that an up-grading programme for unqualified teachers be included to improve the quality of Primary Education.

Your Cooperation will be much appreciated.

Yours faithfully,


B. Gaolathe

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ANNEX E

FAA 611 (e) CERTIFICATION

As the Principal Officer for the Agency for International Development in Botswana, having taken into account, among other things, the maintenance and utilization of projects in Botswana previously financed or assisted by the United States, the performance of the Ministry of Education which has responsibility for implementing education activities, and the previous assistance from other donors specifically directed to education projects, I do hereby certify that in my judgement the Government of Botswana has both the financial capability and the human resource capability to effectively maintain and utilize the capital assistance to be carried out under the Primary Education Improvement Project, Phase II. Capital assistance provided under this project will include (1) construction of three education centers, a three-room addition to the existing Primary Education Center at the University of Botswana (UB) and a 108-bed hostel at UB; (2) equipment for these facilities including office and audio/visual equipment, microcomputers, and portable generators and (3) three vehicles for the technical assistance team.

Paul Guedet
Paul Guedet, Director
USAID/Botswana

3/27/86
Date

ANNEX F

Project Analyses

TECHNICAL ANALYSIS

This section will examine the technical feasibility of the Primary Education Improvement Project II (PEIP II) as a means to address the problems of educational access and quality through interventions in the system of teacher education and leadership. Consideration will be given to the rationale underlying project goal and purpose which have been selected. The appropriateness of the project design will be addressed.

I. Project Basis

The continuing problem which confronts Botswana in respect to nation-wide efforts to achieve universal primary education and to improve the quality of educational opportunity provided to young Botswana is the basis for the proposed project. An analysis of data which were presented in the publication, Education Statistics, Part I, 1984, Ministry of Education, Botswana, identifies the continuing needs in the areas of teacher preparation, inservice programs and curriculum development. The report of the National Commission on Education, Education for Kagisano, April 1977, affords important reference points for assessing the extent and impact of the national effort since 1977 to deal with access and quality in the move toward universal primary education. The Botswana Education and Human Resources Sector Assessment of June 1984 and the Botswana IEES Country Plan of June 1985 provide further documentation and analyses of the current problems in the primary education area.

A combination of problems has led to serious constraints in primary education. One constraint, related to the quality of instruction, involves the problem of teacher training. The present system for preparing teachers does not seem to facilitate improved classroom achievement as measured by the PSLE. A second constraint is the high cost of reaching the 15% of primary school age children not now enrolled. In spite of a lack of classrooms and staff housing, marginally low salaries, untrained teachers and limited facilities for teacher training, the MOE has taken some practical steps to alleviate the situation. The primary school curriculum has been revised and is being introduced into the schools through inservice workshops with the help of PEIP. A new PTTC has been built to provide approximately 150-175 more primary teacher graduates per year. Under PEIP II, the PTTC curriculum will be revised to mesh with the revised primary curriculum. The World Bank and the ADB will be building more primary classrooms, and the Faculty of Education at UB is being strengthened to accommodate more BEd and DPE candidates who will become tutors in the PTTCs, education officers and head teachers in the primary schools. Through a mature age entry system, MOE officials and experienced teachers are admitted to advanced programs to upgrade their skills as supervisors and education officers.

To coordinate the MOE/UB efforts to improve educational opportunities for children and teachers, the MOE has proposed the creation of a Department responsible for Teacher Education, which has been approved in principle, but has not yet become a reality. Such a department would improve managerial effectiveness of both inservice and preservice education and revise the structure and staffing responsible for system-wide operations.

The project plan takes into full account the intentions of the GOB in the area of primary education as stated in the National Development Plan 6. In

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the Education Chapter of that document, the needs of children with special learning problems were identified as requiring attention at the regular school level rather than in special institutions.

Improvement of the skills of teachers through continuation of inservice programs was viewed as a continuing priority with a call for emphasis upon nine year basic education as an inservice theme. The GOB intends to proceed with the establishment of nine new education centers as key sites for intensified inservice education.

The NDP 6 calls for the continuation and extension of the "multiplier effect" strategy for the offering of inservice workshops across the nation, a strategy that was initiated early in PEIP I as a collaborative effort by the MOE, UB, the PTTCs, and the IC team. PEIP II will continue to assist in the effort to maximize the use of the multiplier strategy through the wider involvement of PTTC faculty in coordinated activities sited at the education centers and colleges.

AID-sponsored activities which have been directed toward alleviation of the problems have been documented in the seven semi-annual reports of the work undertaken by the contract team within the scope of the Primary Education Improvement Project. The experiences gained during the first four years of the PEIP project provide a framework for determining the technical feasibility of the design and the strategies for PEIP II. Although PEIP II will pursue a set of goals and a major purpose that are distinct from PEIP I, the strategies that have proven effective and productive in PEIP I must be taken into consideration in the environment and working relationships of PEIP II activities.

The purpose and goal of the PEIP II are responsive to the continuing needs in teacher education and are specifically responsive to needs that have not been previously addressed in a comprehensive, systematic manner. They are compatible with USAID/Botswana's Country Development Strategy Statement, as regards the response to problems in the primary education sector, particularly the employability of primary leavers. The subsequent problem of preparing teachers to present a more practical curriculum is a related concern of the CDSS.

A. Goal and Purpose

The goal of the proposed project is to increase the access, efficiency and relevance of primary education in Botswana. The purpose of PEIP II is to contribute to the realization of this goal by assisting the University of Botswana to develop a permanent capability to prepare to advanced levels of knowledge and skills those Botswana who currently hold, or who will assume within the future, key roles in the system of preservice and inservice teacher education. Of equal importance in the attainment of this goal will be curriculum development in the teacher training colleges that is needed to prepare teachers to function effectively in the new nine year plan of basic education; this will assure an articulation of educational experience from Primary Standard I through the final form of the Junior Secondary School. A third aspect of the project will address the need for inservice education for teacher training college staff, education officers and head teachers to complete a full scale undertaking to increase access to efficiency and relevance of primary education.

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PEIP II will move from the firm foundation that was built through the work of PEIP I which has accomplished its purpose of (1) establishing in the University of Botswana the permanent capacity to provide preservice training through the creation of a four year professional Bachelor of Education degree program and the creation of a two year Diploma program, and (2) of strengthening the capacity of the Ministry of Education, in cooperation with UB, to organize and implement effective inservice programs for teachers and supervisory staff involved in primary education.

The first graduates from the BEd program and the DPE program have taken up positions as tutors in the teacher training colleges, as education officers, and as head teachers in the schools. Nine Batswana have returned from participant training in the U.S. to take up lecturer positions in the Faculty of Education, thus providing the advanced, specialized teaching capability which is necessary in making the Department of Primary Education a permanent entity with the capacity for preparing the professional personnel who will sustain the improvement of primary education. By 1991, assuming the continued assignment of BEd graduates to the PTTCs, the faculties there will be effectively localized. Thus, in order to insure the localization of the colleges, the project calls for a greater increase in the number of BEd candidates as compared with those seeking Diplomas.

The localization of the Department of Primary Education is an important element in establishing a "permanent capacity" in the UB for professional preparation of personnel to fill important roles in primary education. In the context of UB, and of many universities around the world, localization can be defined operationally as the condition in which "all individuals necessary to localize the faculty have been prepared to requisite levels to assume leadership roles."

In the instance of the DPE at UB, it is recognized that university governance procedures and MOE policies relating to assignment of personnel must be taken into account. The assignment of 5 Batswana with MEd degrees to the DPE and the provision in the project for preparation to the PhD level of five lecturers will, most assuredly, put highly qualified Batswana in effective control of the further development and operation of this department. However, due to University constraints on the number of years in service and degree levels, a Mtswana may not have been appointed as head of the DPE by 1991 although many will be academically qualified for such responsibility.

Within the context of UB, the localized DPE will provide a major force for the advancement of higher education that reflects the national purpose and the character of its people. In respect to primary education, the highest level of training programs, the BEd degree and MEd degree, will be in the hands of Batswana faculty who are prepared to levels that match, and often exceed, the levels of other departmental faculties.

B. Rationale for Project Objectives

At the outset, it is necessary to emphasize that the objectives of PEIP II will neither ignore nor neglect the unfinished business of PEIP I. The fact that the multiplier effect strategy for inservice education has proven to be so successful suggests that PEIP I continue to provide leadership and consultative assistance to primary education workshops as did PEIP I. The long range goal of PEIP II in this respect will be to pursue

the preparation of ECs and PTTC tutors for wider participation in the network of linkages that will make a range of human and material resources available to improved inservice education. It must be recalled that sixty percent of the primary teachers had not been reached through inservice after four years of PEIP I, that the percentage of untrained teachers is projected to persist at about 30% through 1990 and that attention to inservice must be increased.

The 1985 Evaluation Report of PEIP I, carried out by Dr. Patrick Lynch, points up the urgent need for more qualified leaders of the inservice activity and, specifically, looks to PEIP II to assist with the preparation of such persons; and although Dr. Lynch recommends that the long term role of the DPE in the inservice programs be limited to research, he recommends short term work with inservice workshops, particularly with the Phase II plan.

The objectives of PEIP II are logical progressions from the accomplishments of PEIP I, turning now to the need to establish the permanent capacity to prepare to the MEd degree level a cadre of professionals who will provide leadership in the further development of the teacher training colleges and in the policy making and planning processes in the Ministry of Education. The complex problems associated with the move toward universal primary education require advanced leadership and management skills which are associated with preparation to the graduate degree level. As a result of the success of PEIP I, the large majority of tutors in the training colleges will possess, by 1990, the BEd degree with special expertise in teacher training. The opportunities for upgrading the total program of the PTTCs are thus greatly enhanced and, to be realized, will require the leadership of principals and assistant principals who are prepared beyond the level of the BEd degree.

A goal of the GOB is to bring the inservice education of primary teachers, head teachers and education officers nearer to all the schools of the nation. PEIP II will assist in the organizing of inservice activities at the existing, and new, education centers, utilizing the resources of the teacher training colleges to the greatest extent possible. Emphasis on pursuing this objective will be upon developing the capability of the PTTCs as resources for inservice education and in strengthening the relationships among these colleges, the education centers, and UB. This objective is consistent with the GOB goal of decentralizing many of the essential services to the schools, a goal that calls for identification and use of resources that are distributed throughout the nation.

The approach that is presented here will complement the work of the JSEIP, regarding the construction and utilization of education centers as major inservice sites for both primary and junior secondary educators.

The objective that pertains to the support of curriculum development in the teacher training colleges is a response to the need to bridge the gap between the evolving curriculum of the primary schools and the preparation of the teachers for those schools. Already under way is the move toward a competency model of teaching. The regional education officers have taken the lead in assessing the needs of the existing cadre of primary teachers regarding those aspects of effective teaching which they believe to be of great importance in their work with children. It is expected that the results of this study, in which PEIP I has cooperated, will provide one of

the points of departure for curriculum study, revision and development in the PTTCs as an important element of PEIP II.

It is appropriate to point out the complex nature of the effort to develop curriculum in the PTTCs that will embody a Botswana teaching competency model. The primary aim is to directly address the teaching competency for the benefit of the teacher trainees in the PTTCs. Materials and strategies to accomplish this are already under consideration by MOE officials, PEIP I advisors and the EOs. A more complex task that will be undertaken in PEIP II will be to explore the ways in which the PTTC curriculum will be implemented through instruction which employs the competency model. This is based upon the long known fact that persons tend to use those teaching methods that they have experienced as pupils and later as students in PTTCs. This particular objective relates closely to concerns expressed by F.A. Cammaerts in his Advice Paper on the Junior Secondary School (October 1981).

The objectives of the project are based upon a rationale which was proven, through the experience and outcomes of PEIP I, to be appropriate to Botswana as a valid framework for collaborative effort. As PEIP II moves from the BEd program development to the MEd program development, from curriculum development in the primary schools to a focus on curriculum development in the teacher training colleges, and from inservice for primary teachers to inservice for all teacher educators, the early pattern of close collaboration among all concerned segments of Botswana education will be maintained and strengthened where necessary.

II. Feasibility of Project Design

This section of the Technical Analysis will describe the feasibility of the project design in respect to its strength, taking into account constraints that may affect, to a greater or lesser degree, the attainment of desired outcome.

A. Technical Strengths

The project is designed to provide a carefully coordinated developmental approach to the three major elements of the activity as follows:

1. The development of the MEd degree primary specialization program at the UB will draw upon studies and assessments of teacher training college needs to provide direction with regard to curriculum content. The participant training to the doctoral level of selected Botswana will produce the localized faculty base for the new MEd program.

The involvement of the Botswana faculty in the new program development has already begun.

The present Master of Education degree program at UB will provide important resources for the new primary education specialization. For example, the basic research course, EMR502, Advanced Educational Research Methods and Seminar, presently a required core course of all MEd degree students, will likely be appropriate for the primary education specialists. The course, EMR 504, Research in Primary and Secondary Education, may be useful in some individual programs.

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Dissertation projects under the new specialization will occupy the second year of the MEd degree program, and it is at this juncture that the PEIP II research specialist will provide individualized guidance in dealing with research topics that focus on primary education and teacher education.

Batswana faculty members in the DPE will assume leadership roles in identifying and developing those full and half course offerings in primary education that will be needed, since no graduate level courses are available now. The entire matter of development of the specialization will require a broadly consultative approach.

2. The problem areas of teacher education will be subjects of dissertation research projects of MEd degree students in the Faculty of Education.
3. The PEIP II team members will be involved in supporting all three major phases of activity, thus providing a highly integrated approach.
4. The PEIP II team will work within a cooperative framework established during PEIP I which assures that channels of communication and cooperation are available and used as in the case of the PEIP I Advisory Committee which has representation from MOE, UB, headteachers, teacher training colleges, USAID, UTS and the Primary Teachers' Union.
5. The inservice activity will bring together education officers, teacher training college principals and faculty, head teachers, MOE inservice officers, UB faculty and the PEIP II team in the identification of topics, the planning and implementation of activities, and the evaluation thereof. Information gained from the inservice activities will be used in on-going curriculum studies at both the PTTCs and the UB, and in the research projects of MEd degree students.
6. The MEd degree and BEd degree students will be involved at various stages in project activities at both the PTTCs and the education centers, hence forging working links with the teacher education system, gaining educational benefits from the experiences, and extending contacts with future colleagues.
7. The research components of PEIP II will be based at the UB. The new MEd degree program specialization will draw upon courses in research design, research methodology and call for assistance in the direction of dissertations carried on by Batswana students. An additional dimension of PEIP II will include involvement in, and support of, the research being carried out by Batswana doctoral and masters' students abroad. Links among the MOE, UB and the Botswana National Institute of Research will help to insure that topics of relevance to Botswana education are being considered, and that support for field work in Botswana is assured. The full participation of Batswana faculty will be required to launch this research component.

Similar linkages between the research components and the PTTCs will be established in order that the problems of teacher education will be given full consideration, and that opportunities for collaborative research projects will be enhanced, involving investigations carried out by joint teams from PTTCs and the UB, a strong recommendation of the Lynch Evaluation Report of 1985.

8. The project will provide academic support to both master's degree and doctoral degree students who pursue studies outside Botswana. In cases where it is deemed appropriate, team members and Botswana faculty who have graduate professional status, will assist in the direction of dissertation work that can be carried out in Botswana, thus increasing the relevance and validity of such studies. In some instances, where it would be academically sound and economically efficient to do so, the dissertation defense may be scheduled in Botswana.

