

PD-ARM-392
97502

MIDTERM EVALUATION

OF

**THE PRIMARY EDUCATION DEVELOPMENT
(PED) PROGRAM**

Prepared for:

**The United States Agency for International Development
Islamabad, Pakistan**

Prepared by:

**Education Development Center, Inc.
International Programs
1250 24th Street, N.W., Suite 300
Washington, D.C.**

Respectfully submitted by:

**Idris Anjum
H. U. Beg
Robert S. Feldman
Richard L. Hopkins
Christina C. Rawley
Mary T. Rose**

Currency Equivalents

Currency Unit = Rupees (Rs)

US \$1.00 = Rs 25.3 (May 1993)

Principal Acronyms Used

ADB	: Asian Development Bank
ADP	: Annual Development Program
AEPAM	: Academy for Education Planning and Management
AGPR	: Accountant General Pakistan Revenue
AIOU	: Allama Iqbal Open University
BEMIS	: Balochistan Education Management Information Systems
DDAC	: District Development Advisory Committees
DCW	: Directorate of Civil Works
DEOs	: District Education Officers
DPE	: Department of Primary Education
EAD	: Economic Affairs Division
EDC	: Education Development Center Inc.
EMIS:	: Education Management Information System
FEMIS:	: Financial Education Management Information System
GOP	: Government of Pakistan
GOB	: Government of Balochistan
IDA	: International Development Association
IMDC	: Instructional Materials Development Cell
IRI	: Interactive Radio Instruction
LCs	: Learning Coordinators
MPA	: Members of provincial Assemblies
NEMIS	: National Education Management Information System
NGO	: Non-governmental Organization
NWFP	: North West Frontier Province
PAAD	: Program Assistance Approval Document
PC-1	: Planning Commission Pro-forma Number 1
PED	: Primary Education Development
PIL	: Project Implementation Letter
PLA	: Personal Ledger Account
PLM	: Purpose Level Monitoring
PTAC	: Primary Teachers Accelerated Certificate
PTC	: Primary Teaching Certificate
SAP	: Social Action Program
SBP	: State Bank of Pakistan
SNE	: Schedule of New Expenditure
UNDP	: United Nations Development Programme
UNICEF	: United Nations Children's Fund
USAID	: United States Agency for International Development

Executive Summary

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Executive Summary
USAID/PAKISTAN
Evaluation of the Primary Education Development (PED) Program
May 1993

1. Background

1.1 Purpose of the PED Program

The PED Program is designed to establish a foundation for sustained economic and social development in Pakistan by encouraging policy reforms in education. The broad sector goal of the PED Program is to increase substantially the national literacy rates, with an emphasis on rural females, in the primary education subsector of the outland provinces of Balochistan and North West Frontier Provinces. Specific targets include increases in all enrollments in primary school, particularly for girls. The program also includes support for improvements in the quality and efficiency of primary education through capacity enhancements related to subsector administration and supervision, planning and management of construction, teacher training and supply, and instructional materials. Finally, the program supports policy change to manage and sustain all of the above subsector improvements.

1.2 Purpose and Context of the Evaluation and Methodology Used

The purpose of this evaluation is to review and assess the effectiveness and impact of the Primary Education Development (PED) Program with regard to the institutional and organizational arrangements as well as the policies and procedures instituted by the provincial governments since the beginning of the PED Program. The report focuses on the technical assistance teams' efforts in assisting the provinces to establish the desired institutional capacity and policy reforms needed to achieve the revised goals of the PED Program during the closing year of the program. The evaluation will be used to guide Mission management in assessing the impact of the PED Program with particular regard to implementation during the final year of phase out and transition of the program to other donor funding.

The assessment and recommendations are presented within the context of changes in the political environment which impacted on the program in its initial stage. Developed under the FY 88-93 U.S. Assistance Package to Pakistan, originally \$280 million in sector grant, training and technical assistance, and related support was to be provided to the Government of Pakistan during the program period of 10 years (1989-99). However, in October 1990, due to the lack of certification required under the Pressler amendment, the USAID program in Pakistan was forced to begin phasing out; the life of the program (LOP) budget was reduced from \$280 million to \$77 million, and the Program was reduced from 10 years to 5 years, ending 5 September 1994. USAID/Pakistan personnel and PED technical assistants have worked with other donors, especially the World Bank, to enhance the effectiveness of the development effort and to plan follow-on development aid to the PED phase out, in order to retain the long-term institutional and policy reform effort.

The timing of the mid-term assessment actually fell during the final 16 months of the program, at a stage between interim and final stages, closer to the end of the program than the middle. Therefore, the assessment offers an evaluation keeping in mind recommendations that will usefully serve the program in the final year as preparation for the transition phase to donor follow-on. The evaluation was conducted during six-week period in April-May, 1993. The types and sources of evidence used to assess the program included document analysis, interviews which were conducted informally through briefings and group and individual discussions with key people in Islamabad and in the two provinces of Balochistan and North West Frontier, and observations at selected Islamabad (national capital) and provincial offices, PED Program office sites, as well as field school and other sites were visited, where observational data on such behaviors as how government education personnel and long-term TAs interacted, how staffing reflected gender equity issues in composition and manner, and how personnel reflected concern for long-term sustainability in attitudes, vocabulary, and ideas volunteered were noted. These were used to supplement and validate more direct documentary and interview data.

2. Summary of Findings, Conclusions, and Recommendations

Institutional development and management and administrative structures have been developed for educational policy reforms. Basic program alterations seem not needed, mainly because two basic goals have been well attended: (1) the flexibility in planning through continuous policy dialogue to evolve the focus of efforts effectively, for example, leading with instructional materials development in the NWFP and the evolving emphasis toward more community participation promotion in Balochistan; and (2) cooperation with the World Bank (complete in Balochistan and in progress in the NWFP) to develop World Bank follow-on projects well coordinated with the PED Program.

Most of the recommendations in the following sections are presented with a view toward what can be reasonably expected to be accomplished during the final year of the program in order to: (1) manage developments in the PED Program through the last year to stabilize institutional developments and ongoing education development processes that can be achieved by Program end, and (2) coordinate the transition to the World Bank follow-on projects, aiming at a smooth transition toward long-term development sustainability.

2.1 Policy and Planning, Administration and Management—Targeted increases in primary school participation rates, especially for girls, have been met and, in some cases, exceeded. Mandated policy changes have been implemented. The formation of a Directorate of Primary Education is complete in NWFP and operationally complete in Balochistan by July, 1993. Real increases in primary education budgetary expenditures have exceeded mandated increases of 5% and 8% in NWFP and Balochistan respectively. Institutional development for administration and management, private sector involvement, provincial coordination of donor funding, and the operationalization of an EMIS system has been carried out in varied degrees of success between the two provinces; BEMIS has become a nationally acclaimed model.

Balochistan:

1. With the DPE now established, it is poised to take over responsibility for planning such challenges as the refinement of BEMIS to maximize the possibilities of sustainability, the coordination of instructional materials development with inservice teacher training, the developing of a proper set of responsibilities for learning coordinators, the promotion of community participation in village primary schools, and the management of primary education expansion within the realities of the recurrent budget. The next year could establish the DPE as the center of primary education planning in Balochistan.

2. The Society for Community Support for Primary Education in Balochistan in cooperation with the DPE could establish a firm foundation for the further development of community supported village schools.

3. To accomplish all this it is recommended that USAID and the TA team shift gears from facilitating management to stimulating planning, especially of the coordination, sustainability, and community support issues above.

North West Frontier Province:

4. It is recommended that the TA team leader focus on this for the next year to help consolidate all development of primary education learning materials in the NWFP in the new IMDC, to increase authority for primary education planning in the DPE and away from the Planning and Development, Finance, and Communication and Civil Works Departments, and to develop the capacity for broader educational planning in the DPE and the Education Secretariat through selective recruitment and training.

5. It is recommended that the curriculum development and teacher training TA team members focus on the establishment of an IMDC by Program end. Perhaps USAID/ Islamabad could work to help establish the DPE as a center for primary education planning through influence to transfer all responsibility for primary education planning to the DPE, including the funds that politicians presently control for social and educational development in their areas.

2.1.1 Financial Support

6. The Primary Education Program did not maintain its expenditure pace during the past year and must be helped to assure that the rate of growth does not fall below the required percentage. In the case of NWFP, there is an obvious need to accelerate the pace of expenditure to reach the target level; the actual expenditure in the current year is lower than the preceding year by 44 per cent.

7. The role of the Directorate of Primary Education is more of an intermediary than that of a supervisor. It receives bills from the implementing agencies and disburses the funds. The overall supervisory role of the Directorate should be strengthened to exercise necessary checks and balances.