With respect to master's level studies out of country, it is planned to offer selected introductory courses, such as Comparative Education and Research Methodology, to students prior to their leaving Botswana. Such courses would be offered only by contractor's team members who hold graduate faculty status and would be recorded as course credit earned in an American university. Participants will be assigned to American universities where their program goals will be best met. The IC will play a key role in assuring the greatest benefit from study abroad.

9. The education centers will be key sites of inservice education activity, supported by a network that will provide for continuing working relations between each education center and a designated PTTC. The effect will be to encourage localization of the inservice activity by placing the primary decision-making at the regional level with professional support being drawn from education officers, PTTC staff and the Department of Primary Education at UB. Liaison will be formally established with JSEIP to assure access to appropriate resources, to enhance articulation of the nine year basic education program across primary and junior secondary years, and to provide articulation of the nine year basic education program across primary and junior secondary years, and to provide the broadest base of consultative support for the inservice effort at the regional level.

10. The curriculum development output concerned with a core curriculum in the primary teacher training colleges will be pursued in a most deliberate manner, due to the importance of articulation with the curriculum of the junior secondary College of Education. During the final months of PEIP I, actions have been initiated at several levels to lay the groundwork for early and continuing collaboration of JSEIP, of the PTTCs, of the MOE, of UB and of USAID on this matter. These actions include discussions with the College of Education principal, the JSEIP administrator, and key persons at UB.

The complexity of the curriculum development component cannot be overstated. The flushing out of the complete concept of the nine year basic education plan and what it can mean to the creation of an education program that is responsive to employment realities, as well as to further education requirements, represents an undertaking that will eventually involve the entire education sector and a large section of Botswana society. Teacher education curricula must take full account of the emerging nine year basic education plan. PEIP II will exploit all possible collaborative opportunities for moving in this activity.

11. The staffing pattern for PEIP II will reflect completely the major elements of the project activity, including the necessary transition requirements associated with PEIP I. Four technicians will continue during the entire life-of-project to insure the stability of the MEd/BEd/DPE

programs in the Department of Primary Education. Three out of the four have been serving under the PEIP I project; so there should be little or no interruption in the transition to PEIP II. The COP (Administration and Supervision), the Primary Inservice Education expert at the Ministry of Education, and the Primary Math/Science expert will continue their services; the Research Methods and Design specialist and the Curriculum/Instructional Design specialist will work with MEd and PTTC personnel, respectively, and be in-country during the LOP. Two positions, the math/science specialist and the social studies specialist, will assume unbroken functioning of the BEd degree program while two Botswana pursue doctoral studies in the U.S. Upon return to Botswana, these two lecturers will assume key roles in the new MEd degree specialization in primary education, and the two IC faculty members will complete their assignment. A research and development specialist will play an important part in the development of the MEd degree specialization, particularly the research component, and will teach basic research methodology and design courses. This specialist will liaise with the Botswana Educational Research Association and other units concerned with the research dimension of teacher education. In view of the move toward the nine year basic education plan and its implications for teacher training curriculum, one project position has been assigned to curriculum development and inservice education. The latter element is reasonably included since much work which involves inservice for PTTC staff will relate to the nine year basic program.

The chief project administrator will most probably provide a critical resource in the administration/supervision areas. The importance which GOB attaches to the rapid upgrading of leadership skills on the part of head teachers, deputy heads and CECs requires that this specialist position have open access to those elements of PEIP's operations that relate to leadership training.

Remaining PEIP II staff requirements will be dictated by developments that relate to specific participant training decisions. Depending upon the final selection of the Botswana lecturer by the University for post-master's study, the Primary Education specialist will serve for three years, beginning in the third year of the project, in one of the following areas: mathematics, curriculum development, media/instructional technology, educational administration, child growth and development, and the teaching of English as a second language. The composition of the team must at all times be relevant to the project needs, needs which will reflect the status of progress toward the accepted goal and purpose of the project. Careful estimations have been made here, but the dynamic nature of the project activities that relate to the PTTC curriculum development and to the inservice network scheme may require staffing adjustments later on.

The PEIP II team will provide specialists who are experienced in African educational development, generally, and in Botswana, recently. Well qualified professors in graduate level education will lend necessary credibility to the new MEd degree program. The resources of the IC's academic departments will support the PEIP II team.

The staffing of PEIP II provides for the "counterpart" relationships to grow as a result of the complete integration of team members into the work of the DPE. Botswana and PEIP team members have attained a departmental level relationship that exceeds the one-to-one relationships that typify so many counterpart situations.

12. The design team for the project paper has included specialists who are experienced in African educational development, persons who have served on the original design team for the PEIP I and who have had a continuing involvement with the implementation of the PEIP I. Thus the design and implementation plan for the PEIP II have taken into account the successes and shortcomings of PEIP I, the strategies that were most effective and those that were not; this method should greatly increase the prospects for a successful PEIP II.

B. Practicality and Suitability

The objectives of PEIP II are derived from the educational needs which have been documented and verified through numerous studies, and recommendations drawn, since the 1977 Education for Kagisano report. The continuing goal of the GOB regarding universal primary education is supported by the project objectives, thus assuring understanding and commitment of the Batswana.

As has been earlier stated, the design team has worked closely and extensively with a broad spectrum of Botswana education and has drawn on the experiences of the PEIP I for guidance.

The project will use approaches that have been proven practical in the Botswana context; it will pursue objectives proven to be suitable to the educational goals of the nation.

C. Related Considerations

There are several related considerations which had implications for the greatest measure of project success. They are presented here with brief comment as to the capability of the project design to deal with them.

1. First is the matter of localizing the inservice of primary educators through the network which will draw upon the education centers, the primary teacher training colleges, the education officers and the DPE of UB.

The education centers, with expanded responsibilities, will require leadership of high quality if the complex relationships and wide range of demands for services are to be dealt with efficiently and effectively.

The PTTCs will, under the localized inservice scheme, be expected to provide staff resources and to develop inservice curriculum materials. They will also be called upon to develop new curriculum materials that are most closely geared to Botswana educational realities.

The DPE in UB will gradually assume an expanded support role to the education centers and the PTTCs, such a role to include consultation in planning, implementation, evaluation and research.

It is imperative that the UB give thorough consideration to the expanded responsibilities of the lecturers who have such a critical part to play at this juncture. The PEIP II advisors who teach in the BEd and MEd degree program, along with their Batswana colleagues, will need the consideration of UB academic administration in the recognition of the work that is to be done in the interest of educational advancement in the schools. The success

of highly coordinated activities will assume that the energies and talents of those lecturers and advisors are available for a reasonable portion of time each year.

2. The participation of the PTTCs in their expanded roles in inservice and curriculum development requires similar consideration regarding availability of faculty resources. The MOE is already exploring ways to deal with this challenge.

3. The PEIP II will plan, with the guidance of PTTC principals, education center directors, and inservice specialists, the matter of providing faculty development courses that will prepare persons to effectively deal with inservice and curriculum development responsibilities.

4. Finally, the problem of instructional materials that are relevant to Botswana teacher education persists. Commercial publishing houses do not find it profitable to be aggressive in a market as limited as 1,000 teacher education students in four teacher training colleges. The PEIP II activity in curriculum development will attack this problem through the use of joint writing teams composed of appropriate subject specialists from PTTCs and the UB, supported by short term consultants who have proven expertise in the preparation of text materials.

5. A similar approach will be used in the creation and production of video tapes for use in the PTTCs as part of the curriculum in classroom management and teaching methods. The curriculum specialist on the PEIP II team will have primary responsibility for coordinating these developments.

6. The matter of continuous and effective links to JSEIP appears to call for a systematic approach by the MOE to formalize the early working relationship into some operational structure that will serve beyond the lives of PEIP II and JSEIP.

III. Project Efficiency

The efficiency of the PEIP II Project will be greatly enhanced through the application of information derived from PEIP I experiences and the use of the well developed relationships that exist as one outcome of PEIP I. The PEIP II design provides for the widest appropriate development and use of known resources, something that will require the maintenance of working relationships across the entire education sector. The scope of work that is set for each project team member and the primary work location of each provides a day-to-day linkage with the MOE, the UB, the PTTCs and the EOs. The Advisory Committee membership, which now includes representation from the JSEIP, will continue to be an important consultative body concerned with the relevance and efficiency of project operations.

The PEIP I contractor made available the resources of an African Studies Center and assured consultative access to professors with African expertise in a wide range of fields, a partial product of more than a quarter century of work in African educational development. The PEIP II will continue to have access to these resources which prove to contribute so greatly to the efficiency factor in dealing with the training of masters' and doctoral level students.

In summary, the PEIP II will provide an activity that will be highly efficient in the use of already established structures for cooperation, to be built on widely accepted assessments of needs and recent experience of successful accomplishment. The design responds realistically to the Botswana situation and, finally, exploits in a complete fashion the resources of the contractor's main campus which is perhaps best demonstrated by the long-term relationship with UB.

Within the life-of-project, it is expected that the project goal and purpose will be attained. It is premature to judge at this time the needs of the primary education subsector that will exist by the end of the project. It is anticipated that any further need for technical assistance could be satisfied through the services of directly employed consultants. At this time, it would appear that the inservice network scheme which will serve the primary school system will be functioning in 1991 in spite of the fact that some education centers will not have been built and staffed. The continuing development of the nine year basic education plan may also produce continuing challenges to the teacher training curriculum which would justify some measure of external support.

It should be recognized that other developments in the education sector during the course of PEIP II may affect the efforts to strengthen preservice and inservice programs for teacher educators. The Diploma program at Molepolole may attract some of the better qualified graduates of Form V away from the PTTC Certificate programs. If the Junior Secondary Teacher Training program moves to become a degree program in the near term, it would present attractive options to qualified Botswana, who might otherwise pursue a career in the primary field. These prospects, and the continuing surge of primary enrollments, may take a toll on the efforts to reduce the cadre of untrained teachers and to localize the professional staffs in PTTCs and education centers with the graduates of the BEd. and Diploma programs in primary education.

IV. Summary Statement

All agencies involved in the preparation of this project (the Ohio University team, USAID, and various MOE and UB officials and advisers who participated on the GOB side) agree that the project is well suited and fully equipped to attack the problems of primary education in Botswana and to make headway in the effort to increase the access, efficiency and relevance of primary education for the youth of this country. The project aims at increasing both the quantity and quality of Botswana primary school educators at the most critical levels--UB primary education specialists, PTTC staff, head teachers, education officers--where leverage and the multiplier effect are greatest.

COST ESTIMATES AND NOTES

This annex contains estimated annual costs for long-term participant training conducted in the United States, monthly costs for short-term U.S. training, detailed projected costs for a one-year contract for long-term technicians, monthly costs for short-term consultants, elements and cost estimates of GOB's contribution, and an overall assessment of the financial procedures used by the GOB.

I. Participant Costs:

Long-term academic training in the United States averages \$1,800 per month or \$21,600 annually. This excludes round-trip airfare which is estimated at \$2,800 per participant and covered by the GOB. Short-term technical training in the United States averages \$3,000 per month, excluding round-trip airfare. Similar to long-term participants, the GOB is also providing airfare for the short-term participants as part of its contribution to the project.

II. Technician Annual Costs:

The following detailed estimated costs include a long-term technician plus support costs for the technician and three dependents (spouse and two children).

X	Estimated salary	\$45,000
X	Post Differential @ 10% of salary	4,500
X	Fringe Benefits @ 25% of salary	11,300
X	Household Effects (storage & shipping costs)	10,000
X	Airfare, one-way @ \$1800 for each person	7,200
X	Air freight @ \$9/lb. for 700 lbs.	6,300
	Education Allowance (primary \$1500/yr. and secondary \$1800/yr)	3,300
	Guard Service	5,000
	R&R Travel @ \$2,400 each, pro-rated over 2 years	4,800
	Contractor's Field Overhead (est. @ 40% of total direct cost line items "X")	33,700
	Contractor's Home Office Expenses & overhead for each technician	16,000
	Sub-total	<u>147,100</u>
	5% Contingency	7,900
	Total	<u>\$155,000</u>

III. Short-term Consultant Costs:

Monthly costs for an average consultant consist of the following items:

Salary @ \$200/day for 20 workdays	\$4,000
Round-Trip airfare, U.S/Botswana/U.S..	2,800
Per Diem for 30 days (50% of per diem rate since housing provided)	900
Contractor Overhead @ 40% of Direct Costs	3,100
Miscellaneous	200
	<hr/>
Total	\$11,000

IV. Elements and Cost Estimates of GOB's Contribution:

The GOB's contribution will consist of salaries of MOE (including U.B.) staff associated with the project, \$26,000 per annum; provision of house and furniture for IC technician, \$6,000 per year; office, furniture and equipment for IC technician, \$2,000 per year; salary (\$4000/yr) and airfare (\$2,800) for each Mbotswana while receiving training in the U.S.; five vehicles for contractor's team, \$12,000 each; in-service workshops, \$5,000 per workshop; equipment and furniture for three education centers, \$60,000 each center; equipment and furniture for Primary Education Center and hostel at UB, \$110,000; A&E professional fees \$73,700; and 40% of total cost of construction components.

V. Overall Assessment of the Financial Procedures Used by the GOB:

The GOB's internal control of expenditures is governed by a financial warrant (FW) system, and expenditures cannot take place without a warrant. A FW is issued by the Ministry of Finance and Development Planning (MFDP), and all issuances are contingent upon the availability of funding. In case of an agreement with a donor agency, the agreement must be signed and conditions precedent fulfilled before a FW will be issued.

Delegated responsibility for the issue of FWs rests with the Budget Administration Unit/Development (BAU/D) under control of the Budget Administrator, who signs all FWs on behalf of the Permanent Secretary of the MFDP. It is through BAU/D that all requests to donors for disbursements, reimbursements or advances are made; in fact, BAU/D invariably initiates these. Between BAU/D and the Planning Officers involved, it is generally possible to ensure compliance with the utilization of any donor financing.

The system provides adequate and appropriate controls. It lays down procedures which are calculated to protect against misuse of public funds. It is applied to all donor funds, whether grant or loan. GOB checks require two signatures for validity. All FWs are made out to the Accounting Officer of a ministry and are filed in the ministerial accounting unit. This is the authority to initiate spending up to the amount shown on the FW for the respective project. The warrant is itemized in accordance with approved

categories as identified in the agreement. Actual expenditure, however, takes place only on the issue of the sub-warrant by the Accounting Officer to either the head of a department under whose control the project falls, to a specific implementation officer designated by him, or to a GOB agency. Whoever receives the sub-warrant is authorized to incur expenditures up to the amount and for the purposes stated. GOB has established an enviable and publicized record of prosecuting even the smallest misuse of funds and of GOB property.

Several factors combine to make this project relatively impervious to fraud, waste, abuse and error. Most important among these are the high level of honesty and freedom from corruption which exists in Botswana society in general and in its government institutions in particular. As cited above, the government employs effective financial procedures and review mechanisms for the letting of contracts and the payment of all vouchers. In addition, it has been USAID/Botswana's policy to maintain direct AID control over the disbursement of AID funds. This allows for a thorough review of supporting documentation before any U.S. Government funds are paid.

At present, there are no specific plans for audits of this activity by either the GOB, AID, or public accountants. The project has, however, a budget line item, "short-term consultants;" USAID will retain control of approximately four months of those consultancies. One or two weeks of this item could address a systems/internal control evaluation of project operations, if deemed appropriate.