8. The existing system should have the ability to cull out data of specific interest in line with the requirements of PED (or any given program) on receipts, disbursements and unspent balances at any given date. The Education Departments in the two provinces may approach the Finance Departments to include the Heads of Accounts in line with the categorization of expenditure specified in PIL No.8.

2.1.2 Education Management Information Systems (EMIS)

9. Document existing data processing activities as reference for others who may follow.

10. Continue to operationalize remaining district computer cells. Provide as much training and follow-up as possible.

11. Complete development of application programs in progress by field testing systems under development, provision of training and finalization of operations manuals. Ensure that final versions of source code are located within the DPE.

12. Attempt to establish a mechanism by which the DPE can contract competent programmers on an as needed basis.

13. Develop a cost profile for the EMIS as a whole and its various subcomponents and activity categories.

2.2 Curriculum and Instructional Materials Development: The strategy to achieve textbook reform has been approached in a unique manner in each of the two provinces and both have developed excellent programs, with Balochistan adapting materials and processes first developed in NWFP. The commonalities of interactive teaching, less rote learning, and student directed activities create an environment conducive to learning.

Balochistan

14. With its designation as a "Cell", the BIMDTC has been accepted, but is not a sanctioned post with a "Schedule of New Expenditures" (SNE) assigned to it. As such, the Cell is actively creating instructional materials that will impact children of Balochistan but it has not been given the organizational status to assure its continued leadership. It is recommended that every effort be made for BIMDTC be assigned SNEs within the next twelve months.

15. In an effort to coordinate the training of teachers in the methodologies required by the new instructional materials, it is recommended that the curriculum and teacher training Cell and the BIMDTC be housed together and we recommend that the Government of Balochistan acquire the present facility to accommodate both training and curriculum offices.

NWFP

16. Every effort should be made for the immediate assignment of a TA counterpart to be trained during the final year of the program.

2.3 Teacher Supply and Training—Diverse and innovative activities have been undertaken to increase the supply, training and supervision of teachers. In Balochistan the Three-Month Crash Training Program and Mobile Teacher Training Project were developed as an alternative approach to recruiting and training teachers, especially women in the rural areas.

17. Increase the quality of teacher training in short courses. Mobile Female Teacher Training Program has been modified following evaluation in Balochistan. It now has a three-month curriculum like the accelerated program and should receive approval for PTAC certification.

18. Upgrade Learning Coordinators to teaching status. Training should be provided the LCs on growth-oriented clinical supervision techniques. Following initial training, LCs should conduct workshops for teams of classroom teachers and head teachers in their area with emphasis on methodologies of teaching new materials and clinical supervision.

2.4 Primary School Facilities and Construction

2.4.1 Balochistan: The Civil Works component of the program has been very successful in the sense that it has achieved its planned targets of 1989-90, 1990-91 and 1991-92 very speedily. This is in spite of the fact that although the program took off in 1989 but first installment of funds was released in 1990. The program is likely to achieve its planned targets for 1992-93 subject to availability of funds. The sites have been approved by Chief Minister and cost estimates are ready. The bids will be called as soon as funds are made available. The main lesson which stems from this is that civil works component of any program requires a finite length of time to develop an acceptable design and to follow through the chain of actions required by competitive bidding process to the point of award of tenders. This process cannot be avoided and, hence, a certain length of time is required to be catered for preparatory work. But is never provided in any documents. Another lesson is that involvement of the private agency in construction management of Civil Works component has yielded laudable results in quantitative and qualitative terms in spite of tribal socio-political system of the province and whatever teething problems were faced by A/E firm for its survival and use of private consulting firm may be continued for any such future undertaking if contract administration and actual execution is to be made successful.

2.4.2 NWFP: It will be in the best of PED to entrust responsibility of construction management of school buildings to a suitable private A/E firm which would accelerate the pace of work and would also improve the quality. Engaging the services of A/E firm is usually the least expensive way to accomplish an engineering undertaking. The study of management of construction and maintenance of school buildings in NWFP by Engineering Associate Karachi during July, 1991 is a good reference to this context. C&W already overloaded with developmental works of National importance would be able to share time & talent for improvement of quality and timely completion of these projects.

3. Lessons Learned

3.1 Program Flexibility. An education sector approach allows the flexibility to lead with overall strengths and contextual advantages. Specific successes and directions that reform and development activities take depend as much on context and individuals involved as original planned intention. This suggests a need both for flexibility in determining what constitutes success and for a view that looks at the total education sector.

In Balochistan, the cultural context that allows some rule bending and selectively ignoring of certain procedures and formalities has made administrative and planning reforms more possible than the rule-following formality in the NWFP. On the other hand, the presence of a large, developed curriculum center in Balochistan impeded others from experimenting, while the corresponding weak curriculum center in the NWFP allowed such experimentation by others.

3.2 Institutionalization an Ongoing Process. In both provinces important educational development successes are being coupled with institutionalization as an ongoing process. Development activities are not being allowed to proceed too far out in front of efforts to put funding on recurrent budgets, to make institutional developments a permanent part of the bureaucracy, and to evolve TA from any central developmental role to a purely supportive role before it disappears.

3.3 Early diagnosis of circumstances leading to educational disparities at the local level can improve decisionmaking for resource allocations to improve participation rates for disadvantaged groups. The human resource survey conducted early in the program in both provinces showed reasons for low participation rates in different groups which were contrary to popular understanding, especially for rural females. The survey showed that many parents and communities did want education for their girls, but were unable for various reasons to send their daughters to primary school due to such factors as distance, school conditions, cost, or a perceived inappropriateness of the educational system. An EMIS system was effective in showing disaggregated data by gender and by tribal, village, or community locations. For example, once attitudes of a particular community were shown to support girls education, circumstances leading to low participation could be analyzed and resources could be appropriately targeted.

MIDTERM EVALUATION



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1. Introduction

1.1 Summary of Goals

"The program goal is to enhance the institutional capabilities of the Balochistan and the NWFP governments to formulate and implement policy that improves access, equity, and quality of primary education." (Project Paper, June 1989, p. 13).

The PED Program seeks a balanced development of primary education in Pakistani provinces of Balochistan and the North West Frontier (NWFP), including both a quantitative expansion of schools, teachers, and students and qualitative improvements in the siting of schools, teaching, and teaching materials. Special emphasis is on gender equity, especially the expansion of access to primary education for rural girls, and the sustainability of development gains.

The program is innovative and different from a more traditional project approach because it attempts to achieve balanced, long-term educational development goals, even at the expense of short-term, discrete, predetermined developmental goals. Sustainability and sector planning are emphasized over immediate results.

1.2 Summary of Strategy

The general strategy of the PED Program is to strengthen the institutional capacity of the GOP for policy formulation, planning, and implementation of primary education in Balochistan and North West Frontier province by focusing on:

Detailed strategies for achieving the goals include:

(1) Continuing policy reform through continuing dialogue, with increased financial support for primary education and increased access to primary education for girls as mandated policy changes—such policy reform to be stimulated by overall education sector financial aid made available in tranches as mutually agreed upon conditions are met.

(2) Financial grant aid made available for total primary education sector use, rather than specific development goals, where specific goals are planned and implemented by the provincial government bureaucracy rather than newly created, separate project implementation units. A mandated institutional development has been the creation of a Directorate of Primary Education in each of the two provinces to coordinate effort and focus attention on primary education. However, this Directorate is to be the institutionalized government agency dealing with the entire primary education sector planning and administration, including donor-supported activities.

(3) During the life of the program, initial policy reform, institutional development, and sector planning were to be facilitated by (a) short- and long-term technical assistance (TA), in order to stimulate initial movement and help institutionalize a continuing process of planning and improvement, and (b) the development of an educational management information system (EMIS), in order to support rational planning and stimulate policy dialogue.

Four component areas have been the focus of planning and policy activities in order to carry out the strategy: (1) Administration and Management, focusing on rational planning leading to coordinated but decentralized management; (2) School construction, especially of girls' schools; (3) Teacher Training, targeting rural females for local schools; and (4) Instructional Materials Development, to create higher quality, locally relevant materials.

1.3 Context Issues

There are several contextual issues to keep in mind when analyzing the design and the evolution of PED. The first of these concerns two political actions which took place within the first year which dramatically altered program planning. During the Gulf War in 1991 all U.S. PED personnel were evacuated for three months. During the time of the evacuation it was learned that the Pressler Amendment would be invoked and the PED program bud-

get and time line would be dramatically reduced from ten to five years with one-third the original fiscal allocation. These two unexpected events interfered with program start-up timing during a period of intensive planning with officials and severely diminished the extent of the program as it was originally planned.

Second, the socio-cultural environment within and between the two provinces is extremely varied. Balochistan is a large province but contains only about 5 percent of the country's total population, most of whom live in far flung rural areas. By contrast, NWFP is the smallest province with the second smallest population (about 12 percent) which is more densely settled and has greater access to services. Ethnic communities are diverse in both provinces and social organization is complex with more than 300 major and minor tribes in the two provinces. Balochistan is one of the linguistically most diverse of the provinces, only 1.4 percent of the households speak the official language of instruction, Urdu. These conditions, along with varied ecological zones, topography, and climate contribute to changes which occurred in planning and implementation throughout the program.

Third, bifurcation of education in Pakistan requires the separation of girls and boys throughout the education system. Access and quality issues persist everywhere, but the situation is much worse for girls. When the program started only about one-third of the villages had access to a primary school within one kilometer, but only six percent of the villages reported a primary school for girls within one kilometer. In NWFP 80 percent of villages were located within one kilometer of a primary school, but only 40 percent had primary schools for girls within the same range.

1.4 Program Rationale: Focus and Challenges

The rationale of PED program aid strategy is straightforward and explicit in the Project Paper. Rather than simply transferring resources, the program directs its effort in such a way as to develop organizational strengths in both the public and private sectors through the ministries of education, as well as through private and community efforts at the local and provincial levels. Thus strengthening the public and private sectors should in turn stimulate the Ministry and make the public sector more active and effective.

By encouraging and strengthening women's participation in particular both sectors will thus increase the educational capacity of the country and the client population will benefit on both sides.

The program also has its challenges. Restricted time and fiscal allocations caused by the invocation of the Pressler Amendment created an atmosphere of intensity and a perceived need to push for development of visible products at a faster rate than was originally anticipated. By its very design, the rationale for sustainability required long-term development support for increasing quantity and quality to improve educational outcomes using a three step approach that includes: (1) research studies, (2) development of quality inputs, and (3) experimentation and evaluation to ensure the relevance of the intervention in continuous cycles. The price for extending the program too large, too fast would be to sacrifice quality for quantity; so far this has been avoided in many areas of the program.

2. Program Overview

2.1 Program Goal and Purpose

The main problem addressed through PED is the low quality of basic primary education in Balochistan and North West Frontier Province (NWFP). The basic rationale underlying PED's institutional development strategy is that the systematic improvement in the efficiency and quality of the provincial systems of basic education cannot be attained unless an institutional framework to ensure supervision, guidance, pedagogical and financial support, and facilitation of research and development is improved.

The PED strategic objective is therefore comprised of four components: (1) Administration and management, focusing on rational planning leading to coordinated but decentralized management; (2) School construction, especially of girls schools; (3) Teacher training, targeting rural females for local schools; and (4) Instructional materials development, to create higher quality, locally relevant materials.

Due to the socio-cultural differences between the two provinces, the process and time line for implementing these objectives have diverged in Balochistan and NWFP. PED has achieved its goals in varying degrees; some have exceeded expectations of the ten-year plan.

2.2 Program Implementation

(For an institutional chart, see Annex 1)

The first step in field implementation of the PED program is marked by the collection of the first data to be used by both provinces to help develop a comprehensive master plan to increase the supply and distribution of teachers, especially female teachers. The human resource survey became the major source of baseline data of use in helping to determine program effectiveness in terms of increasing access and equity. EMIS was set up and survey data entry began.

Field implementation of the PED program began fully with the placement of long-term technical assistance teams in Balochistan and NWFP to help facilitate institutional development and implementation of the procedures, processes and infrastructure required to develop the primary education system. Previous to that, however, a thorough study was conducted in preparation for the PAAD.

A review of the time frame of the research, design and implementation of the program during the first two years is given below.

April 1989	Working Paper Completed
June 1, 1989	Project Assistance Approval Document (PAAD) Signed
February 15, 1990	PED TA Contract Awarded
March-June, 1990	Human Resource Survey data collected in Balochistan and started in NWFP
June 30, 1990	Technical Assistance Team field placements complete
January 1, 1991	Establishment of Directorate of Primary Education in NWFP PED Staff (U.S.) evacuated during Gulf War; notification of termination of the program in June 1994 (U.S. aid to Pakistan withdrawn due to invocation of Pressler Amendment)
March 30, 1991	PED Technical Assistance Team Returned to field positions

As a major benchmark in the PROAG, both provinces agreed to establish a directorate of primary education. The NWFP agreed to establish their directorate by June 5, 1990. Balochistan agreed to appoint an Additional Director of Primary Education and to work toward establishing a full directorate over a period of a year or two.

The first quarter of the following year was marked by two major events: (1) U.S. staff members were evacuated during the Gulf War; and (2) while in Washington, D.C. they were notified that, due to the invocation of the Pressler Amendment, the entire PED program was to be curtailed by September, 1994. Following these events, a revised program implementation plan was executed and preliminary inquiries were made with the World Bank for ongoing funding.

In NWFP the Primary Education Directorate became official and was staffed during January while the PED TA staff was in Washington, D.C.

Program initiatives were directed for a new time frame and budget imposed when the Pressler Amendment was invoked, to take into account the dramatic reduction in time (10 to 5 years) and money (\$280 to \$77 million). Policy reform and action benchmarks were developed to lead and indicate progress towards provincial program goals each year in the four functional areas of administration and management, school construction and facilities, curriculum development and instructional materials.

2.3 Achievement of Objectives

The program has fulfilled achievement objectives in many areas and is ahead of schedule in the critical development of administrative and management systems to support increased policy and planning capabilities. The weakest area in both provinces is in attaining the goals set for increasing the qualifications of teachers, although significant numbers of teachers have been trained.

Output objectives have been reached in the following proportions:

	Balochistan	NWFP
Policy and Planning		
Establishment of Directorate of Primary Education	73%	91%
Educational Management Information Systems (EMIS)	92%	87%
Private Sector Involvement		
Creation of Education Foundation	63%	100%
Provincial Donor Coordination	75%	86%
Finance		
Increased government support for primary education	over 100%	over 100%
School Construction & Facilities		
Primary Schools w/Buildings		
Boys	95%	98%
Girls	68%	96%
Teacher Training		
% male PT certified	55%	75%
% female PT certified	76%	82%
	68%	75%
Instructional Materials	50%	85%

2.4 Achievement of Enrollment Outcomes

Policy reforms were adopted for meeting enrollment targets; Revised enrollment targets were adopted for the end year of the program in 1994. Primary school enrollment targets for Balochistan were set at 353,000 for boys and 131,000 for girls; and in NWFP 1,280,000 for boys and 540,000 for girls.

The table below shows actual enrollment rates to have reached targeted amounts faster than expected. In NWFP there has been a 14% increase in enrollment and it is possible that the enrollment target for girls and boys may be exceeded. The participation rate shows a decline because it is now calculated on the basis of children ages 4-9 (grades K-5) rather than ages 5-9 (grades 1-5), based on new EMIS data.

Primary School Enrollment Outcomes Compared to 1994 Targets

	NWFP			Balochistan		
	90/91	92/93	Target 1994	90/91	92/93	Target 1994
Enrollment						
Boys (000)	1042	1282	1280	324	363	353
Girls (000)	406	508	540	83	101	131
Ratio boy/girl	2.6	2.5	2.4	3.9	3.6	2.7
Participation Rate						
Boys	77.0	77.5	80	71	71	-
Girls	33.5	38.2	38	16.8	24	-
Ratio boy/girl	2.3	2.2	1.34	4.2	3.0	-
Retention						
% Kachi-Pakki Dropout	15%	6.2%	10%	27%	28%	15%
Percent Class 3 Completion						
Boys 73%	92.2%	82%	39%	47%		50%
Girls 60%	85.5%	71%	28%	37%		40%

Figures for NWFP and Balochistan show steady increase in enrollment for both boys and girls. In Balochistan the two year gain for girls was 21.9% against a goal of 15%; the increase for boys was 12% against a goal of 8%. Boys are now exceeding the 1994 target.

3. Policy and Planning, Administration and Management

3.1 Introduction

The overall change pursued through educational policy and planning is increased provincial commitment to primary education, especially of girls. This has been accomplished through a combination of mandated increases in recurrent financial expenditures by the government with other policy changes developed through an ongoing policy dialogue to increase efforts toward primary education improvement, both quantitatively and qualitatively. Major policy changes pursued included the development of a separate Directorate of Primary Education in each province and permission in the centralized national education system to develop more relevant instructional materials in the provinces. Other policy changes pursued included relaxing teacher entry level qualifications in order to recruit local rural village girls as teachers and train them through specially developed teacher training programs.

3.1.1 Short-Term and Long-Term Goals

Short-term goals include (1) increases in the number of primary schools and students, with proportionally greater increases for girls, (2) improvement in the quality of teachers and instructional materials in the primary schools, and (3) more rational/gender equitable planning of such improvements. Long-term goals include (1) the institutionalization of the processes of continual commitment to and improvement of primary education, with special emphasis on the sustainability of gains made during the program, and (2) a continuing increased commitment to rational, gender equitable educational planning.