Schedule for Technical Advisors

Long Term Advisors

	1	<u>Project Year (Aug-Sept.)</u>				5	Total Years
		2	3	4			
Supervision/Administration (UB) Chief of Party	X	X	X	X	X	5	
Primary Inservice Education (MOE)	X	X	X	X	X	5	
Math/Science/Teacher/Competency (UB)	X	X	X			3	
Social Studies (UB)	X	X				2	
Primary Education (UB)			X	X	X	3	
Research Methods & Design (UB)	X	X	X	X	X	5	
Curriculum & Instructional Design (UB & PTTC)	X	X	X	X	X	5	
Total Person Years	6	6	6	5	5	28	

Short Term Consultants

	1	<u>Project Year</u>				Total Months
		2	3	4	5	
Estimated two to three consultants per year for average duration of three months each	8.5pm	11pm	10pm	3.5pm	3.0pm	36pm

Inflation Rate & Contingency Factor Calculations for AID-Supplied Goods & Services
(\$000)

	<u>Year One</u>	<u>Year Two</u>	<u>Year Three</u>	<u>Year Four</u>	<u>Year Five</u>	<u>Total</u>
Estimated Dollar Costs:						
Short & Long-term Technicians	909	942	909	708	708	4176
Short & Long-term Overseas Training	43.2	104.4	147.6	104.4	61.2	460.8
Commodities	329	--	--	--	--	329
Sub-total	1281.2	1046.4	1056.6	812.4	769.2	4965.8
Inflation @ 5% Per Annum	64.1	107.3	166.6	175.1	212.5	725.6
Sub-total	1345.3	1153.7	1223.2	987.5	981.7	5691.4
Estimated Local Costs:						
Short & Long-term Technicians	120	120	120	100	100	560
Inservice Workshops	10	10	10	10	10	50
Commodities	10	46	10	10	10	86
Construction	363	488.4	--	--	--	851.4
Sub-total	503	664.4	140	120	120	1547.4
Inflation @ 10% Per Annum	50.3	139.5	46.3	55.7	73.3	365.1
Sub-total	553.3	803.9	186.3	175.7	193.3	1912.5
Sub-total, Project Cost Components	1784.2	1710.8	1196.6	932.4	889.2	6513.2
Total Inflation Cost	114.4	246.8	212.9	230.8	285.8	1090.7
Total Project & Inflation Costs	1898.6	1957.6	1409.5	1163.2	1175.0	7603.9
Contingency Factor (5% for All Items Except Construction Component Which is 10%)	114.4	127.4	70.5	58.8	59.0	430.1
GRAND TOTAL	2013.0	2085.0	1480.0	1222.0	1234.0	8034.0

Note: Cost estimates before inflation are in 1985 prices.

ECONOMIC ANALYSIS

I. Overview of Economic Analysis

An economic analysis of projects affecting basic education system improvement is intrinsically difficult. Most of the difficulty lies in specifying the benefits and in assigning economic values to the benefits selected for measurement. While the outputs of an education system are fairly specific and tangible (educated children), project analysis is more difficult when the project is attempting to affect quality or efficiency within the system.

Educators can agree that there is a relationship between inputs and outputs, but cannot agree fully on precisely what the interactions are and thus precisely what mix of inputs will give the most optimum outputs. For purposes of economic analysis, one must take the position that the choice of a given level, mix and allocation of inputs is a technical judgement not properly in the purview of the economic analyst. Thus, analysis must attempt to quantify the outputs resulting from changes in system capacity and efficiency rather than the cost-effectiveness of a particular mix of inputs.

Conventionally, it is accepted that there are substantial externalities or social benefits resulting from completion of primary education which are not fully captured in the wage differential, which is modest in most cases. There is substantial technical consensus, supported by a growing body of research literature, that completion of four to six years of basic schooling translates into a number of attitudinal and behavior changes affecting productivity, receptivity to new technologies, risk tolerance, fertility attitudes and practices, health practices affecting the individual and his/her family and many other socially and economically desirable results. Unfortunately for purposes of economic analysis, while it is possible to agree that these social benefits exist, there is no agreed basis for assigning economic values to them.

II. Particular Analytic Characteristics of Primary Education in Botswana

In Botswana, there are two more particular difficulties in analyzing the economic impact of any changes in quality or quantity of primary education.

The first is that primary education is already reaching 85% of the relevant age group. The relatively easy quantitative expansion has already been accomplished and much of the social benefit from raising the general level of basic education has already been obtained, or will be in the next decade or so if the system can only maintain its current coverage and quality. As the system expands to reach the remaining 15% and to accommodate the growing cohort (a) the unit costs for that part of the expansion targeted on the most difficult to reach children (small villages, linguistic minorities, children with special education needs) will almost certainly rise and, (b) the expansion to accommodate the cohort growth may not have the same marginal value as that of the current enrollment. In any case, the number of primary school leavers is already well above the absorptive capacity of the formal sector labor market, making it risky to use increased earnings to assign economic value to additional increments of primary educated workers.

This leads to the second particular difficulty. In Botswana the basic education cycle is being extended to nine years, currently seven primary: three junior secondary, changing to 7:2 in 1988 and then to 6:3 after 1991. Increasingly, the certification which will have value in formal sector employment will be at the junior secondary or senior secondary level. Some education or skills training beyond primary completion will be required for most new workers unwilling to accept unskilled labor.

Thus, economic analysis of primary education and the impact of PEIP II starts with a conclusion that the marketplace value of a primary school certificate will be only slightly greater than no primary or partial primary and requires an assumption that there will in fact be sufficient capacity at the Form I level of junior secondary.

III. Plans and Projections for Primary Education Expansion

Primary education is projected to grow from 220,401 enrolled in 1985 to 286,605 in 1991 with an output of some 36,484 in Standard 7 in 1991, most of whom will sit for the School Leaving Examination, compared with 30,780 in 1985. This growth will be slightly above the rate of growth of primary school age children and should lead to a change from approximately 85% enrolled today to essentially universal enrollment in 1991. It will require both overall expansion and special efforts to reach smaller villages (with smaller schools and special classroom management practices) and special needs children. To accomplish this, some 2,140 additional teachers (trained or untrained) will be required and some 2,600 new classrooms will be required.

The system at present has too few classrooms and too few trained teachers (for purposes of this analysis the term "trained" teacher is used in preference to "unqualified" teacher) though the situation for both has improved over the past five years, 1979-84.

In terms of efficiency, in 1983 there were 12,803 repeaters, concentrated in Standards 4 and 7,¹ and 5,096 dropouts, or 2.6% of enrollment, mainly between Standards 1 and 4.² Of the 30,780 who sat the Standard 7 School Leaving Exam in 1985, slightly less than 72% passed. These efficiency indicators are relatively good by international comparisons, particularly considering the relatively high level of enrollment. In any case, both the repetition and dropout rates appear to be improving and the numbers for 1985 appear to be on the order of 5,000 dropouts and 8,000 repeaters (official 1985 statistics not available at time of writing). The essential concern is to ensure that in pursuing additional expansion of enrollment capacity, system efficiency and output are not sacrificed, at a minimum, and preferably is improved.

¹The Education Sector Assessment, June 1984, states that "the 12,803 repeaters at the primary level in 1983 comprised 6.5 percent of the total enrollment (including 28% of Standard 7 and 12% of Standard 4)". Page 4 - 45

²Ibid, pp. 4-19.

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Progress is being made in expanding teacher training capacity to a projected output of at least 600 annually in 1991 and in building schools, with at least 1,500 classrooms scheduled to be built 1985/1991. The World Bank may fund an additional 500 classrooms. Sometime in the early 1990s, trained teacher supply and classroom capacity are likely to catch up to enrollment. However, through 1991 (the period of PEIP II implementation), Botswana is likely to continue to fall short both of the ability to train or recruit adequately trained teachers and of the number of classrooms required. Assuming success in building schools and training teachers during NDP 6, there will still be less than 80% as many classrooms as classes (necessitating an educationally undesirable use of "open-air" schools and double-shift schools) and about 27% of the teachers will not have the desired level of professional training.

Consequently, a major emphasis over the next five years must be placed on measures to maintain and improve quality, to compensate for the shortages of trained teachers and the inadequacy of physical classroom capacity and to develop the training, supervisory and technical support systems which the system will need to maintain quality and capacity over the succeeding years.

IV. Methodology for Analysis of PEIP II

PEIP II will be concentrated on measures to improve system quality and efficiency. While it is an essential part of the strategy of expansion, it will not itself provide any significant part of the resources relating directly to system capacity. Teacher salary, school building and maintenance, most textbooks and consumables and the administrative costs of running the system will be mainly or entirely from other sources, primarily the MOE budget and deficit grants administered by the Ministry of Local Government and Lands (MLGL).

The impact of PEIP II will be primarily in the form of a series of intermediate goods or outputs rather than system outputs. This does not suggest that PEIP II outputs are not critical to the success of the overall strategy of expansion. However, the main outputs listed in the text and in the Logical Framework (MEEd program, increased output from BEEd and DPE programs, staff strengthening of UB's Department of Primary Education and of the PTTCs, a network of education centers and inservice education at all levels, curriculum and materials development, research, test improvement, etc.) are all intermediate to and distinguishable from the actual inputs to and outputs from the schools themselves.

None of the increase in quantitative enrollment capacity of the system in the period 1985-1991 will be attributed directly to PEIP II expenditures. Rather, the benefits of PEIP II will be found primarily in the form of measures of system efficiency (either improvements or maintenance) and to a lesser extent in cost savings over alternative ways of accomplishing the same objectives.

The quantifiable benefits in the form of increased system outputs attributable to quality improvement or maintenance or to changes in system efficiency have already been factored into the MOE and NDP6 projections for education enrollments through 1991. In other words, PEIP II is assumed to be responsive to and part of the MOE's expansion and system improvement plans.

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For a base case economic analysis, three types of quantifiable benefits attributable to quality and efficiency changes have been selected and at least one form of significant cost savings can be predicted. The quantifiable benefits are 1) reduction in repetition, 2) reduction in dropout, and 3) maintenance of an acceptable pass rate on the Standard 7 exam. The main cost saving will be in obviating the need for expatriate educators or technicians in a number of positions.

Benefit 1: Reduction in Repetition

At present there is an estimated repetition of some 8,000 to 10,000 annually, concentrated in Standards 4 and 7. This is attributed to difficulties in passing the attainment test at Standard 4 and the need for an acceptable pass on the Standard 7 exam before proceeding to Form I. Thus, both relate directly to instructional quality and effectiveness in the preceding grades. Measures to raise teacher competencies, improve curriculum materials and make the examinations themselves more relevant and valid in terms of the new curriculum will account for much of any projected improvement (i.e. reduction) in repetition.

Repetition in 1984 was about 4,600 at Standard 4 and 6,000 at Standard 7.³ The numbers and patterns vary significantly from year to year, but are projected to reduce steadily from 1986 onward. The numbers repeating are projected to decline by 1991 to essentially no repetition in Standard 4 and under 1,000 repetitions in Standard 7. This is dependent largely on Form I capacity expanding to 23,000 places by 1991.

For the base case analysis, the expected impact of PEIP II activities will reduce repetition throughout the system by 5,000 student years below the level of 1984 and ensure that repetition rates do not increase again after 1991. This is approximately half the current repetition but less than that required to meet the MCE projection for 1991.

Unit costs per year of repetition avoided are estimated at Pula 180. This is obtained by adding the NDP 6 estimate of P160 per student in MOE expenditure and the P20 per student grant to MLGL. This grant is expected to go to P30 by 1991. The Sector Assessment uses P189, reflecting more of the local government costs. Thus, P180 is a somewhat conservative estimate of costs saved per year of repetition avoided.

Five thousand years equivalent of cost savings at P180 per unit yields a benefit of P900,000 by 1991. This is projected to grow incrementally from 1987 through 1991 and is entered as Benefit B1 in the Summary Base Case.

Benefit 2: Reduced Dropout

Dropouts are estimated at 5-6,000 annually, mainly between Standards 1 and 4. In 1983, total dropouts were 5,096 with 3,014 or 59% completing

³Note: The Standard 4 estimate of repeaters represents the 1984 increase in Standard 4 over Standard 3 in 1983, rounded, and the Standard 7 estimate represents the increase in Standard 7 over Standard 6 in 1983, also rounded. (See Table A) The numbers for 1985 are about the same for Standard 4 (4,153) and lower for Standard 7 (3,139).

fewer than four years. At this level no lasting education benefits are assumed from years of education invested. These years are considered system wastage, with an estimated average of two years of expenditure per dropout.

Comparing the 1980 Standard 1 intake with the number remaining in Standard 5 in 1984, 5,441 had left the system before Standard 5. Projections (See Table A) for the cohorts entering 1985, 1986, 1987 and the numbers in Standard 5 in 1989, 1990, and 1991 indicate a loss of 3,348, 3,139 and 2,889 respectively. The difference between dropout of the cohort 1980-1984 (5,441) and the cohort 1985-1989 (3,348) is 2,093 and between 1980-1984 and 1987-1991(2,889) is 2,552.

For analysis, it is estimated that PEIP II will have an impact in reducing dropouts by 2,093 for each entering cohort, equivalent to the difference between early dropout 1980-1984 (before PEIP I began to take effect) and that projected for 1985-1989 when PEIP I and II impacts will begin to be fully realized. In later years, it is expected that PEIP II will enable dropouts to be kept to at least 2,093 less than what it would be without PEIP II.

For ease of calculation and to bias conservatively, the dropout estimate is rounded to 2,000. Assuming two years per dropout, this yields a benefit stream of 4,000 years of unit costs saved or approximately P720,000 annually each year from 1989. One half of this benefit (P360,000) may be obtained by 1987 and three-fourths (P540,000) by 1988. These benefits are entered in the Summary Base Case as Benefit B2.

Benefit 3: Maintaining Standard 7 Examination Pass Rates

In 1985, 30,780 Standard 7 students took the PSLE examinations. Of these, preliminary reports are that slightly under 72% passed. It is difficult to define what the acceptable or target pass rate should be. The examination itself appears to be rather subjectively marked, relying on scripts marked by a large number of reviewers, and in any case is based mainly on the existing curriculum. A revised curriculum is being put in place and an improved examination is being developed, with substantial assistance under PEIP I and PEIP II along with inservice and preservice training for the revised curriculum.

It is projected that the examination administered in 1991 will be an acceptably valid testing instrument measuring accomplishments under the revised curriculum and thus the instructional quality and effectiveness of the capacity of the education system being developed for 1985-1991.

As the following table shows, if enrollment projections are achieved for Standard 7 and the current 72% pass rate is maintained, a) there will be a significant surplus through 1988 of candidates with PSLE passes unable to find places in Form I, b) from 1988 onwards at least 70% of those who pass can expect to enroll in Form I, and c) from 1989 onwards it will be necessary to achieve exam pass rates close to 70% to ensure a supply of students to Form I.

	Standard 7 Enrollment	72% Pass	Increase over 1985 Pass	Capacity in Form 1	Form I as % of Standard 7 in Previous Year
1985	30,780	22,161	—	10,265	
1986	30,925	22,266	105	10,540	34%
1987	30,887	22,239	78	12,460	40%
1988	32,588	23,463	1,302	15,360	50%
1989	31,237	22,491	330	19,000	58%
1990	34,339	24,724	2,563	21,000	67%
1991	36,484	26,268	4,107	23,000	67%
1992 (Est.)				25,000 (Est.)	

Source: NDP 6, Chapter 6, Education

For purposes of base case economic analysis, it is estimated that the pass rate will be maintained at the 72% achieved in 1985. This is a slightly different and probably more modest objective than the project goal, which is to increase scores on the PSLE.

In calculating the benefit stream, it is expected that most or all of the difference in absolute numbers successfully taking the PSLE examination, i.e. the result of maintaining the percentage pass rate, can be attributed to PEIP II activities. This yields a benefit of 105 additional passes in 1986, 78 in 1987, 1,302 in 1988, 330 in 1989, 2,563 in 1990 and 4,107 in 1991. With further increases in system capacity after 1991, the benefit of at least 4,107 passes due to maintenance of quality and instructional effectiveness is expected for 1992 and subsequent years.

The remaining question is what value to assign to the additional students successfully completing the PSLE. As noted earlier, it is risky to assume increased income due to primary education alone. However, we can assume additional economic benefits from qualifying for secondary or other post-primary education.

The reported wage⁴ for workers in the agriculture sector, most of whom have less than primary education, is .33 Pula/hour and about 67 Pula average monthly income, including overtime and other adjustments.

For a primary school graduate working in a semi-skilled occupation such as construction, transportation or manufacturing the average hourly wage is estimated at .50 Pula and monthly income at 80-100 Pula.

⁴Estimates used here are based on interviews with Department of Labour (DOL) and other analysts and calculations by team member David Evans.

For a secondary school graduate, hourly wages are estimated at 1.33 Pula hourly and monthly income at 220 Pula. Thus, the difference in income expectations between a secondary graduate and an individual with less than a complete primary education is approximately 150 Pula a month.

As completion of senior secondary requires an additional five years, the additional private economic benefit for an individual passing the PSLE is assumed, very conservatively, to be one-fifth of the difference in income expectations between a secondary school graduate and an individual with less than primary completion.

Thus, an increase in lifetime earnings stream of 30 Pula a month or 360 Pula a year is assumed as a benefit for each additional pass due to maintaining quality and instructional effectiveness. This is entered in the Base Case Summary as Benefit B3.

Benefit 4: Cost-Savings of Localization

Finally, a benefit is calculated from the success of PEIP II in training individuals to replace positions currently filled by expatriates or to fill positions for which expatriates would otherwise be hired. At least 12 individuals are expected to receive advanced long-term training, and a substantial number of additional positions may be localized through increased output from the MEd and BEd programs, most of whom will go to the PTTCs, education centers, and MOE. A conservative savings of \$20,000 annually is estimated for each localized position.

Six of the long-term trainees will return to their present positions but with advanced training and enhanced professional capacities. Six will fill new positions. It is estimated that seven positions will be localized which would otherwise be occupied by higher cost expatriates.

Thus, a benefit of three positions filled by 1989, two more by 1990 and two more by 1991 is taken into account. Savings estimated at \$60,000 for 1989, \$100,000 for 1990 and \$140,000 for 1991 and subsequent years are entered as Benefit B4 in the Base Case Summary.

Summary Base Case

The four benefit streams, 1) reduced repetition, 2) reduced dropout, 3) maintenance of PSLE pass rate and 4) cost savings of localization are expressed in \$000's and distributed over 20 years. Summing across the columns yields a summary of benefits over the 20 years. The benefits are discounted at 10%, the estimated rate of the opportunity cost of capital in Botswana.

Project costs are as shown in the financial tables. All project costs are included except for contingency and inflation. Project costs are assumed to be expended in the years obligated and are discounted at the same 10%. At 10% discount, the present value of the sum of the costs is \$6,720,000 and the present value of the sum of the benefits is \$12,335,000. This yields a benefit/cost ratio of 1.84. The IRR is calculated as 22%. This is an extremely positive result using relatively conservative estimates and excluding other possible benefits.

Alternative Analysis

In the event that the Botswana system does not reach its ambitious growth targets, an alternative analysis was employed using more conservative assumptions.

Alternative assumptions are as follows:

- Benefit 1: Reduce the estimated reduction in repetition to 3,000 student years annually
- Benefit 2: Reduce the estimated reduction in dropout to 1,000 annually
- Benefit 3: Beginning in 1991, use only the difference (3,268) between the projected Form I capacity (23,000) and 72% of Standard 7 enrollment (72% of 36,484 equals 26,268) rather than the difference between a 72% pass rate and the absolute number of passes in 1985
- Benefit 4: Same as Base Case

With these changes, the Alternative Case yields a discounted benefit stream of \$8,533,000 versus discounted costs of \$6,720,000. The Benefit/Cost ratio is 1.27 and the IRR is 15%. Thus, even with more conservative benefits, the project is economically viable.

SUMMARY BASE CASE: PEIP II
(US\$ 000s)

<u>Year</u>	<u>B1</u>	<u>Benefits</u>			<u>B4</u>	<u>EB</u>	<u>Present Value</u>		<u>Project Cost¹</u>
		<u>B2</u>	<u>B3</u>				<u>FV-EB @ 10%</u>	<u>FV EC @ 10%</u>	
87 1	99	198	15	--	312	284	2,173	2,390.7	
88 2	198	297	258	--	753	622	2,052	2,483.8	
89 3	297	396	65	60	818	614	1,060	1,410.8	
90 4	396	396	507	100	1,399	956	768	1,125.0	
91 5	495	396	813	140	1,844	1,145	667	1,073.8	
92 6	495	396	813	140	1,844	1,040	--	--	
93 7	495	396	813	140	1,844	946	--	--	
94 8	495	396	813	140	1,844	861	--	--	
95 9	495	396	813	140	1,844	782	--	--	
96 10	495	396	813	140	1,844	712	--	--	
97 11	495	396	813	140	1,844	645	--	--	
98 12	495	396	813	140	1,844	588	--	--	
99 13	495	396	813	140	1,844	535	--	--	
00 14	495	396	813	140	1,844	485	--	--	
01 15	495	396	813	140	1,844	441	--	--	
02 16	495	396	813	140	1,844	402	--	--	
03 17	495	396	813	140	1,844	365	--	--	
04 18	495	396	813	140	1,844	332	--	--	
05 19	495	396	813	140	1,844	302	--	--	
06 20	495	396	813	140	1,844	275	--	--	
					Total	<u>12,335</u>	<u>6,720</u>		

¹Financial subtotals (less contingency + inflation) B/C = 1.84
IRR = 22%

Note: Exchange Rate, Pula 1 = US\$0.55

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SUMMARY ALTERNATIVE CASE I: PEIP II PROJECT
(US\$ 000s)

<u>Year</u>	<u>B1</u>	<u>B2</u>	<u>B3</u>	<u>B4</u>	<u>EB</u>	<u>Present Value Costs</u>		<u>Project Cost¹</u>
						<u>FV EB @ 10%</u>	<u>FV EC @ 10%</u>	
87 1	59	99	15	--	173	157	2,173	2,390.7
88 2	119	149	258	--	526	434	2,052	2,483.8
89 3	178	198	65	60	501	376	1,060	1,410.8
90 4	238	198	508	100	1,044	713	768	1,125.0
91 5	297	198	647	140	1,282	796	667	1,073.8
92 6	297	198	647	140	1,282	723	--	--
93 7	297	198	647	140	1,282	658	--	--
94 8	297	198	647	140	1,282	599	--	--
95 9	297	198	647	140	1,282	544	--	--
96 10	297	198	647	140	1,282	495	--	--
97 11	297	198	647	140	1,282	449	--	--
98 12	297	198	647	140	1,282	409	--	--
99 13	297	198	647	140	1,282	372	--	--
00 14	297	198	647	140	1,282	337	--	--
01 15	297	198	647	140	1,282	306	--	--
02 16	297	198	647	140	1,282	279	--	--
03 17	297	198	647	140	1,282	254	--	--
04 18	297	198	647	140	1,282	231	--	--
05 19	297	198	647	140	1,282	210	--	--
06 20	297	198	647	140	1,282	191	--	--
Total						<u>8,533</u>	<u>6,720</u>	

B/C = 1.27 IRR = 15%

¹Financial Table Subtotals (less contingency + inflation)

Note: Exchange Rate, Pula 1 = US\$0.55

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Table 6.3 Primary school enrolment by Standard and year 1979-84¹

	1978	1979	1980	1981	1982	1983	1984
Standard 1	24 279	27 620	32 065	29 759	30 197	32 385	36 013
Standard 2	24 719	23 507	27 071	29 880	29 553	29 387	31 025
Standard 3	23 106	24 542	23 823	26 177	29 159	29 655	29 084
Standard 4	23 285	22 670	24 172	25 943	29 878	33 306	34 209
Standard 5	18 666	22 044	22 135	20 094	20 460	24 542	26 624
Standard 6	17 009	18 173	21 316	21 431	20 309	21 717	24 731
Standard 7	14 395	18 334	21 332	24 823	27 554	27 339	27 659
Total	145 459	156 890	171 914	178 107	187 110	198 331	209 345

Source: CSO and Ministry of Education, Planning Unit.

TABLE B

Table 6.16 Projected Primary School Enrolment 1985-1991²

	1985	1986	1987	1988	1989	1990	1991
Standard 1	37 454	39 326	41 293	42 738	44 234	45 782	47 384
Standard 2	34 891	36 305	38 118	40 024	41 428	42 878	44 379
Standard 3	30 572	34 366	35 777	37 561	39 439	40 827	42 256
Standard 4	33 237	31 592	35 282	36 826	38 654	40 586	42 037
Standard 5	27 211	29 771	28 641	32 307	34 106	36 187	38 404
Standard 6	26 238	26 831	29 327	28 266	31 812	33 613	35 661
Standard 7	30 798	30 925	30 887	32 588	31 237	34 339	36 484
Total	220 400	229 116	239 323	250 309	260 909	274 212	286 606

Source: MoE Planning Unit and MFDP Employment and Manpower Planning Unit.

¹ NDP 6, Page 124.

² IBID, Page 138.

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SOCIAL SOUNDNESS ANALYSIS

A. Socio-Economic Environment

The Republic of Botswana is a multi-party democracy, politically stable and fiscally conservative. At Independence, Botswana was ranked as one of the poorest nations in the world, with a per capita income of about \$60 per annum. Today, per capita Gross Domestic Product (GDP) is approximately \$700.

Botswana's remarkable achievement in this area is primarily due to large investments in the mineral sector of the economy, which is the major contributor of the GDP. Agriculture contributes about 7% of the GDP and is dominated by the livestock industry. While the government has invested heavily in minerals and livestock, comparable levels of investment have not been made in arable agriculture and non-farm employment endeavors.

Agriculture in Botswana is not self-financing nor is it sufficiently productive to feed most families, even in years with favorable rainfall. Because of this, there is a strong interdependence between off-farm wage employment and farm production. Various household members simultaneously engage in agriculture and wage employment to subsist or to accumulate wealth. Yet job opportunities for the uneducated and the untrained are limited in Botswana. The socio-economic result of this is that the distribution of income and wealth is severely skewed. The GOB is aware of this stratification and is making efforts to invest and create employment in agriculture and the non-farm sector to rectify inequalities. The inhabitants of Botswana identify themselves with tribal and clan groupings, each of which manifest varying degrees of social and cultural differences. While the largest groups are Tswana* in origin, the indigenous population also contains a number of people of non-Tswana origin such as the Kgalagadi, the San, the Herero, the Kalanga, the Yei and the Mbakushu. Differences among these groups are expressed in attitudes and value orientations. To a lesser degree, they indicate class position and location in the economic organization. Although

Setswana and English are the two official languages of the country, other linguistic affiliations remain. Notwithstanding, ethnic differences in Botswana are not politicized. The various social identities and affiliations are compatible and harmonious rather than contradictory and conflictual. In the context of Botswana, therefore, ethnic categories exist as cultural units rather than as interest groups geared towards political activity. This is a factor which differentiates Botswana from most of Africa.

The educational quality of the national labor force (all of those over 15 years) is presently unbalanced, with fewer educated members of the workforce than are required to fill positions. The problems derived from this unbalanced economic structure are giving rise to inequalities in access to income-earning opportunities. Individuals with little or no schooling are the least likely to be in formal employment; only 20% of the labor force with no schooling are wage employed, compared to 49% of those with secondary schooling. Certain better paid occupations are only open to those with formal educational qualifications. Each extra year of schooling raises the

*Linguistically classified as the Sotho group of Bantu speaking people.

chances of being employed by about two percentage points for the average person. This relationship is found in both rural and urban areas, although it is stronger in urban areas.

During primary schooling, overall male/female achievement levels are approximately equal,* with females scoring significantly higher in English and Setswana and males numerically higher in math and science. However, regional differences in achievement levels have been documented. A positive relationship was demonstrated between the variables of geographical location of schools and student achievement as determined by Primary School Leaving Exam performance. Four major categories of primary school locations were tested in 1982: town, major village, service center and rural. Schools in urban areas scored a mean of 53.2, major villages a mean of 52.1, service centers a mean of 49.5 and rural schools a mean of 48.7. The rural/urban difference was 4.5. In overall achievement, students in Gaborone far exceeded those in all other districts and townships.

B. Beneficiaries

Those direct beneficiaries of the project will be the Batswana who enter and graduate from the Diploma, Bachelor's and Master's in Primary Education programs at the University of Botswana. It is expected that the number of the first two groups (combined) will increase from the current level of 30 per year to reach a new level of 50 per year by 1990. The MEd graduates will increase from 4 to 8 per year during the life of the project. Receipt of a degree or diploma will provide these individuals with greater upward mobility in the primary education system.

Additional direct beneficiaries will include 12 Batswana who will receive long-term overseas training (12 person years of post-Master's training and six person years of Master's training) and those Batswana who will receive the four to six months of short term overseas training. These beneficiaries will acquire knowledge and skills that will enable them to fill positions of responsibility within the Botswana educational system.

Through inservice workshops conducted by the Department of Primary Education and the MOE, direct benefits will flow to 37 education officers. Indirect returns from the workshops will be channeled to 518 head teachers, 522 deputy head teachers, 878 senior teachers and over 6800 classroom teachers. As a collective unit, these individuals are expected to increase their knowledge and skill base. Other beneficiaries of the project will be the students enrolled in primary schools. It is projected that there will be approximately 230,000 students in these grades during 1986. This number is estimated to increase to 286,000 within the life of the proposed project.

C. Social Feasibility

The social feasibility of the project has been demonstrated by the progress made under PEIP I, progress attributable not only to the contract team but to direct GOB participation. GOB receptivity is further demonstrated by NDP 6 objectives for primary education which include goals for physical and personnel expansion and upgrading and goals directly related to quality and equity.

*This changes markedly at the junior secondary level, where a substantive disparity between male and female achievement levels emerges.

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Some behavioral changes will be required if the project intends to produce students who are academically better prepared for further education or training. Both teaching and learning techniques will have to be altered from those grounded in rote memorization. At present the Research and Testing Center is initiating examinations that encourage teachers to change their teaching methods and thereby assist students to move away from learning by memorization. Rates of success are improving. By attacking the problem simultaneously from several different directions, i.e., through changes in curriculum, dissemination of instructional materials, inservice and preservice teacher education, as well as through examination procedures, the probability of achieving widespread success increases considerably.

Particular caution is needed in curriculum development, and in the selection of forms of instruction, to ensure against western educated technicians unknowingly fostering cognitive styles derived from their own primary group socialization. Similar cognitive capacities are shared by all human groups regardless of culture. However, there are marked differences in internal consistency between cognitive styles and patterns of socialization that foster them. Relational thinking, which is based on holistic, analogic or imitative expression derives from socialization in an extended family nexus, which is characteristic of many developing countries, including Botswana. Relational thought is also profoundly nominalistic, in that particulars do not refer back to an abstract universal. Non-relational thinking isolates and abstracts information from its context and its knower. It is far more characteristic of western societies, particularly where socialization occurs in the nuclear family, and it is systematically privileged in western public school.