3.1.2 Methods of Achieving Goals

What makes this development: "program" different from a more traditional "project" is the intention to achieve balanced, long-term educational development goals, even at the expense of short-term, discrete, predetermined developmental goals. Sustainability and sector planning are emphasized over immediate results. Planned methods of achieving such goals include:

1) Financial grant aid made available for total primary education sector use, instead of for specific development goals, where specific goals are planned and implemented by the provincial government education bureaucracy rather than specially created project implementation units. A mandated institutional development has been the creation of a Directorate of Primary Education in each of two provinces to coordinate effort and focus attention on primary education. However, this Directorate is to be the institutionalized government agency dealing with all of primary education sector planning and administration—not just donor-supported activities.

(2) Continuing policy reform through continuing dialogue, with increased financial support for primary education and increased access to primary education for girls as mandated policy changes—such policy reform to be stimulated by overall education sector financial aid made available in tranches as mutually agreed upon conditions are met.

(3) Short-term and Long-term technical assistance (TA) and EMIS to stimulate policy dialogue. During the life of the program, initial policy reform, institutional development, and sector planning were to be facilitated by (a) short- and long-term TA, in order to stimulate initial movement and help institutionalize a continuing process of planning and improvement, and (b) the development of an educational management information system (EMIS), in order to support rational planning and stimulate policy dialogue.

Such methods were intended to imbed provincial government ownership of educational policy reform and development planning (a) to ensure long-term sustainability of program accomplishments in the improvement of primary education quantity, quality, and gender equity, and (b) to institutionalize the process of educational improve-

ment through continued policy dialogue, rational planning, and commitment to primary education development after the aid-funded program ended.

3.1.3 Development Sustainability and Gender Equity

Since development sustainability is a central concern and claim in the design of this program, it will be the focus of this assessment of education policy and planning. For it is mainly through the education policy and planning processes during the program and after that development sustainability would be achieved. Another central concern of this program is increased gender equity. This assessment of education policy and planning also includes consideration of the effects on improved gender equity that may be imbedded in the policy and planning processes encountered.

The central issues covered in this section of the evaluation are: (1) the implementation of mandated policy changes; (2) the development of a process of policy dialogue; (3) the institutionalization of rational educational planning (The section of the PED mid-term evaluation focusing on the planned development of an educational management information system [EMIS] will cover this support for rational planning in more detail.); (4) the extent to which the planning and administrative activities and the attitudes and goals of the involved personnel reflect the central concern for development sustainability; and (5) the extent to which gender equity issues are addressed and reflected in policy and planning activities.

3.1.4. PED Policy Changes

Policy changes were pursued in five areas: (1) administration and management, (2) teacher supply, training and supervision, (3) instructional materials development, (4) construction and facilities, and (5) financial support for primary education. This part of the assessment will focus primarily on administration and management, particularly with regard to the effectiveness of technical assistance and the Directorate of Primary Education. Reference will also be made to other areas integral to policy and planning, but which are more fully detailed in later sections of this assessment.

3.2 Directorate of Primary Education: A mandated goal of the PED program was to consolidate primary education planning and administration in a Directorate of Primary Education (DPE), which would also be separated from secondary and other areas of education administration to focus on primary education needs more forcefully. The DPE in Balochistan to be operationally effective in June, 1993; Directorate of Primary Education established in NWFP in 1991.

3.2.1 Directorate of Primary Education: Balochistan

In 1990, what would eventually become the Directorate of Primary Education began with the appointment of the office of the Additional Director of Primary Education. With a total staff of five and a beginning budget from the GOB of Rs 14 million for the first year, until USAID funds could reimburse and continue funding, the focus was on school construction (Rs 10 million) and administration and planning (Rs 4 million). In 1990 the office of the Additional Director took over planning, with the TA team, which arrived in June 1990, helping in this process.

The first major hurdle was to secure the appointment of qualified staff from the ranks of the GOB. Resistance from the government bureaucracy on the appointments and poor quality appointments delayed the planning capability of the fledgling Directorate for around a year, during which time the DPE depended on the TA team to prepare annual work plans and pressure for the appointment of a competent staff.

Great resistance for the consolidation of primary education planning and administration in a Directorate of Primary Education has come especially from the Project Implementation Unit (PIU) established under the World Bank Second Primary Education Project (PEP2) in Balochistan. The PEP2 PIU had been responsible for the implementation of the PEP2 in seven of the 20 districts in the province, had developed over the years a fiefdom outside of the main structure of the Provincial Department of Education, and had actually obstructed the generalization of the project development to the whole province.

Different administrative arrangements established by various donors as well as the government within the same sub-sector had greatly hampered implementation of all donor-funded projects as well as planning and administration of primary education overall. Thus, consolidated and coordinated planning and administration of all primary education regardless of funding within one Directorate was greatly needed but also greatly resisted by uncoordinated fiefdoms.

The target date for the implementation of the DPE was set for July 1992, but it will actually become operationally effective in July 1993. The Education Secretary has approved a reference for posting the deputy directors and selected assistant directors so that preparations can be completed. The Secretary of Finance has sanctioned an additional 15 posts necessary for pre-implementation.

Over this time, and with great difficulty, capable assistant and deputy directors (for the four component areas) had been appointed, work plans developed, and activities implemented in education management information services (especially for rational planning of school construction sites), school construction, and teacher training. Activities are expanding to include instructional materials development and the decentralization of planning, budgeting, and accountability to the district and sub-district levels.

Over the past three years, planning has evolved from being TA team-centered to being TA team-aided. Indications show a general tendency for the Pakistani DPE staff to take responsibility for planning and administration, and for the TA team to step back to support, stimulate, and facilitate.

Although experiencing a slow, difficult process in its establishment, the DPE will become operationally effective, administratively and financially, for all primary education in the province by July 1993. This is a major accomplishment in consolidation and coordination of disparate elements, enabling rational planning and then decentralization. The Director, Assistant Director for Administration, and TA team leader have been key players in this planning, administrative, and political process. They have worked hard and well together, with the TA team leader playing an important but increasingly supportive role. These three have gathered good staff around them by carefully fighting for, selecting, and recruiting capable and motivated people.

A significant problem in staff selection has been the bureaucratic requirement to hire personnel from within the system and the seniority system of promotion--as opposed to a merit system. In order to ensure active and effective development planning and administration in the long run, the emphasis has been on searching and recruiting until good staff is found. This has drawn out the process somewhat, but should ensure longer term sustainability of active and imaginative planning--assuming good staff can be retained. This has been coupled with (1) job descriptions for all positions from the Director to learning coordinators that spell out responsibilities and powers, and (2) staff training.

An obvious priority has been recruiting capable women for staff positions, which is most noticeable at the mid-levels, but the posts of Additional Director and Deputy are also held by women.

Among top-level administrators, there is a sensitivity for the need for long-term sustainability planning that institutionalizes development gains and prepares for the transition to the eventual disappearance of outside funding and technical assistance. Avoiding the lesson eventually learned the hard way in the World Bank PEP2, where at project end some 600 new teachers and staff needed to be put on recurrent funds all at once to great turmoil, new teachers and staff will be hired for only a year on World Bank funds in the follow-on World Bank project before they are put on GOB recurrent funding. In the USAID PED Program new teachers have been placed immediately on GOB recurrent funds. In this way new teachers hired initially with outside funding will continue to be put on the GOB recurrent budget gradually, possible because of the mandated annual increase in the GOB education budget. Likewise, the plan is to consolidate supervisors/ learning coordinators and put them on the GOB recurrent budget in the next few years before the anticipated World Bank follow-on project to PED ends--and, by the way, possibly to use learning coordinators to decrease expenses in the BEMIS budget to help sustain BEMIS.

A notable success has been the cooperative planning with the World Bank for a follow-on project that builds on and meshes well with the PED Program. This is an example of significant donor cooperation. In Balochistan it seems this will successfully minimize the threat caused by the invocation of the Pressler amendment to the ability to effect long-term institutional change and long-term sustainability of short-term development successes. This will affect not only the potential success of administrative and planning reforms, but the continuity of planned experiments and innovations, such as the mobile teacher training programs developed and the efforts to institutionalize the establishment of new schools through community participation.

Another planning success has been that all donor coordination, which has increased significantly with many donors participating during the PED Program, is now to be coordinated through the DPE.

Anticipated Successes and Problems

The anticipated success of the DPE is that it will exist and that it will be a force to be reckoned with. The anticipated problems are that the next few years will be testing years to see if that force can be redirected or diminished by political and bureaucratic powers in opposition. Initial success cannot ensure long-term success. An institution can become stale from within or outmaneuvered from without. Two keys to the future success of the DPE will likely be (1) how it handles the long-term effectiveness and sustainability of BEMIS, and (2) whether and how it develops decentralized planning, budgeting, and accountability in the province. Both of these efforts will require effective involvement in the political system in Balochistan as well as in the education administration system.