In principal, accommodation to western culture and cognitive styles need not mean abandonment of Botswana ways. The retention of traditional cultural patterns of problem solving and analysis is completely compatible with learning the westernized aspects of science and mathematics. However, the social consequences of entirely changing Botswana cultural patterns of cognition could be staggering and could result in underachievement, and in inherent bias against Botswana students. Therefore, a consultancy, possibly using AID central funds, will be considered to analyze variations in learning styles, leadership types, cognition and cultural values and their relationship to the present educational learning environment.

In addition to the kind of cultural relativism needed to avoid conflict between cognitive styles, curriculum should be sensitive to the history and culture of Botswana. Indications from curriculum development efforts with the MOE lead one to believe that this will occur.

D. Social Impact

PEIP II, and its diffusion to the wider population, will affect different groups in different ways. The project will impact on the primary schools, a category of schools that has suffered in the past from a lack of qualified teachers. Benefit incidence for this group is therefore compatible with equity objectives.

The project activities will have a positive impact on women in several major ways. First, the inservice component of the project aims at improving the effectiveness of the primary teaching force. Since the largest segment of

that target group is female (76% in 1983), it is women who will experience the strongest impact. Second, under PEIP I, 53% of the students admitted for the diploma and degree programs at UB were women. It is expected that this laudatory gender distribution will continue to be reflected in PEIP II. Third, both preservice and graduate education of the PTTC tutors through UB and revisions and implementation of the PTTC curriculum are aspects of PEIP II. A favorable impact will accrue to women as the majority of PTTC students are female (87% in 1983).

By improving the quality of primary education and by focusing on the need for the learning environment to be conducive to the culturally cognitive styles of Batswana, the project should impact favorably on the performance of all primary pupils (53% of whom were female in 1983). However, project implementors should be aware that the rate of female attendance and levels of achievement change markedly for women once they enter junior secondary school. Attention should be given to issues of causality, particularly those that begin their development during the primary cycle. Finally, project inputs are also expected to counter-balance the present geographical variations that occur in achievement levels.

This assessment of the distribution of the benefits and burdens of the project indicate that the social consequences will be strongly positive. While the ultimate success necessarily depends on the quality of project implementation, analysis of the project in terms of the social factors involved indicates that the project is soundly designed to meet its stated objectives.

INITIAL ENVIRONMENTAL EXAMINATION
OR
CATEGORICAL EXCLUSION

PROJECT COUNTRY: Botswana
PROJECT TITLE: Primary Education Improvement Project II (633-0240)
FUNDING: FY(s) 86 \$ _____
IEE PREPARED BY: Stafford Baker, GEO, USAID/Botswana

ENVIRONMENTAL ACTION RECOMMENDED:

Positive Determination _____
Negative Determination X *

CATEGORICAL EXCLUSION PREPARED BY: STAFFORD BAKER, GEO, USAID/BOTSWANA

Non-construction activities meet the criteria for Categorical Exclusion in accordance with Section 216.2 (c)(2)(i) and are excluded from further review. (See attached discussion.)

*A threshold negative determination regarding construction activities, which will not have a significant effect on the environment, is recommended.

Bessie L. Boyd
Concurrence: Bessie L. Boyd, AFR/TR/SOP APPROVED X

Bureau Environmental Officer DISAPPROVED _____

DATE January 10, 1986

G. Bisson
Clearance: RLA/SA G. Bisson DATE 12/20/85

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INITIAL ENVIRONMENT EXAMINATION

PROJECT LOCATION: Botswana
 PROJECT TITLE: Primary Education Improvement Project Phase II
 FUNDING \$8,192,000
 IEE PREPARED BY: Stafford Baker, USAID/Botswana GEO
 ENVIRONMENTAL ACTION RECOMMENDED:

The education, technical assistance and training components of the project do not have any direct effects on the environment. Construction activities are managed by the Government of Botswana Architecture and Buildings Department and the University of Botswana Physical Planning Departments. Site allocations are made according to established land use development plans that consider alternate land uses and the impacts on water supply and other essential services. No issues requiring further environmental study have been identified, and it is therefore recommended that a Negative Determination be made.

ACTION RECOMMENDED BY: ^{ms} Paul Guedet, Mission Director
 DATE: 12/30/85

Clearance: PDO:WELLIOTT ^{12/20/85} W E
 RLA/SA:GBISSON G B
 12/20/85

I. PROJECT DESCRIPTION

PEIP II is a follow-on project planned to increase the access, efficiency and relevance of primary education in Botswana. The project will build on the progress made under the current PEIP activity with special emphasis on institutionalizing the pre-service and in-service teacher training programs, permitting their orderly expansion to meet country-wide needs.

The Project will provide the following:

- A. Technical assistance -- to teach courses in new and expanded education programs at the University of Botswana and to assist curriculum development and in-service training activities.
- B. U.S. training -- for five to eight Batswana to replace the U.S. T.A. staff.*
- C. Commodities -- such as library references, educational research materials, microcomputer and duplicator equipment.
- D. Construction -- of (1) an expansion to the existing Primary Education Center, (2) a 108-bed hostel, to provide additional classroom and dormitory space for the increased number of participants in education and in-service programs and (3) three education centers to complete the country-wide in-service teacher education network.

II. ENVIRONMENTAL IMPACTS

The education, technical assistance and training components of the project do not have any direct effects on the environment. Environmental impacts of the project are limited to land use for construction of new facilities and demands on services created by the people using the facilities. New construction is planned on the University of Botswana campus in Gaborone and in Tsabong, Kasane and Mochudi.

The Physical Planning office of the University of Botswana has developed a Master Plan for physical expansion of the University. The Master Plan identifies sites for future development on unused land within the current boundaries of the campus. The new hostel will be constructed on one of these sites, and the PEC expansion is planned adjacent to the current building. The hostel site is covered by sparse grasses and bush while the PEC building is surrounded by grass and gravel parking areas. The proposed building design will complement the existing UB structures.

*U.S. training will also be provided for four to six Batswana who will assume roles at the Primary Teacher Training Centers or in the Ministry of Education.

The Education Centers will be sited according to existing development plans for the villages. These plans specify residential, commercial and community service areas. Plot allocations are made by Land Boards which consider alternate land uses and adequacy of services. Land in villages is generally overgrazed and denuded of grass and edible bush cover. Soil in Tsabong and Mochudi is mostly permeable sand. Some rock is encountered in Kasane. Sites are inspected by architects from the Ministry of Works and Communications to confirm suitability for construction, and septic tanks are sited to avoid rock areas.

Population increases resulting from utilization of project facilities will be small relative to the size of the towns and will be temporary in nature. The new hostel will permit up to 108 additional students to reside on the UB campus (relative to existing enrollment of 1,700 and a Gaborone population of about 65,000). Up to 70 people will participate at any one time in workshops at the Education Centers. This compares with village population of 1800 for Tsabong, 2200 for Kasane and 18,400 for Mochudi. All four towns have established water supply systems and other community services sufficient to accommodate small population increases.

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IMPACT IDENTIFICATION AND EVALUATION FORM

Impact
Identification
and
Evaluation

Impact areas and Sub-areas

A. Land Use

1. Changing the character of the land through

- a. Increasing the population L
- b. Extracting natural resources N
- c. Land Clearing L
- d. Changing soil character N

2. Altering natural defences N

3. Foreclosing important uses N

4. Jeopardizing man of his works N

5. Traffic access N

6. Land use planning N

7. Squatter, other development N

B. Water Quality

1. Physical state of water N

2. Chemical and biological states N

3. Ecological balance N

C. Atmospheric

1. Air additives N

2. Air pollution N

3. Noise pollution N

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D. Natural Resources	
1. Diversion, altered use of water	<u>N</u>
2. Irreversible, inefficient commitments	<u>N</u>
3. Wildlife	<u>N</u>
E. Cultural	
1. Altering physical symbols	<u>N</u>
2. Dilution of cultural traditions	<u>N</u>
F. Socioeconomic	
1. Changes in economic/employment patterns	<u>N</u>
2. Changes in population	<u>N</u>
3. Changes in cultural patterns	<u>N</u>
4. Dislocation and relocation of area residents	<u>N</u>
5. Support facilities	<u>L</u>
G. Health	
1. Changing a natural environment	<u>N</u>
2. Eliminating an ecosystem element	<u>N</u>
3. New pathways for disease vectors	<u>N</u>
4. Safety provisions	<u>N</u>
H. General	
1. International Impacts	<u>N</u>
2. Controversial Impacts	<u>N</u>
3. Larger program Impacts	<u>N</u>
4. Aesthetics	<u>N</u>

N - No environmental impact
L - Little environmental impact
M - Moderate environmental impact
H - High environmental impact
U - Unknown environmental impact

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ENGINEERING ANALYSIS

I. CONSTRUCTION REQUIREMENTS

The Primary Education Improvement Project (PEIP) has been assisting the GOB to increase the access, efficiency and relevance of primary education in Botswana since 1981. Two buildings were constructed on the University of Botswana (UB) campus to support the project activities. The Primary Education Center (PEC) provides classroom space for the new primary education course programs, office space for the U.S. technical assistance contractor and Botswana counterparts, an instructional media room and an educational materials production workroom. An 84 bed hostel was constructed to accommodate preservice and inservice trainees enrolled in the project's education programs. Both facilities are fully utilized.

The PEIP II project is planned to assure the continued and sustained improvement of the quality of primary school teaching and administration, begun under PEIP I. The principal reason for the project is to further institutionalize the preservice and inservice programs and permit their orderly expansion to meet country-wide needs. Additional facilities are required to support expanded enrollment in preservice and inservice programs at UB, and to complete a country-wide program of inservice education center construction beginning under AID's Junior Secondary Education Improvement Project (JSEIP). Construction of an addition to the existing PEC and a new 108 bed hostel on the UB campus, and three new education centers in Tsabong, Kasane, and Mochudi is proposed.

II. DESIGNS AND SITES

The existing PEC is a two-story building with classrooms on the ground floor and offices and workrooms on the second floor. Three additional rooms (one math/science laboratory, one regular classroom, and one seminar room) and circulation space totaling 200 M² are required for the expanded PEIP II activities. These will be provided in an extension to the ground floor of the existing building. It is proposed to build this extension on the west side of the existing PEC building. Presently, the west side is occupied by prefabricated, temporary office modules. The UB plans to remove these office modules by January, 1987. The siting of this extension shall be confirmed after consultation between UB's physical planner and the architect.

The UB has a standard plan for a 108 bed hostel which is a modification of the 84 bed hostel used under PEIP I. Ground floor lounge areas in the original plan have been converted to bedrooms in the revised plan. Students occupy double bedrooms with a floor area of 14 M². The hostel building is a three-story structure with bedrooms and restrooms on each floor plus a warden's apartment on the ground floor. The new hostel will be constructed on a site identified on the Master Plan for development of the UB campus, adjacent to the existing hostel blocks.

The three education centers will utilize the same plan being developed for the six centers planned under JSEIP. The centers have two classrooms of about 60 M² each, a library, two offices for an administrative assistant, two education officers and a secretary, a hostel block (to accommodate 36 people), kitchen and dining facilities (for 60 people) and two standard GOB staff houses. Sites for the education centers will be allocated by District

Land Board authorities based on village development plans. Sites are inspected by the Chief Architect's Office for suitability before officially being approved by the GOE.

AID approval of all building plans and site plans will be required before contracts for construction are awarded.

III. STANDARDS AND SPECIFICATIONS

Education centers utilize simple construction specifications common to both urban and rural areas of Botswana. The buildings have concrete strip foundations, reinforced concrete floors, concrete block walls, wood rafters, corrugated steel roofing, metal door and window frames and wood doors. Hardware for plumbing and electrical systems and items such as door locks are produced in Southern Africa and widely stocked throughout Botswana. Small contractors in rural villages are familiar with the construction techniques required and produce work of good to excellent quality.

The PEC expansion and hostel construction will be more sophisticated than that of the education centers. The multi-story hostel has reinforced concrete structural columns. Roof construction will be precast asbestos cement panels on steel beam rafters in accordance with existing University buildings. The hostel will have solar hot water heating. Other construction features are similar to the education centers. There are many large contractors working in Gaborone that are capable of performing the construction work.

IV. CONTRACTING

The UB's Physical Planning Department will coordinate contracts for design of the PEC expansion and construction of both buildings at the University. The Chief Architect's Office of the Ministry of Works and Communications will administer the construction of the education centers. Final design work for the education centers is already underway with the JSEIP activity. The GOB will contribute all professional fees for design and supervision of construction. Construction will be advertised, and contracts will be awarded according to standard GOB Tender Board procedures.

Fixed Amount Reimbursement (FAR) procedures will be utilized to finance the construction, with AID's contribution determined by 60% of the estimated construction costs. When AID makes its FAR commitment for construction, the GOB Ministry of Finance and Development Planning warrants sufficient funds for the total construction to the Chief Architect's Office or UB, and construction contracts can then be awarded. AID reimbursement will only be requested after construction is completed. FAR procedures are used almost without exception by AID on other project-financed construction in Botswana and have proved to work extremely well for both AID and the GOB.

V. AID MONITORING

AID approval of preliminary plans, final plans, site plans, specifications and contract award will be required before award of the contracts, and inspection and approval of completed buildings will be required before reimbursement. A REDSO engineer will be responsible for these reviews, inspections, and approvals.

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VI. IMPLEMENTATION SCHEDULE

<u>ACTION</u>	<u>PARTIES</u>	<u>DATE</u>
Grant Agreement Signed	USAID/GOB	April 1986
Architect Appointed to Do Final Design for PEC Expansion	GOB	June 1986
FAR Established for Hostel	USAID	June 1986
Construction Contract Awarded for Hostel	GOB	August 1986
FAR Established for PEC	USAID	August 1986
Construction Contract Awarded for PEC Expansion	GOB	November 1986
Construction of PEC Expansion Completed	Building Contractor	July 1987
Construction of Hostel Completed	Building Contractor	August 1987
FAR Established for Three Education Centers	USAID	September 1987
Construction Contract Awarded for Three Education Centers	GOB	January 1988
Construction of Three Education Centers Completed	Building Contractor	June 1988

VII. COST ESTIMATES

A. 108 Bed Hostel

The cost estimate for the hostel is based on recent contracts for identical hostels at the University.

Cost P1,000,000

B. PEC EXPANSION

The cost estimate for the extension to the PEC is based on unit costs for similar construction at the University.

Area for three rooms and circulation space = 200 M²

200 M² x P500/M² = P100,000

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C. EDUCATION CENTERS

Cost estimates for the education centers are based on the cost analyses performed for the JSEIP (633-0229) construction:

	<u>Area</u> <u>Sq. M</u>	<u>Unit Cost*</u> <u>(Pula)</u>	<u>Cost</u> <u>(Pula)</u>
Classrooms/Store	148.8		59,520
Office/ Library	97.5		39,000
Production Area/Office	97.5		39,000
Kitchen	37.6		15,040
Dining Area	18.3		7,320
Hostels	161.8		64,720
Ablution Blocks	68.2		27,280
Residential Staff Housing (2)	164.6		65,840
Instructors' Quarters	<u>67.0</u>		<u>26,800</u>
Totals	<u>861.3</u>	<u>400</u>	<u>344,520</u>

*Includes Site Works and Services

This base cost is for construction in Gaborone. For construction in other towns, the base cost is multiplied by a cost factor calculated by the Chief Architect's office based on GOB experience with construction costs throughout the country.

<u>Location</u>	<u>Cost Factor</u>	<u>Total Cost</u>
Tsabong	1.60	P550,000
Kasane	1.60	P550,000
Mochudi	1.10	P380,000

D. PROFESSIONAL FEES

Professional fees for architectural design and construction supervision are estimated at approximately 10% of building costs for new designs and 5% for existing design.

New Design	P 100,000 x 10%	= 10,000
Existing Design	P2,480,000 x 5%	= <u>124,000</u>
Total		<u>P134,000</u>

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E. Total Construction Cost and Professional Fees (Pula)

	<u>USAID</u>	<u>GOB</u>	<u>TOTAL</u>
PEC Expansion	60,000	40,000	100,000
Hostel Block	600,000	400,000	1,000,000
Three Education Centers	888,000	592,000	1,480,000
Profesional Fees	<u> </u>	<u>134,000</u>	<u>134,000</u>
TOTAL	<u>1,548,000</u>	<u>1,166,000</u>	<u>2,714,000</u>

VIII. CONCLUSION

The facilities planned to be constructed under the project are required to achieve the objectives of PEIP II. Standard GOB specifications and construction procedures are planned to ensure smooth implementation of the program and to minimize construction and recurrent maintenance costs. The REDSO Engineer reviewed the requirements, designs, contracting arrangements, AID monitoring plans, payment procedures, implementation schedule and cost estimates and concluded that the planning is adequate and costs are reasonably firm and acceptable. Therefore, the construction program is considered to meet all Section 611 (a) (1) requirements of the Foreign Assistance Act of 1961, as amended. Annex E is a 611 (e) Certification prepared by the USAID/Botswana Director for the consideration of the Assistant Administrator for Africa, pursuant to AID Handbook 3, Appendix 3L guidance.

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GRAY AMENDMENT CERTIFICATION

It is hereby certified that the Procurement Plan for the Primary Education Improvement Project, Phase II, has been developed with full consideration of maximally involving Gray Amendment entities in the provision of goods and services under the Project. The Africa Bureau approved (per State 132382) the implementation of this project through a collaborative assistance mode contract. Thus only those Gray Amendment entities which were also qualified educational institutions were appropriate for the project. As the Contracting Plan indicates, efforts will be made to maximize subcontracting activities with an Historically Black University.

Paul Guedet
Paul Guedet,
USAID/Botswana Director

4/29/86
Date

ANNEX H

Background Information: Education Statistics

**ORGANIZATIONAL CHART A
MINISTRY OF EDUCATION**

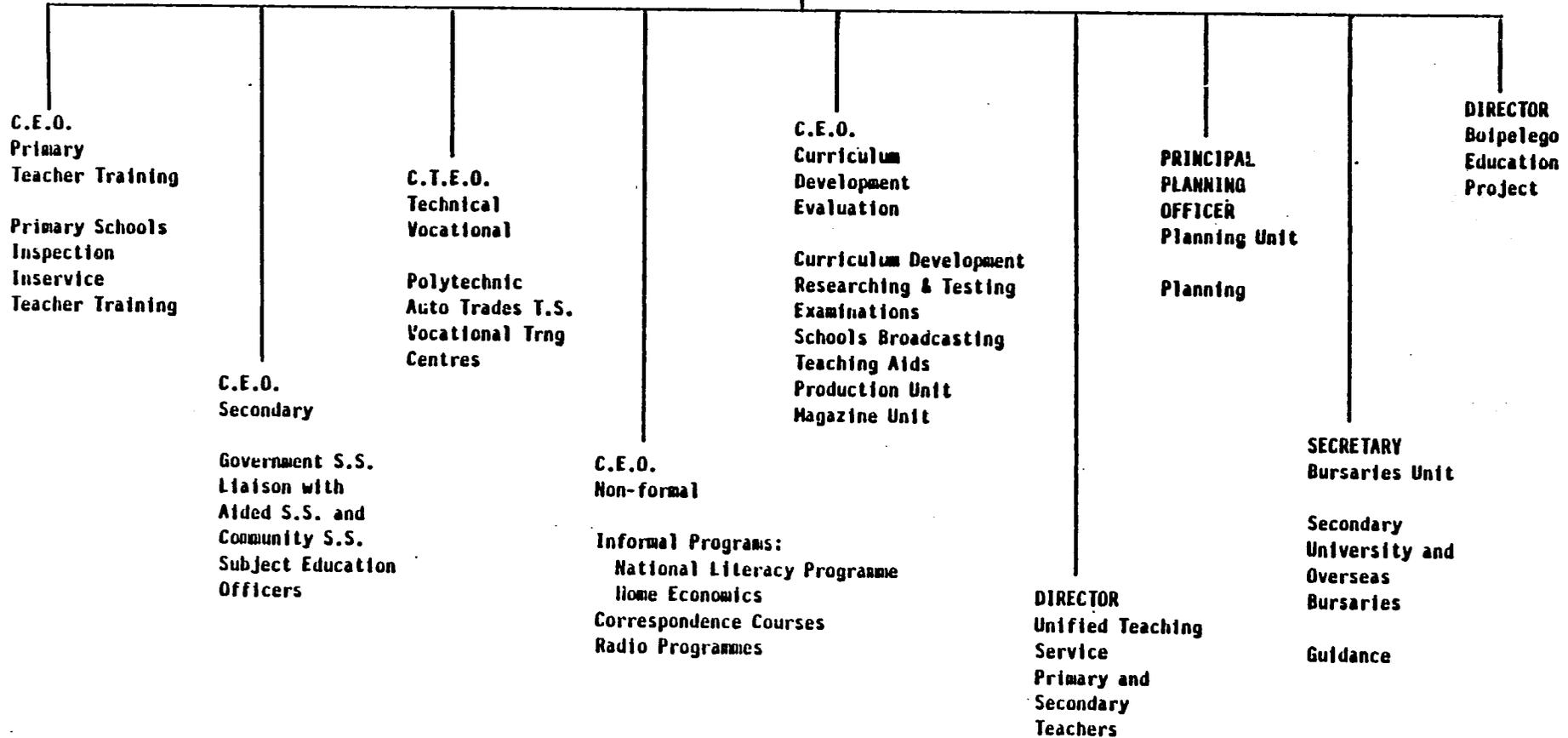
MINISTER

PERMANENT SECRETARY

-----Director, Brigades

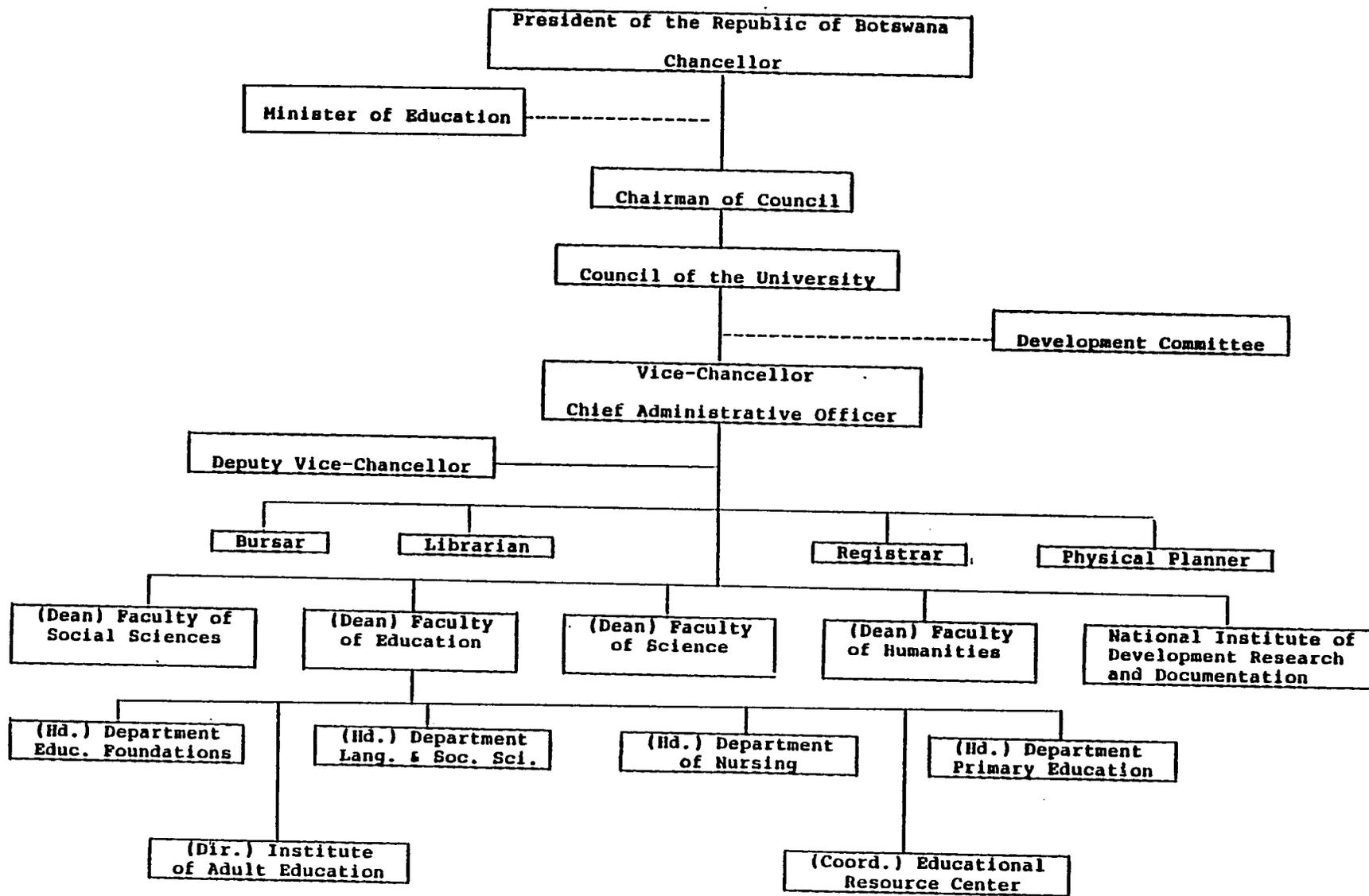
-----**UNDER SECRETARY**
Administration/Finance

DEPUTY PERMANENT SECRETARY



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UB ORGANIZATIONAL CHART B



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CHART CCOORDINATION FOR THE
PRIMARY EDUCATION IMPROVEMENT PROJECT IIADVISORY COMMITTEE

CEO - PTT	Dean, Faculty of Education
CEO - CDEU	Director, UTS
Senior Planning Officer	PTU Representative
Motswana Lecturer, DPE	PTTC Principal
MOE Inservice Leader	MOE PEIP II Coordinator
PEIP IC	MFDP Representative
USAID/Botswana HRDO	JSEIP Representative

PROJECT PURPOSE

To strengthen the capacity of the MOE and UB to organize, revise and implement effective preservice, inservice and curriculum programs for primary teacher education.

PROJECT COMPONENTS

Continue preservice primary education at UB in diploma and BEd programs	Develop two-year MEd program with primary education specialization
Increase intake of students into the two programs to primary teachers, ECs, and PTTC staff	Establish network for delivery of inservice education
Provide advanced preparation for Botswana Faculty of Education	Assist in development of the PTTC Curriculum

TABLE I

PRIMARY TEACHER DEMAND AND SUPPLY
PROJECTIONS IN 1979 AND IN NDP 6

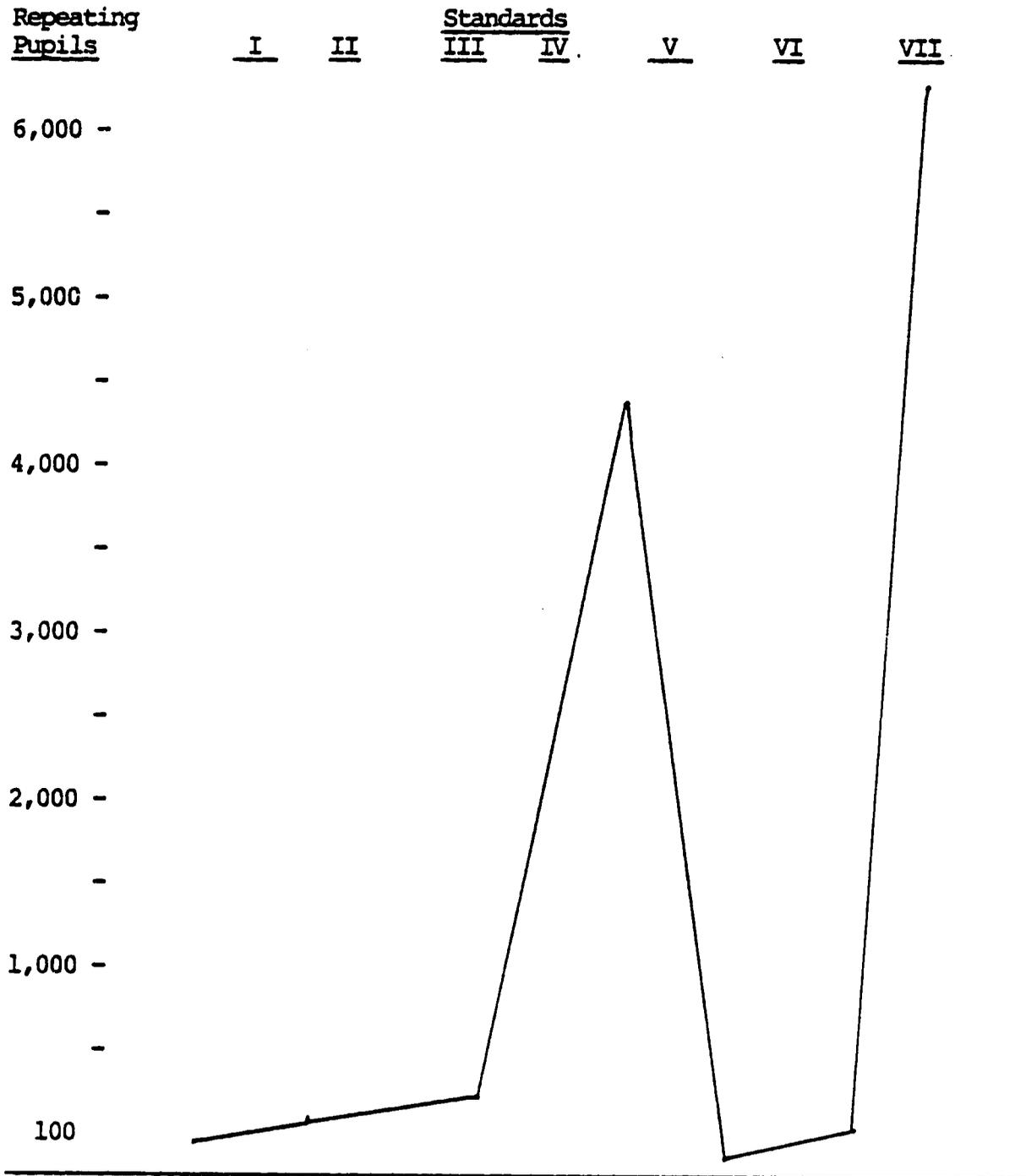
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
1979 Primary Enrollments Projection	230,000	237,000	244,000	251,000	259,000
<u>NDP 6</u> Projection	229,000	239,000	250,000	261,000	274,000
1979 Projected Teacher Demand	7,192	7,408	7,630	7,859	8,095
Projection Available	(5,693)	(6,102)	(6,499)	(6,884)	(7,257)
<u>NDP 6</u> Projected	7,390	7,720	8,070	8,420	8,850
Projection Available	(5,020)	(5,350)	(5,680)	(5,980)	(6,630)
1979 PTTC Outputs	580	580	580	580	580
<u>NDP 6</u>	610	610	610	690	690

NOTES: The 1979 projections were based on an assumption of an earlier drop in Standard I enrollments and resulted in accordingly lower estimates in demand for primary teachers.