3.2.2 Directorate of Primary Education: North West Frontier Province

The establishment of a DPE in NWFP was accomplished more quickly than in Balochistan, being effective 1 January 1991. Project Implementation Units (PIUs) established previously in the province to administer donor projects in primary education were not as resistant as in Balochistan. However, the coordination of these PIUs by the DPE is also not yet as well established as it seems to be in Balochistan.

The DPE in NWFP operates in a rigid, rule-oriented bureaucracy, which severely hampers its power and effectiveness. The Director of the DPE, for example, cannot communicate directly to the Secretary of Finance concerning recurrent budget concerns, but must communicate through the Secretary of Education. The bureaucracy follows approval procedures and rules more rigidly than in Balochistan, which puts a brake on innovation and experimentation, and severely hindered efficient administration and planning of straightforward issues such as school construction.

Four Departments—Education, Finance (recurrent budget), Planning and Development (development budget), and Communication and Civil Works (building construction)—are involved in the planning and administration of primary education at the provincial level alone. Without mechanisms for streamlining or shortcutting procedures and regulations, at least on an experimental basis, policy reform and development planning for innovation are difficult.

The four Secretaries of these same Departments constitute the Steering Committee for Primary Education, where primary education policy is discussed and decided. This has focused attention somewhat more than before on policy dialogue and alternatives. However, this process has not yet stimulated or supported thoughtful and comprehensive planning of policy issues and alternatives about primary education in the DPE or elsewhere.

Similarly, the District and Sub-District Education Offices (DEOs and SDEOs) have been established as agencies directly responsible for primary education to aid the process of planning and administering primary education more effectively. There is beginning development and pilot testing of a School Improvement Program (SIP) requiring the DEOs to develop action plans to increase school enrollments and effectiveness. Thus far, however, their education planning is not well done, and in any case the DPE has not been able to consolidate effective planning and administration power to enable decentralization of this power.

The DPE was established quickly in NWFP, but has yet to operate effectively. Education "planning" both inside and outside the DPE in the Planning and Development Department focuses almost exclusively on school construction to the neglect of areas such as education policy reform, curriculum and instructional materials development, teacher training, and institutional development—even though individuals involved recognize the need for a broader focus.

Part of the problem is due to rapid turnover of within the department (seven Secretaries of Education since the start of the PED program) and uncoordinated education planning activities in the four departments involved—Education, Planning and Development, Finance, and Communications and Civil Works. This results in inefficient planning of even school construction—exacerbated by the rampant nationwide political interference by Members of Provincial Assemblies (MPAs), as noted before for Balochistan. With so much time and energy taken up by this basic planning process, little is left for policy and planning analyses to support other educational reforms and developments.

Another part of the problem also appears to be ineffective use, in the Department of Education and perhaps the DPE, of education planners put to administrative rather than planning purposes, though assessment of this was incomplete due to the absence of key Department of Education and DPE administrators during this evaluation (Secretary of Education, Director of Primary Education, the two Additional Directors of Primary Education for Males and Females, and the Deputy Director for Management and Administration). However, it seems clear that the institutional definition of "education planning" does not extend much beyond planning for increased access to education through school construction.

A third problem inhibiting effective education planning is the entrenched, rule-bound, and politically influenced provincial bureaucracy mentioned previously. This severely hampers the DPE in operational planning of such relatively routine activities as school construction and teacher assignment, let alone of more innovative education improvement experimentation or development such as curriculum or policy reform.

One element of this problem is the enormous power of the Department of Finance over the recurrent budget in education. To be sustained, improvements in education must in some way be institutionalized, and this often means placing people and budgets under recurrent expenditures. The Department of Finance, which seems heavily politically influenced and seems also to guard its powers jealously, has, therefore, great power over the ability of the DPE to sustain any successful development activities. In a more open and rational bureaucratic system, such checks and balances might be reasonable. In the NWFP they seem a barrier to education development.

Anticipated Successes and Problems

The DPE is institutionalized in the NWFP but not yet operating effectively as a policy analysis and planning unit. However, there are hopeful signs, an example of which is the recent decision by the Steering Committee for Primary Education to form a civil works unit within the DPE on a pilot-trial basis for a three-year period to plan and manage all primary education construction, rehabilitation, repair, and maintenance for three provincial Divisions. This experiment in coordinated planning and management of an element of the primary education sector inside the DPE, an element which is otherwise handled by a separate Department of Communications and Civil Works, will, hopefully, show that primary education could be better coordinated and developed if the responsibility were located within the DPE.

It is likely that USAID and the World Bank will need to work with the DPE to obtain from the provincial Departments through the Steering Committee for Primary Education increased responsibility in the DPE for primary education policy analysis, planning, and administration. This will be a bureaucratic struggle that will need to be institutionalized before USAID and the World Bank finish their aid to the DPE, if policy and planning coordination is to be institutionalized in the DPE. The DPE will not be able to institutionalize this by itself. Such DPE coordination should include coordination of all donor aid to primary education in the NWFP as well. Such development will probably require USAID and the World Bank to make incremental steps conditions of further aid.

The DPE and the Department of Education, however, do not yet seem able to handle such policy analysis and planning responsibilities. Planning and management training is likely required, and probably also careful recruitment and hiring, to develop such a capacity. Since key personnel were not able to be interviewed for this assessment, it is not clear to this outside evaluator just what is needed. But it is likely that the Education Secretary, the Director of DPE, and the TA chief of party could develop an appropriate plan that would need to be coordinated with the possible World Bank follow-on project.

Internally within the Department of Education and the DPE, education planning needs to be redefined as more than school construction and teacher placement planning. The DPE should take the lead in institutionalizing the IMDC as a cell and as a continuing process of instructional materials development and inservice teacher training. It should also take the lead in developing action plans for implementing such policy reforms as the provincial intention to evolve to fully gender-integrated primary schools. The DPE needs to evolve from focusing on short-term pressing administrative concerns to longer-term planning and development strategies.

3.3 Develop an accurate and reliable EMIS on which to base rational planning

3.3.1 Balochistan Management Information System (BEMIS)

BEMIS has had nationally noticed success in developing basic school demographic data for the province that is the most accurate and trusted around. When BEMIS-generated data are in conflict with other data by competing data sources, BEMIS has established itself as the benchmark. This could both enhance and undermine long-term sustainability. Its usefulness to education planners and administrators to fight political pressure--in the siting of schools or the placing of teachers, for example--has made it invaluable to education planners and potentially threatening to politicians.

Anticipated Successes and Problems

Perhaps the most notable of successes is the national visibility of the success of BEMIS in producing comprehensive and accurate results. By becoming the national model, its political strength makes it a more difficult target to hit directly. However, BEMIS is seen as an expensive operation, especially in a developing country. As noted previously, its usefulness to education planners has already been felt in enabling education officers to counter political pressure in siting school construction and teacher placement through the use of comprehensive and accurate school data.

Problems for the long-term sustainability of BEMIS may arise in the following areas: (1) the failure to provide for maintenance and replacement costs for equipment and materials; (2) the neglect of needed continual inservice training in the development and use of the data; (3) the expansion of the data collected and of uses for that data by expanding costs rather than by making collection, analysis, and use procedures more efficient and cost effective; (4) the failure to counter political and bureaucratic opposition to comprehensive, valid, and available information; (5) the failure to provide for useful fall-back or consolidation positions in facing possible future financial cutbacks or political opposition; and (6) the failure to ensure continually that key people see BEMIS as essential or at least important.

DPE and BEMIS have already considered at least a number of these issues. A significant cost reduction to enhance sustainability in the collection of BEMIS data is the planned reduction to the collection of only "essential variables" data in the fall census, involving only one to two pages.

The DPE is also planning to use BEMIS creatively to counter political opposition to rational, as opposed to political, determination of the location of new school construction. BEMIS would be used by education planners to identify, for example, 10 possible locations that meet the need criteria in a particular politician's district. The politician would then be asked to select 5 from that list using any criteria and to announce his or her provision of these schools to the public. After the announcement, the DPE would use the money budgeted for five schools to

construct these schools, thus ensuring that they are in needy areas and that the politician receives at least initial public credit for them.

Besides defusing political opposition to rational educational planning--a long-term threat to BEMIS's sustainability--the hope is that the general public would gradually realize that schools were being constructed basically on need rather than political criteria and begin to provide support for the DPE down the road when outside donors and related technical assistants are no longer there to run political interference. The political power of outside money and expertise is difficult to sustain when the outsider leaves. This is an imaginative approach that loses nothing if it fails to deliver more political power than the basic encouragement of politicians to compromise with the social need for more rational planning of education resources.

This approach should work for more effective school construction planning within the mechanism of the District Development Committees, where members of the provincial assemblies (MPAs) and DEOs participate together to select new school sites. Politicians also are allotted money directly from the government for development in their districts. From these funds they can directly allocate money for the building of a specific school, and they then typically give a list of people to the DEO from which to hire teachers for these schools. To counter this threat to rational education planning (1) the EMIS data will have to be used directly to convince MPAs of where the need exists, (2) the donors will have to work to redirect government education development funds through the education planning units being developed, and (3) rules for hiring of qualified teachers on merit rather than patronage will have to be strengthened and enforced.

3.3.2 Education Management Information System (EMIS) NWFP

The EMIS developed in NWFP thus far seems more or less equally successful to that in Balochistan, farther along in developing Geographical Information System (GIS) capability to map school locations, though perhaps not as visible as a national model.

The differences seem not as significant as the success of both in being used, to some extent at least, by education professionals in countering political pressures for school location and teacher placement. The systems are being reasonably successfully developed. The challenge is now (1) in using such information in more effective education planning beyond just school location, and (2) in sustaining the EMIS over the long term. Over the past three years EMIS in NWFP has been developed to be an effective data collection system, sometimes playing an important role in helping to rationalize the planning of school construction sites. It is only beginning to support planning of such other areas as school facilities, teacher placement and training, and instructional materials distribution. This is covered more completely in Section IV.

3.4 Instructional Materials Development Cell (IMDC)

Here the initial development of new primary education instructional materials will be used to (1) illustrate that education planning for education improvement needs to be supported but not necessarily initiated and guided from the top of a bureaucratic structure, and (2) contrast the successes and problems thus far in the PED Program in the two provinces of Balochistan and the NWFP.

The development of primary education instructional materials in NWFP is discussed here as an example of the planning of education improvement supported by the DPE administration but spearheaded by a key technical assistant (TA). It illustrates how effective "planning" for education reform and improvement may not, at least necessarily, be a centralized or administrative function--though its institutional sustainability may require more active DPE administrative planning and support.

Mainly through the efforts of an active and effective TA--though also because the pre-existing curriculum development center was not large, powerful, and resistant in the NWFP, as it was in Balochistan--an innovative and successful set of instructional materials has begun to be developed in the NWFP for primary education for Kachi (junior first grade) through grade five.

A 15-day workshop on curriculum development in primary education was held in September 1991, to which were invited important curriculum development actors in the province, including 48 primary education teachers. From these primary education teachers, 16 were selected and 13 accepted detailment to a new IMDC for primary education in the DPE, organized as a "branch" of the provincial Curriculum Bureau, which is located in Abbottabad, some 180 kilometers from the provincial capital of Peshawar. By June 1992 seven of these primary education teachers were placed on the recurrent budget as primary education instructional materials developers, and in June 1993 the remaining six will be.

The TA took an active role in developing the Kachi materials, and in the pilot testing and teacher training that followed. In the development of the Pakki (first grade) materials, she took a less active role, encouraging the local instructional material developers to take the lead. At present the second grade materials are being developed. Plans include development of materials through the fifth grade.

There is also an effective system being developed and implemented for training teachers to use the newly developed instructional materials.

Projected Successes and Problems

The primary education instructional materials development and dissemination with inservice teacher training processes are development activities that beg to be continued and sustained, because of their success to the present and promise for continued progress. This is not likely to be accomplished without careful coordination with the World Bank follow-on project.

The IMDC may be established by the end of the PED Program, but the materials development will be in its adolescence and in need of continued nurturing and support by the DPE and the World Bank follow-on project--not the shock of donor aid and technical assistance with a different agenda or direction. As solid as the foundation has been built for effective instructional materials development, continued progress as well as long-term sustainability, though promising, are fragile.

The problem for the DPE, the PED Program, and any World Bank follow-on project is (1) that the instructional materials development will likely not be completed through grade five by the end of the PED Program in one year, (2) the IMDC is not yet institutionalized, though it may be more secure by the end of the PED Program, and (3) the DPE is not yet able to coordinate all curriculum development and instructional materials development for primary education in the province, notably that supported by other donors, to support and sustain the work of the IMDC.

IMDC successes are perhaps somewhat related to a potential weakness in sustainability. Exemplary primary education teachers were brought into the instructional materials development process and trained to be effective instructional materials developers. This is not tradition in Pakistan, where high status university professors or curriculum developers have created education materials for primary as well as other education levels. In developing the IMDC branch of the NWFP Curriculum Bureau, care must be taken to ensure that key positions will not be filled by political patronage. This may be made somewhat more difficult by not having high status instructional materials developers to counter such political pressure. It is in such political power maneuvers that donors and a TA team can temporarily play a key role, but eventually the DPE and the Department of Education will have to handle these political power assignments.

The successful beginning development of improved primary education instructional materials and the beginning institutionalization of this process in the IMDC show that planned improvements in the quality of education do not have to be initiated by education "planners" or a "planning office." They do need the leadership of activist educational leaders, however, in supportive institutional settings.

The curriculum development TA specialist has been able to initiate this process to great acclaim in the province. The instructional materials developers in the emerging IMDC, DEOs, learning coordinators and supervisors, and teachers all seem generally enthusiastic about the emerging new materials. There also is hard data

on increased learning outcomes and, perhaps, on decreased dropout rates that validate the development of much improved learning materials.

In addition, the foundation has been built for the institutionalization of (1) the continual process of instructional materials development, and (2) the distribution of the materials developed coupled with the training of teachers in the use of the new materials. By June 1993, all 13 primary education instructional materials developers will be on the recurrent budget. The plan to build a building in Peshawar for the IMDC is approved, but the IMDC as a branch of the Curriculum Bureau is not fully approved. The problem seems to be how to ensure that key jobs in the IMDC will not be filled by patronage. Similarly, distribution and teacher training have been carefully planned through a system of (1) pilot testing, (2) testing of teachers trained directly by master teachers compared to teachers trained indirectly through learning coordinators and supervisors, and (3) large group training of teachers by master trainers and learning coordinators to cover districts and, eventually, the province.

Such successful planning, however, has depended on the expertise and active leadership of the curriculum development TA. It is not yet institutionalized in either the IMDC or a planning office. Instructional materials developers and master teachers have been trained to plan the development and pilot testing of new materials and the teacher training system to implement them, and they seem very confident that they can carry on such processes. This will likely not continue, however, beyond the presence of a TA team member leading it until the processes are successfully institutionalized in an established IMDC with effective internal leadership and external support in the DPE and beyond.

3.5 Decentralization to the District and Sub-District Level Offices

Now that the DPE has consolidated planning and administration of primary education in Balochistan, it has the power to decentralize planning, budgeting, and accountability to the District and Sub-District levels. The present DPE leadership sees the advantages of decentralization in the increased motivation, cooperation, and understanding of the local situation that it promises in the planning and administration of primary education. Successful decentralization—which includes responsible action and accountability—will not happen, however, if it is not planned and facilitated well and will depend on continued enlightened leadership at the DPE for at least three more years and probably creative technical assistance to support it. It will also depend on training DEOs and SDEOs over a period of a few years to revolutionize the way the bureaucracy and the education officers think about and act on initiative and responsibility. It is a dramatic change in the culture of the presently centralized bureaucracy that will be upsetting to some while stimulating to others.

In a centralized government system like Pakistan, however, perhaps the greatest threat to decentralization to the local level is a change of personnel in the DPE reasserting the authority of the DPE, since decentralization depends on delegation of DPE powers.

3.6 Conclusions

Given the dramatic reduction in time (10 to 5 years) and money (\$280 to \$77 million) mandated by the Pressler amendment, the PED Program has made commendable progress toward continually institutionalized primary education expansion and improvement, guided by a balanced primary education sector planning process and aimed at sustainability beyond outside donor funding. That this is an impossible goal within the revised five-year limit makes it all the more commendable that USAID and the World Bank have managed exemplary cooperation in developing continuity into World Bank follow-on projects.

Although milestones will have been reached by the end of the PED Program, in neither province is primary education development likely to be self-sustaining and guided by institutionalized, balanced, and comprehensive educational planning. Separate Directorates of Primary Education have been institutionalized in both Balochistan and the NWFP, though neither are yet operating effectively as a policy analysis and planning unit. In Balochistan, the Directorate of Primary Education (DPE) has finally been established and is beginning to plan beyond school construction and crash teacher training to include consideration of such issues as the sustainability of BEMIS (the educational management information system), the development of an effective role for learning coordinators

integrating inservice teacher training with BEMIS data collecting, and the introduction of improved instructional materials. However, such integrated planning will likely still be in its infancy at the end of the PED Program and will need to be further nurtured in the World Bank follow-on project.