Both the 1979 and NDP 6 projections concerning outputs of the PTTCs appear to be short at least in the near term. In 1984, 461 took the Primary Teaching Certificate Examination, and it appears unlikely that the 580 estimate will be attained before 1987. In 1990, according to NDP 6, about 30% of the teaching force will remain untrained.

CHART I

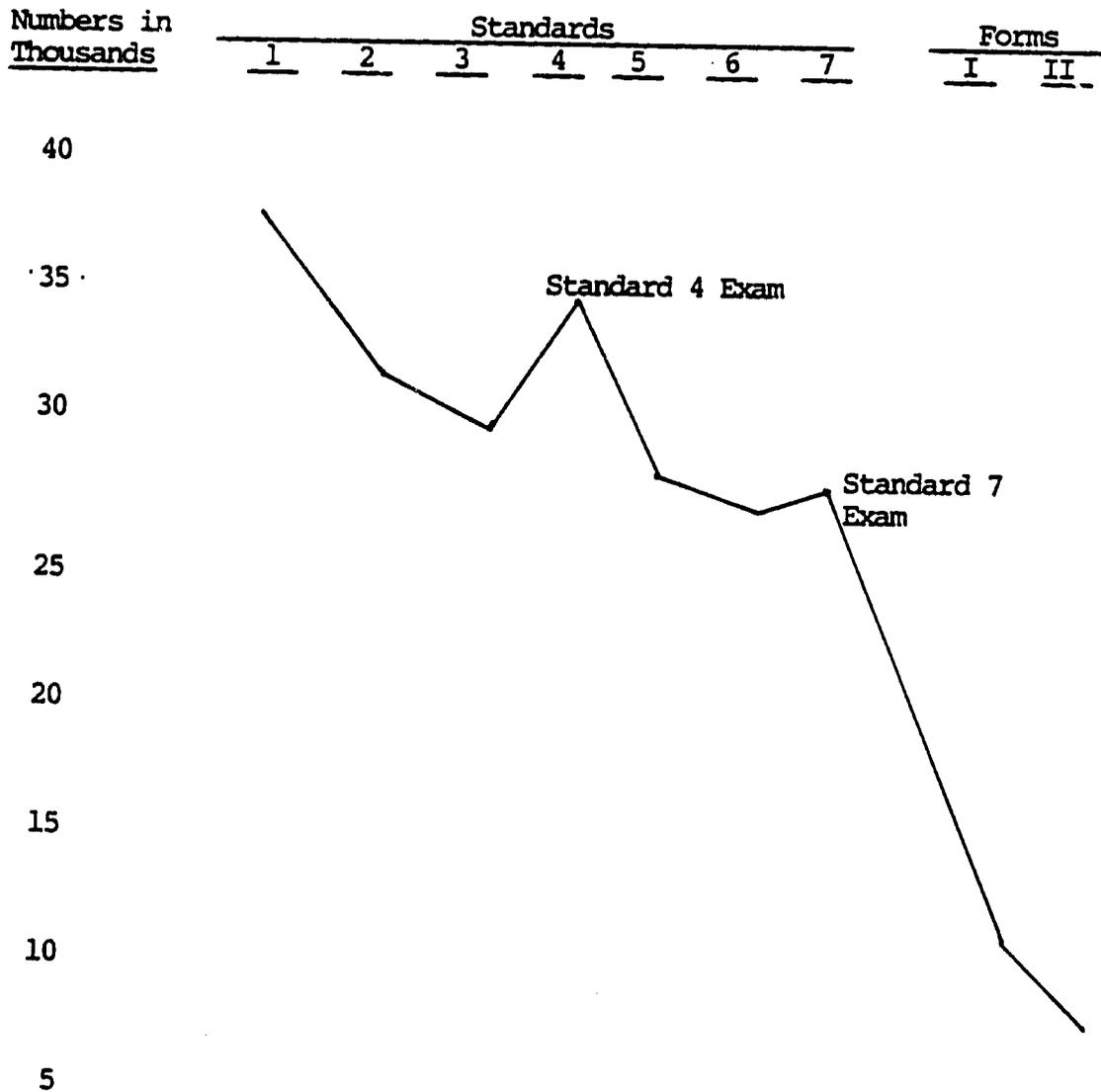
NUMBER OF REPEATERS BY STANDARD (1984)



(More than 10,000 repeaters each year for all Standards. What is the cost in terms of teachers needed, classrooms required?)

CHART II

ENROLLMENTS BY STANDARDS AND FORMS I AND II (1984)



(Currently low rates of access to nine years of schooling pose implications for transition to the nine year basic education plan.)

Position Descriptions
Ministry of Education
Botswana

Education Officers (EOs) - Officers appointed to serve in the districts as supervisors, inspectors, counselors and administrators, representing the MOE in primary education and working closely with head teachers of primary schools and the education secretaries appointed by local district councils.

Regional Education Officers (REOs) - Officers appointed to serve over the EOs. Major concerns are with primary education. At present (1986), there are four REOs in Botswana with responsibility for supervising the EOs and the primary schools.

Senior Education Officers (Primary) (SEOs) - Officers appointed to serve as supervisors of primary and teacher training at headquarters. The EOs (Primary), the REOs, and the Principals of the PTTCs are under the SEO (Primary) as well as all primary schools.

Senior Education Officers (Secondary) (SEOs) - Officers appointed to serve as supervisors of the secondary schools in subject areas. Because curriculum writers are not available, SEOs have been revising curricula for Forms I - V (Grades 8 - 12) with panels of teachers assigned to work with them. They conduct workshops in their areas of expertise to review the revised syllabi and teaching methodology needed for implementation.

Chief Education Officers (CEOs) - Heads/directors of departments in the MOE with responsibility for the overall functions of their particular sections, such as: Primary and Teacher Training (P & TT), Secondary, Non-Formal, Technical, Curriculum Development and Evaluation (CD & E).

Head Teachers* - Administrative heads of local primary schools. The majority are experienced classroom teachers who have demonstrated ability in primary education. They are responsible for the operation of their individual primary schools. They may be called upon to give workshops in neighboring schools but are automatically expected to conduct inservice training for teachers of their own schools. They are directly responsible to the EOs.

Deputy Head Teachers* - Those who serve under a head teacher with responsibility for classroom management, time and attendance of teachers and students, bursary matters and overall supervision of school maintenance.

Senior Teachers* - Experienced classroom teachers who help newly appointed trained and untrained teachers to implement the revised primary school curriculum. Larger primary schools have two or more senior teachers to work with particular grade levels, e.g. 1-4, 5-7, to ensure uniform teaching - learning situations in classrooms. They often initiate internal workshops or those for sister schools.

*All primary public school teachers are appointed by the Unified Teaching Service (UTS); teachers remain unqualified until training at a PTTC can be obtained and the Primary Teacher Certification Examination has been passed. The UTS is responsible for the salaries of all primary teachers except those teaching in private schools.

QUALIFICATIONS AND TRAINING
OF
BOTSWANA'S PRIMARY TEACHERS

1. A qualified teacher in Botswana is one who has attended a primary teacher training college (PTTC) and has passed the Primary Teacher Certification (PTC) examination. To enter a PTTC, a teacher must have taught at least one year in a public primary school and have passed the Junior Certificate Exam.
2. A trained teacher is one who has received some preservice or inservice training but has not passed the Teacher Certification Examination. Thus a teacher can be trained but not qualified.
3. A teacher who has had no previous training of any kind before he/she was hired to teach is considered untrained until he/she attends workshops under the MOE or attends a PTTC. Although many have had at least five years' experience, they are still considered untrained until they attend MOE workshops.
4. Untrained and unqualified primary teachers are appointed and paid by the GOB through the Unified Teaching Services (UTS) of the MOE. Qualified teachers are also appointed by the UTS but receive higher salaries on the Teaching Scale than those who are unqualified because they have passed the PTC examination.

JOB DESCRIPTIONS FOR CONTRACT TEAM SPECIALISTS

Team Leader and Specialist in Supervision/Administration

Qualifications: An earned doctorate, experience in administration and teaching at a variety of levels—primary and tertiary. Experience in administration of educational projects in developing countries desirable.

Duties:

- To serve as Head of the Department of Primary Education, UB, until such time as a qualified Motswana is appointed.
- To administer the contract between USAID and the IC.
- To maintain liaison with the contracting university.
- To maintain liaison with appropriate units in the MOE, UB and other contractors.
- To serve as a consultant on primary education to the MOE and UB.
- To serve as coordinator/supervisor of all project funded personnel and project activities, including participant training, the activities of short-term consultants and the ordering of commodities.
- To coordinate all project funded research projects.
- To facilitate the work of the Primary Inservice Education Specialist in implementing inservice activities through the MOE.
- To facilitate the work of the Curriculum and Instructional Design Specialist in implementing curriculum development activities at the PTTCs.
- To assist in teaching responsibilities in the primary education programs at UB in the area of administration and supervision.
- To report on a regular basis to the PEIP Advisory Committee.

Length of Service: Five person years.

Specialist in Primary Inservice Education (MOE)

Qualifications: An earned doctorate and experience in teacher education at various levels. Experience in educational supervision desirable. Experience in positions requiring coordination among educational agencies required.

Duties:

- To provide leadership and to coordinate inservice responsibilities in the MOE in cooperation with a Motswana counterpart in organizing and implementing the inservice network in education centers.

- To share responsibility for the preparation of materials and the arrangements for these inservice activities.
- To provide direction and coordination to the instructional leadership teams developed for and through the inservice activities and to conduct necessary follow-up activities with them.
- To initiate and facilitate the cooperative involvement of all appropriate agencies in the planning and implementation of inservice activities.

Length of Service: Five person years.

Math/Science/Teacher Competency Specialist

Qualifications: Earned doctorate with specialization in the teaching of curriculum in primary mathematics and science. A working knowledge of teacher competency models desired. Primary and tertiary teacher experience required.

Duties:

- To assist in teaching, committee work and supervision of teaching practice at UB.
- To spend approximately 50% of the time in consulting, developing materials and participating in inservice activities associated with the inservice network and curriculum development activities at PTTCs.
- To provide leadership as a part of inservice activities in the use of the Botswana Teacher Competency Model.
- To assist Motswana counterpart, upon return from graduate study, to assume these duties as a member of the Faculty of Education at UB.

Length of Service: Three person years.

Social Studies Specialist

Qualifications: Earned doctorate with specialization in the teaching of curriculum in primary social studies. Experience in developing primary social studies curriculum and instructional materials desired. Primary and tertiary teaching experience required.

Duties:

- To assist in teaching, committee work and supervision of teaching practice at UB.
- To spend approximately 50% of the time in consulting, developing materials and participating in inservice activities associated with the inservice network and curriculum development activities at PTTCs.

- To provide leadership in developing an understanding of the nature of social studies/citizenship education and the program components needed to prepare teachers in this area.
- To assist Motswana counterpart, upon return from graduate study, to assume these duties as a member of the Faculty of Education at UB.

Length of Service: Two person years.

Primary Education Specialist

Qualifications: Earned doctorate with specialization in a primary teaching area or areas needed to replace the Motswana counterpart selected for post-master's study in the U.S. Primary teaching and tertiary teaching experience required.

Duties:

Duties will be those listed under Social Studies Specialist but in the area(s) of specialization to be identified for this position.

Length of Service: Three person years.

Research Methods and Design Specialist

Qualifications: Earned doctorate with specialization in educational research methodology and experience in research design and supervision of research activities. College and tertiary teaching experience required.

Duties:

- To assist in teaching, committee work and supervision of primary education research activities at UB.
- To supervise research activities of participant trainees during the time they are in-country developing research topics and gathering research data.
- To instruct participant trainees in research methodology prior to departure for graduate study.
- To facilitate research activities pertaining to curriculum development at PTTCs.
(Approximately 50% of time will be spent in UB activities and 50% in research activities and instruction with participant trainees, PTTCs and inservice activities.)
- To work with staff and students in the use of computers and statistics in research.
- To take the initiative in identifying and securing needed resources for use in educational research.

Length of Service: Five person years.

Curriculum and Instruction Design Specialist

Qualifications: Earned doctorate with specialization in curriculum and instruction design. Experience in developing teacher education curriculum and instructional materials required. Primary, teacher education and tertiary teaching experience required.

Duties:

- To assist in teaching and committee work at UB for 25% of the time.
- To facilitate curriculum development and inservice at PTTCs for 75% of time.
- To coordinate the development of curriculum materials at the PTTCs.
- To collaborate with other consultants assisting with research activities pertaining to curriculum development at the PTTCs.

Length of Service: Five person years

NOTE: One of the long-term technical specialists will be designated to serve as Deputy Team Leader.

Short-Term Consultancies

The nature of an evolving five-year project is such that the need for consultant services cannot always be predicted in advance. However, it is estimated that 36 months of qualified technical consultants will be needed. During the PEIP I project, 30 person months have been used so far under the contract for short-term consultants out of a total of 37 scheduled; approximately two-three person months have been used by the external evaluator out of seven programmed under the project, but outside the contract. It therefore seems practical to program 36 person months for contract and external use under the project.

<u>PEIP I</u>	<u>Programmed</u>	<u>Used</u>
Contract	37	30
External	7	2/3
Total	<u>44</u>	<u>32/3</u>

The development and pace of activities will dictate the time and specific areas in which additional specialists will be needed. An examination of activities begun in PEIP I and problem areas identified suggest that there will be specific needs for short-term consultants with strengths in the following areas:

1. Program Evaluation and Needs Assessment - three months, early in the project to assist in the identification of curriculum development needs at PTTCs and UB:

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2. Materials Distribution Systems - three months, early in the project to recommend procedures for efficient distribution of instructional materials to schools;
3. Special Education - three months in the second year to provide workshops on the topic of meeting the needs of handicapped children;
4. Remediation - three months in second year to provide workshops on techniques for assessing and designing instructional strategies to overcome learning difficulties;
5. Guidance and Counseling - two months in the third year to provide inservice to PTTCs and to assist head teachers to develop appropriate guidance procedures and materials;
6. Correspondence and Part-time Instruction - three months in third or fourth year to make recommendations on the development of a part-time diploma program in conjunction with the pilot diploma program at UB/Tlokweng;
7. Materials Development - one to three months each year of the second, fourth and fifth years to assist TTCs in developing instructional materials for use by students of the TTCs;
8. Primary Education Areas - two to three months each, as needed, to assist in curriculum development activities at the PTTCs and to provide inservice for teachers through the inservice network; and
9. Teacher Competency Model - three months late in project to follow-up on activities begun in the first three years on the Botswana Teacher Competency Model.
10. External Evaluations/Audit - two weeks to one month each, as needed.

EDUCATION CENTERS

DESCRIPTION

Education centers are facilities designed to promote the professional development of teachers through various programs of inservice education. Centers provide assistance in materials development, library resources, demonstration teaching, and courses or workshops. Each center is affiliated with a teacher training college and staffed by education officers who are committed to inservice education. Center staff provide services to teachers at the center as well as in the area schools.