In the North West Frontier Province (NWFP), the establishment of the DPE did not bring comprehensive educational planning much beyond struggling bureaucratically with the planning of school construction. Therefore, the exciting initial development and introduction of improved instructional materials is not yet supported by careful overall primary education planning to institutionalize continual improvement and integrate it with other educational development. The establishment of the Instructional Materials Development Cell (IMDC) will help this institutionalization process develop, but the DPE will still need to work to enable coordination of other donor-funded instructional materials development through the IMDC. It will also need to find ways of supporting the IMDC and integrating its workings into plans for school construction and preservice teacher training as well as inservice teacher training and the role of the learning coordinators, as now being developed. Integrated educational planning will have to answer such questions as: With available money is it more important to build schools, hire more teachers, or train teachers to use new instructional materials?

3.6.1 Policy dialogue process

A policy dialogue process has been developed, at least within the governments and in the Steering Committees for Primary Education. As a result, important policy changes have deliberately occurred—for example, relaxation of teacher hiring requirements to enable the hiring and training of local village girls in rural Balochistan, and the piloting of school construction management within the DPE in the NWFP. The DPEs should next develop the capacity to contribute analyses to better inform that policy dialogue and perhaps evolve it into a more open dialogue with information made public from EMIS and other measurement and evaluation activities.

3.6.2 The institutionalization of rational educational planning

EMIS in both Balochistan and the NWFP have greatly aided the rational planning of school construction and teacher placement against stiff political pressures. This is a major accomplishment. Such a process has not yet been institutionalized, but with care it could be over the life of a World Bank follow-on project.

The further development of EMIS support for rational educational planning of such processes as school facilities repair and rehabilitation, teacher training needs, and instructional materials distribution is yet to be accomplished—or completely planned. However, the potential is now present and beginning to be widely understood.

Planning that goes beyond school construction and teacher placement has begun in Balochistan at the DPE but seems yet to be focused upon in the DPE or Education Secretariat in the NWFP. This development is crucial if the comprehensive and organized development of the total primary education sector is to be accomplished.

3.6.3 Development sustainability

Central concern for development sustainability is reflected in planning and administrative activities and in the attitudes and goals of the involved personnel. The Director and Assistant Director for Administration in the Balochistan DPE are key figures who do understand this concern and work at ways of achieving it. The TA team leader in Balochistan also understands this concern, and plans to focus now more on developing community support for primary schools.

In the NWFP the key DPE and Education Secretariat personnel were not available, but it is clear that the TA team leader and PED Program chief of party understands the concern. It seems that what has been developed in the DPE in the NWFP will be sustained. Other TA team members in the NWFP seem to understand the concern for sustainability, certainly, at least, the curriculum development specialist. However, developments are not yet to the point where they can be evolved within a year to sustainability.

Therefore, it is crucial in both provinces that the follow-on projects to be supported by the World Bank continue the educational reform and development and evolve them to sustainability by World Bank project end. This will be difficult for the World Bank to manage without long-term TA and close monitoring and evaluation to guide and ensure such evolution to sustainability.

3.6.4 Gender equity

It is clear that increased access to primary education for females is understood and addressed as a major policy of the PED Program and is planned for. There is also an effort in both provinces to increase gender integration in primary schools, if perhaps slowly, and to include females equally in study tours, hiring, and district and school level responsibility.

The absence of females at the higher policy making or administrative levels is easily noticed, as is the absence of any widespread concern by males, at least, to change the gender determined cultural patterns reflected in the educational system that go beyond numbers. That is probably a next difficult challenge for educational policy makers and planners.

3.7 Lessons Learned: Flexibility and Context

It is still too early, after three and a half years of a planned ten year effort, to tell if development sustainability can be better attained in this effort at sector grants tranced according to policy reform and sector-wide planned development coupled with TA aid, compared to a more traditional development project. However, the results look promising.

In both provinces important educational development successes are being coupled with institutionalization as an ongoing process. Development activities are not being allowed to proceed too far out in front of efforts to put funding on recurrent budgets, to make institutional developments a permanent part of the bureaucracy, and to evolve TA from any central developmental role to a purely supportive role before it disappears. That such promising efforts should continue as a part of the development effort seems clear.

It is clear that the specific successes and directions that reform and development activities take depend as much on context and individuals involved as original planned intention. This suggests a need both for flexibility in determining what constitutes success and for a view that looks at the total education sector as a possible field of play.

In Balochistan, the cultural context that allows some rule bending and the selected ignoring of certain procedures and formalities has made administrative and planning reforms more possible than the rule-following formality in the NWFP. On the other hand, the presence of a large, developed curriculum center in Balochistan impeded others from experimenting, while the corresponding weak curriculum center in the NWFP allowed such experimentation by others.

The personality and abilities of a TA determine what developments can be effectively assisted. Working in the political arena can accomplish different goals than working more personally with professionals as individuals.

An education sector approach allows the flexibility, perhaps, to lead with overall strengths and contextual advantages. At least it seems to have happened in Balochistan with administrative reforms and in the NWFP with curriculum and instructional materials development most obviously.

3.8 Recommendations

3.8.1 Possible Modifications

Basic program alterations in policy and planning, at least, seem not needed, mainly because two basic goals seem to have been well attended: (1) flexibility in planning through continuous policy dialogue to evolve the focus

of efforts effectively, for example, leading with instructional materials development in the NWFP and the evolving emphasis toward more community participation promotion in Balochistan; and (2) cooperation with the World Bank (nearly complete in Balochistan and in progress in the NWFP) to develop well-coordinated World Bank follow-on projects.

Great care, however, should be taken that the ongoing planning for the World Bank follow-on project in NWFP results in a coordinated linkage. This will be crucial to continued education reform developments as well as long-term sustainability. The instructional materials development in NWFP, for example, will be at a midterm point in the development of materials for grades 0 to 5 and will need continuity into the World Bank follow-on project for successful continual development.

Planning further actions will need to focus on three time periods in the future: (1) the 12 months left in the USAID PED Program, and (2) the planned World Bank follow-on projects for the following 5 to 7 years. The following "possible further actions" focus on the players that will manage developments in these two periods.

3.8.2 Possible Future Actions

3.8.2.1 USAID/Islamabad and PED TA Teams

1. The USAID/ Islamabad Human Resources Development Office and the PED Program Technical Assistance Teams in both Balochistan and the NWFP will be considered together, as a mutually supporting Program team as is necessary for efficient and timely completion of the program in 1994. In the next year this team has two challenges to face together: (1) to manage developments in the PED Program through the last year to stabilize institutional developments and ongoing education development processes that can be achieved by Program end, and (2) to coordinate the transition to the World Bank follow-on projects, aiming at a smooth transition and long-term development sustainability.

In the next year, the following developments might be reasonably expected:

Balochistan

2. With the DPE now established, it is poised to take over responsibility for planning such challenges as the refinement of BEMIS to maximize the possibilities of sustainability, the coordination of instructional materials development with inservice teacher training, the developing of a proper set of responsibilities for learning coordinators, the promotion of community participation in village primary schools, and the management of primary education expansion within the realities of the recurrent budget. The next year could establish the DPE as the center of primary education planning in Balochistan.

3. The role of the learning coordinator, the process of development of instructional materials, and the system of teacher training need to be better coordinated and could be by Program end to lay a firmer foundation for future development in the World Bank follow-on project. However, such planning for coordinated development would have to be focused on by the DPE leadership and the TA team leader in cooperation with the TA team and others.

4. The Society for Community Support for Primary Education in Balochistan in cooperation with the DPE could establish a firm foundation for the further development of community supported village schools.

5. To accomplish all this it is recommended that USAID and the TA team shift gears slightly. It is recommended that TA leadership shift from facilitating management to stimulating planning, especially of the coordination, sustainability, and community support issues above. It is further recommended that the TA team involved in instructional materials development and teacher training coordinate with the DPE, with the help of the team leader, to cooperatively plan more integrated instructional materials development, teacher training, and learning coordinator roles. USAID/ Islamabad ought to help the DPE efforts to overcome bottlenecks in the Pakistani

bureaucracy, with certification of meeting conditionality, for example, so that the DPE can focus on establishing itself as the center of primary education planning in Balochistan.

NWFP

6. The instructional materials development is a bright spot in the NWFP and could be institutionalized by the establishment of the IMDC with supportive, professional leadership by Program end. What seems more problematic is the needed shifting of the DPE focus on running the bureaucratic gauntlet regarding the planning of school construction to a broader focus that would establish its role in planning the coordination and development of such areas of concern as teacher training, EMIS, expansion of access to schools, instructional materials development, and community involvement in schools. The DPE, the Education Secretariat, and the DEOs, need to prove their broader planning capabilities and establish their central responsibility for primary education in the NWFP. This is necessary not only for the institutionalization of coordinated primary education planning, but also for the protection and sustainability of such associated institutions as the new IMDC and EMIS, and the development of a suitable role for institutions like the Frontier Education Foundation.