From the initial inservice training of primary school teachers, the role of the education centers has slowly come to grow. It is today fairly widely accepted that education centers should be multi-purpose resource centers for almost all aspects of education, even such aspects that are not under the umbrella of the Ministry of Education. Among the activities that can take place at an education center are the following:

- curriculum workshops for teachers, both primary and secondary, trained and untrained;
- the training of literacy assistants and literacy group teachers;
- the running of literacy classes;
- teaching aids production workshops run by TAFU;
- inservice teacher training workshops arranged by the PEIP and JSEIP projects;
- weekend courses for non-formal education correspondence students;
- regional seminars for distance education students from the Institute of Adult Education;
- subject panel meetings;
- District Council inservice courses.

The above is not in any way an exhaustive list of education center activities, but gives an indication of the various aspects of education that a center should be equipped to handle.

GOAL

The building of nine new education centers (3 under PEIP II) and the renovation of three existing ones will be completed by 1990. This would provide a total of 14 education centers in the country and establish a distribution network which would enable national, regional, and local inservice needs to be addressed. Every primary and secondary school in the country would have a direct link with an education center.

The immediate goal is to provide an administrative and staffing policy which will allow for program flexibility while providing links to relevant inservice providers (i.e. EOs, TTC tutors, UB staff). Issues of minimal training of education center directors, utilization of interns from the UB (PEIP) and the number of staffing positions in each center must be determined.

Since junior secondary and upper (senior) secondary programs in inservice education will be held at the centers, the staff must be able to plan and manage workshops and seminars on all levels, including adult and non-formal education.

OBJECTIVES

The development of education centers is critical in that it directly relates to program development in other areas in primary education. It is therefore important to phase in the building and staffing of new centers in a coordinated effort with the total developmental plan of primary and secondary education. The designation of which locations should have priority in the building of new centers will be related to this developmental plan.

A second objective is to plan a staff development program for education center staff to enable them to conduct needs assessments and provide inservice programming and leadership in their respective districts.

A third objective is to develop an effective linkage with primary and secondary schools, EOs, TTC tutors, UB instructors and the MOE, to maintain center vitality and growth.

A final objective is to develop an evaluation program for each center which will lead to systematic self-study and growth.

IMPLEMENTATION

Although the actual instruction and renovation of education centers will cover a 5 year period, policy decisions concerning administration, staffing and locations will have to be addressed at the very beginning stages of center development. Inservice committees at a national, regional and district level must be selected. Defining the centers' relationship with TTCs, EOs, PEIP, JSEIP, etc., will require numerous meetings during the first year of the five year plan. Implementation will then focus on the building of new centers, training of staff and evaluation of programs.

PERSONNEL

It is recommended that the staffing of each center consist of the following:

- a) Director - B.Ed degree or its equivalent.
- b) Assistant Director - initially PEIP interns studying to be education center Directors.

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- c) Two Field Officers - to provide inservice and support to local schools and assist in organizing and teaching courses.
- d) Secretary.

MATERIALS

All education centers should have basic equipment to provide the necessary functions of the center; this would include such items as the following:

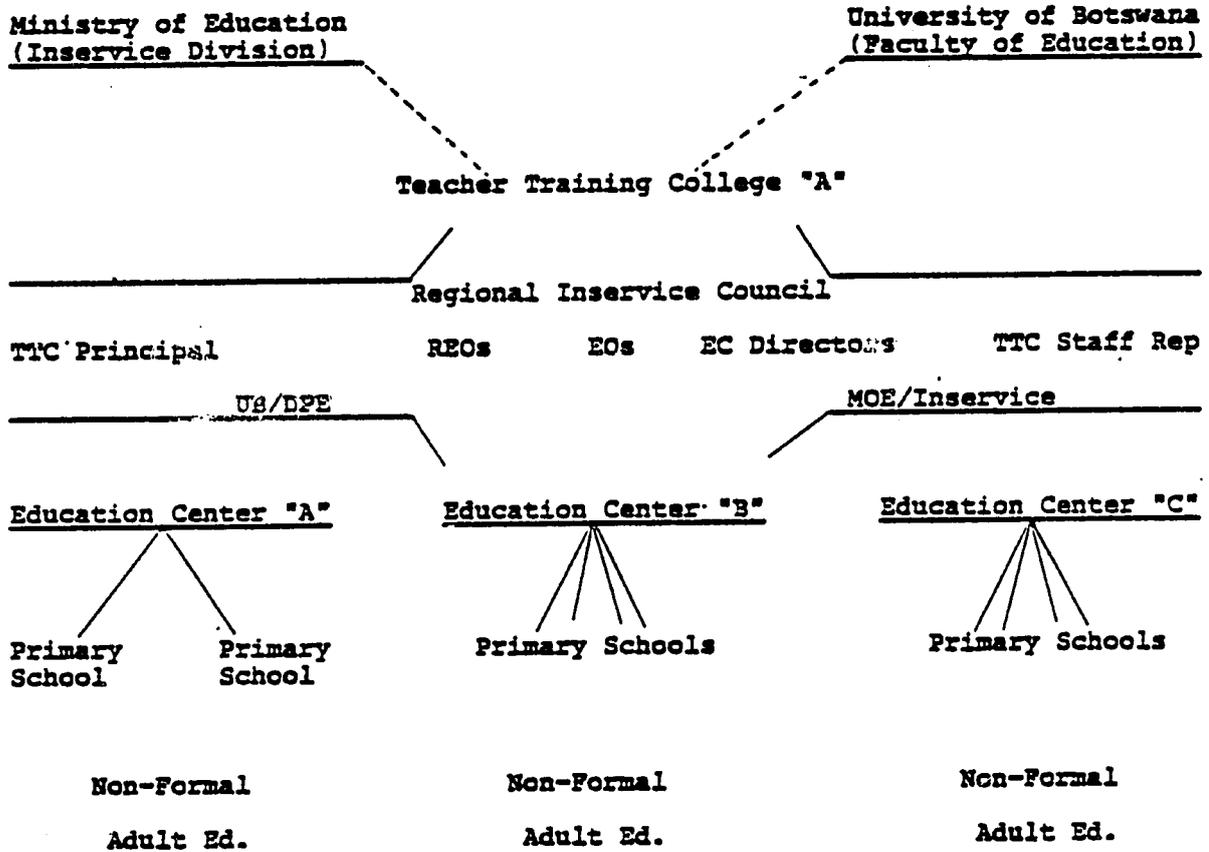
- a) An adequate selection of library resources for Standards 1-7 and Forms 1,2, including remedial and enrichment materials.
- b) Basic supplies, such as paper, scissors, crayons, pens, markers, meter sticks, clay, paste etc.
- c) A.V. equipment, including a 16mm projector, overhead projector, audio cassette machine, video camera, monitor, slide projector - 35,, camera etc.
- d) Materials development equipment, including a copying machine, stencil cutter, laminating machine, paper cutter, duplicating machine.

ATTACHMENT I

P:NETWORK

THE NETWORK FOR INSERVICE EDUCATION

AN EXAMPLE OF ONE COMPONENT



Throughout Botswana, every education center would be linked to a TTC and to appropriate resource institutions in a similar fashion.

(Illustrative Only)

AID'S COMMODITY PROCUREMENT PLAN AND WAIVERI. Responsible Agencies

The responsible agencies in the Government of Botswana (GOB) for all procurement activities undertaken by the project will be the Ministry of Finance and Development Planning and the Ministry of Education. These ministries will be ultimately responsible for GOB review and approval of all contracts and for other documents/instruments which obligate and or expend funds. These agencies will also be responsible to ensure the proper receipt and utilization of AID-financed project commodities.

II. Procurement List:

<u>Item</u>	<u>Qty</u>	<u>Probable Source</u>	<u>Project Component</u>	<u>Estimated Cost</u>
Texts, Reference Books, Periodicals		US	PTTC/ED CIRS/UB	\$110,000
Filmstrips/Films		US	PTTC/ED CIRS/UB	61,000
Teaching Aids		US	PTTC/ED CIRS/UB	
Overhead Projectors	7	US	PTTC/ED CIRS	2,000
16 mm Movie Sound Projectors	7	US	PTTC/ED CIRS	6,000
Video Cassette Machines & Monitor	7	.899	PTTC/ED CIRS	14,000
Tapes, Transparencies		US	PTTC/ED CIRS UB	10,000
Carousel Slide Projectors	4	US	ED CIRS/ UB	2,000
Cassette Recorder	3	US	ED CIRS	300
Film Strip Projector	3	US	ED CIRS	400
Typewriter	3	US	ED CIRS	3,500
Duplicating Machine	3	US	ED CIRS	400
Portable 1.5 kw Generators	3	899	ED CIRS	2,500
Desk Top Photocopier	3	899	ED CIRS	9,500
Microcomputer w/Printer/Software	4	US	UB/PTTCs	<u>22,000</u>
Subtotal				\$243,600

Procurement Agent's Fees and Estimated Shipping				<u>85,400</u>
Subtotal				\$329,000
Office Supplies/ Consumables		Botswana (offshelf)	All	50,000
Vehicles	3	899	ED CTRs/	<u>36,000</u>
Total Estimated Cost of Commodities				<u>\$415,000</u>

III. Procurement Entities/Procedures:

It is planned that the majority of books, periodicals, filmstrips and tapes may be purchased through work orders to an AID IQC book contractor, or other suitable arrangements, under USAID issued PIO/Cs. Periodically, as needs develop, the IC will submit a list of books/periodicals/films to be purchased to the USAID project officer. This officer with the assistance of the Field Support Office will prepare the PIO/Cs and purchase orders. The IC will be required to purchase a nominal amount of books, etc. to be identified as needed.

Other items to be procured in the United States will be purchased by a Procurement Services Agent under an AID/W negotiated PSA IQC. In order to maximize the use of minority business involvement on the project, USAID will request AID/W to consider assigning procurement work in the project to one of the small minority owned PSAs under contract. Specific lists of items to be purchased will be generated by the IC and forwarded to the USAID project officer for appropriate action.

Items designated as AID Geographic Code 899 source/origin will be procured by the USAID Field Support Office. These items will be purchased through informal competitive procedures. Office supplies and small value shelf items may be purchased by the Field Support Office or the IC as appropriate.

IV. Procurement Schedule

Because the project involves construction of training facilities and continual training programs, procurement of many of the required items will occur during much of the life of the project. Procurement of items to be purchased in the United States will commence approximately nine months prior to need in order to ensure timely arrival. Procurement of motor vehicles under the Southern Africa light-weight blanket vehicle waiver will commence within three months of estimated requirement for vehicles. To the maximum extent possible, the IC will prepare consolidated lists of needed books/periodicals/films to be submitted to USAID six months in advance of required arrival.

V. Shelf Item Purchases

The project will purchase, as necessary, items readily available on the commercial market in Botswana in accordance with the provisions of HB 1B Chapter 18. Such shelf item purchases will consist almost entirely of expendable supplies and of repair parts as needed for equipment/vehicles

and are budgeted at approximately \$50,000 for the life of the project.

VI. Source/Origin Waivers

The authorized source/origin for this project grant is AID Geographic Code 941 and Botswana. A source/origin waiver to permit purchase of seven video cassette machines with monitors, three portable generators, and three desk top photocopiers is requested. Three vehicles will be purchased under the Southern Africa light-weight blanket vehicle waiver.

VII. Shipping/Marking/End Use Accounting

Because of Botswana's landlocked position and because most of the items to be purchased off shore are small in volume and relatively light in weight, air freight may be considered for some of the items. The PIO/C and AID Form 1194 to the procurement entities for such shipment will request consolidated air shipments for these commodities. Imports under the project will be cleared through customs by the USAID Field Support Office. Property distributed to the University of Botswana and to the various training centers will be entered into the official inventory of equipment of the particular institutions. The IC will maintain adequate records for all AID-financed commodity inputs and will ensure that all non-expendable equipment is appropriately marked with the AID hand clasp symbol.

JUSTIFICATION FOR PROCUREMENT SOURCE/ORIGIN WAIVER
FROM AID GEOGRAPHIC CODE 941 TO AID GEOGRAPHIC CODE 899

- A. Cooperating Country: Botswana
- B. Project: Primary Education Improvement Project, Phase II (PEIP II) (633-0240)
- C. Nature of Funding: Grant
- D. Source of Funding: ESF
- E. Commodities: 3 Portable Generators
3 Desk Top Copiers
7 Video Cassette Players w/Monitors
- F. Approximate Value: \$26,000
- G. Probable Source/Origin: AID Geographic Code 899

Discussion and Justification:

The Primary Education Development Project, Phase II (PEIP II) requires three desk top paper copiers, seven video cassette players with monitors, and three portable generators. All of these items are needed to carry out project objectives. The three desk top copiers and the seven video cassette recorders with monitors will be used in the Primary Teacher Training Centers to be constructed under the project for inservice training of teachers. The portable generators are necessary to provide reliable electricity to run the equipment for training at centers.

No video cassette recorders or video monitors using the PAL system, which is in use in Botswana, are manufactured in the United States. Moreover, since video equipment, generators and paper copiers made in the United States or other AID Geographic Code 941 countries are not marketed in Botswana, no local servicing is available for any of these items from Code 941 source/origin.

HB 1B, Chapter 5B 4a(2) provides that the authorized source origin of commodities may be expanded to the extent necessary when the commodity is not available from countries or areas included in the authorized geographic code. Given the facts that PAL system video equipment is not made in the U.S. and that service and maintenance facilities for U.S. or Code 941 manufactured generators, video equipment and paper copiers are non-existent in Botswana, the test of HB 1B appears to have been met.

Under Delegation of Authority No. 140, as last revised 17 April 1985 (State 115914), the Mission Director has the authority to approve procurement waivers of the source/origin requirements up to a value of \$3,000,000 per transaction. This request, therefore, falls within that authority to grant.

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ANNEX L

Implementation Schedule Charts

TECHNICAL ASSISTANCE SCHEDULE

POSITION	Aug 1986	Aug 1987	Aug 1988	Aug 1989	Aug 1990	Aug 1991
Supervision/ Administration Five Years	X	X	X	X	X	
Primary Inservice Education Five Years	X	X	X	X	X	
Math/Science Teacher Competency Three Years	X	X	X			
Social Studies Two Years	X	X				
Primary Education Three Years			X	X	X	
Research Methods and Design Five Years	X	X	X	X	X	
Curriculum and Instructional Design Five Years	X	X	X	X	X	
Short-Term Consultancies: One- Three Months Each						

Total 31 Person Years

FY TENTATIVE SCHEDULE FOR SHORT-TERM CONSULTANTS

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	
Program Evaluation/Needs Assessment		XXX					
Materials Distribution		XXX					
Primary Education I			XX				
Special Education			XXX				
Remediation			XXX				
Primary Education II			XX				
Guidance and Counseling				XX			
External Evaluation		x	X*	X	x	X	
Correspondence and Part-time Instruction				XXX			
Materials Production				XX			
Teacher Competency Model				XX			
Materials Writing I		XX			XXX		
Materials Writing II						XX	
TOTAL		8 1/2	11	10	3 1/2	3	= 36

*Includes one-two weeks for audit, if deemed appropriate.

X = one month
x = two weeks

PARTICIPANT TRAINING SCHEDULE

<u>POSITION</u>	Aug. 1986	Aug. 1987	Aug. 1988	Aug. 1989	Aug. 1990	Aug. 1991
<u>Post-Master</u>						
Social Studies						
PT2						
PT3						
PT4						
PT5						
PT6						
<u>M Ed</u>						
PT1						
PT2						
PT3						
PT4						
PT5						
PT6						
Short Term 4 to 6 Months	To be decided in August - December 1987					

Total 20 Person Years

ANNEX M

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