7. The DPE continues to require assistance from the TA teams to help in developing planning capacities. It is recommended that the TA team leader focus on this for the next year to help consolidate all development of primary education learning materials in the NWFP in the new IMDC, to increase authority for primary education planning in the DPE and away from the Planning and Development, Finance, and Communication and Civil Works Departments, and to develop the capacity for broader educational planning in the DPE and the Education Secretariat through selective recruitment and training.

8. It is recommended that the curriculum development and teacher training TA team members focus on the establishment of an IMDC by Program end. Perhaps USAID/ Islamabad could work to help establish the DPE as a center for primary education planning through influence to transfer all responsibility for primary education planning to the DPE, including the funds that politicians presently control for social and educational development in their areas.

3.8.2.2 World Bank follow-on

Cooperative planning between USAID and the World Bank for the evolution from PED to a World Bank follow-on project seems nearly complete and notably successful in Balochistan. The questions that appear to remain which PED can help resolve during this last year concern the details of the transition. The ability of the DPE to manage the project needs to be better established and developed. A transition that protects and expands the accomplishments of the instructional materials development could be a problem if new technical assistance with a new agenda is brought in.

This transition will require strong coordination and cooperation between USAID/ Islamabad office and the TA team. For example, USAID-Islamabad might focus on the development policy and planning dialogue with the Department Secretaries and others in the NWFP to help consolidate primary education planning responsibility and capability in the DPE. Questions to consider might include: Would a temporary joint assignment of the education planner in the Planning and Development Department to the DPE help develop better coordination? Can the other donors in the NWFP involved in primary education instructional materials development be persuaded to assign overall coordination and development to the new IMDC? Can politicians be persuaded to use the DPE and DEO planning processes based on EMIS data to locate their development funds?

The PED Program TA team members initially were heavily involved in planning support and policy dialogue. As development takes place and becomes institutionalized, there is a need for the TA team members as well as leaders to step back to a more supportive and unobtrusive role. Team members seem aware of this and worry over when and how such a transition is most appropriate. As team members are phased out, even in the last year of the PED Program with a World Bank follow-on project expected, every effort should be made to leave activities led by those who stay behind and in a condition that makes it reasonably possible for them to sustain without the technical assistants presence.

As new TA team members are brought in, every effort should also be made in this gender equity focused program to involve women in leadership roles at all levels.

3.8.3 Pakistani Education Planners and Managers

In both Balochistan and the NWFP the DPEs have now been established. These Directorates should now be the central institution for planning and managing primary education in their respective provinces. The possibilities and difficulties in carrying out that responsibility are different in the two provinces.

In Balochistan, the DPE has finally been given the responsibility for all primary education planning and administration in the province and is poised to take the leadership. Some broad leadership roles for the DPE are (1) the planning of the transition to the World Bank follow-on project, at which time the Director of the DPE will become project manager, (2) the evolution of the use of TA support to more advisory and supportive roles, (3) the selection and training of staff at the DEO level to develop effective decentralization, and (4) the hiring and supporting of top-level women. The present DPE leadership is well aware of all this and capable of managing such a transition. However, a change in leadership could threaten this.

Some specific challenges facing the DPE in Balochistan are developing appropriate roles for learning coordinators; coordinating the development of teacher training, instructional materials, and a more cost-effective BEMIS; coordinating the promotion of community participation; and managing primary education expansion and improvement within the GOB recurrent budget increases.

Learning coordinators in Balochistan have uncovered non-operating schools and forced teachers back to teaching where they were posted, but they have not yet developed an effective in-service training role helping teachers improve their teaching.

Balochistan can ill afford learning coordinators to cover all schools unless they prove much more useful and important in improving the quality of teaching. Balochistan is poised to experiment with combining in-service teacher training, instructional materials introduction, and BEMIS data collection in the learning coordinators' role. Before any great expansion of learning coordinators, this role should be better defined—both to justify expansion and to guide training of new learning coordinators. There has also been talk of using learning coordinators in community promotion, though this role would probably detract from the central focus on helping teachers improve their teaching.

The evolution from the crash teacher training program to the more long-term mobile teacher training program needs to be better coordinated with new instructional materials dissemination and the evolution of a more cost-effective method of BEMIS data collection. The development of the learning coordinator role will be central in this coordination, but another method of facilitating such coordination might be moving the teacher training team to the curriculum cell facilities so the two teams can easily interact on a regular basis.

The Society for Community Support for Primary Education has taken the lead in the promotion of community participation in the establishment and support of village primary schools. The DPE will need to coordinate this effort with the activities and responsibilities of the DEOs to increase cooperation and reduce duplication and conflict in such expansion of private involvement in the schools. Here is an area where the DPE might use technical assistance in planning, promotion, and advice.

That the Society has focused on community support for public schools rather than the development of community support for private schools should be encouraged. The community participation promoters in the villages are already achieving remarkable success in solidifying community support for primary education for females under difficult conditions. Support for such efforts to increase equity is a very useful social role for a private foundation. On the other hand, the establishment of more private fee-paying schools will in all probability increase educational opportunity inequities based on social and economic class, already pronounced throughout Pakistan.

Private foundation and business support for primary education for all, especially those least likely to receive it, should be the preferred option.

Perhaps one of the most difficult challenges facing the DPE will be the coordination of plans for primary education expansion with the possibilities for increasing and maintaining the GOB recurrent budget for primary education. The establishment of new village primary schools, especially for girls, has been so successful, and the technique of using community participation promoters so promising, that the foreseeable problem in the future will be to keep the recurrent budget support up with the expansion demand and possibilities. The temptation to use World Bank funds in the follow-on project to pay teachers longer than one year before requiring that they be put on the recurrent budget, or of putting new teachers on World Bank funds before others have been transferred to the recurrent budget, will be great. It should be resisted to ensure sustainability of the expansion at the end of the World Bank follow-on project. Dashed expectations will be a more difficult social problem to deal with than pent-up demand—especially if other methods of finding an outlet for that demand are developed, such as the possibility of private or community support for buildings, salaries, or equipment.

One way the DPE planners can help add more recurrent budget support for the expansion of active primary schools is to reduce wastage in the system—notably by redirecting funds from the approximately 450 defunct schools in Balochistan, where teachers collect salaries but do not teach. That learning coordinators can help in this process, by the way, is not an unimportant service that they can perform.

The DPE in the NWFP faces many of these same planning and management challenges, though here the basic problem is consolidating the planning and management responsibility into the DPE in the first place. In the bureaucratic and rule-bound NWFP this may be a difficult issue, but the DPE should lead the way by improving the educational planning in the DPE and the DEOs to justify such an assumption of responsibility. As it is now, others in the planning and management bureaucracy in the province do not believe that the Education Secretariat including the DPE and the DEOs can handle the responsibility. To some extent this seems justified. A concerted effort at recruitment, training, and assigning time and responsibility to broadened planning should be led by the DPE.

3.8.4 The World Bank

Cooperation between the World Bank and the PED Program to develop a closely coordinated follow-on project in Balochistan is highly commendable. Such close donor coordination is not the rule and is usually made difficult by donor organizational differences. Developing countries desperately need donors to overcome such difficulties, and this example is a credit to both the World Bank and USAID.

Hopefully, such coordination can also be developed in the transition from the PED Program to a World Bank follow-on project in the NWFP. Here the most vulnerable activity, perhaps, is the instructional materials development initiative. Even if the IMDC is established by the end of the PED Program, the newly trained instructional materials developers and the process of developing and transmitting improved materials to classroom use will still be new and fragile. It will not be able to easily withstand new technical assistance with a different approach or agenda. Its success thus far deserves continuation. Follow-on assistance should support this.

The follow-on projects in the two provinces, being directed by provincial officers, will have a tendency to be separate and lose the advantage of learning from each other's experiments and difficulties. Cooperation between the two provinces has led to aid to Balochistan from the NWFP in developing instructional materials and help to the NWFP from Balochistan on how to promote community participation in establishing and supporting village primary schools for girls. Perhaps long-term TA can be assigned to both provinces to continue such shared learning.

Issues that will likely remain for the World Bank follow-on projects to deal with include:

- (1) The role of learning coordinators, especially in Balochistan, will possibly still be less developed than necessary to justify expansion to cover all schools in light of other needs.

- (2) The DPE in the NWFP will likely still need help in developing its coordination and planning role for all of primary education. TA in management and planning, selective recruitment and training, pressure to integrate all former project implementation units (PIUs) into the DPE, and World Bank presence in the Steering Committee for Primary Education policy dialogues whenever possible could all be used to facilitate such a development.
- (3) The World Bank will need to continue to insist that financial and planning systems are efficient and honest, and to set up mechanisms to ensure this. As much public accountability and openness to accurate information as possible need to be built into systems. Public reporting of EMIS data, criterion referenced test results, enrollment and dropout rates, and investment and development plans are a few of the techniques.
- (4) The World Bank will probably also need to continue efforts at the national and provincial levels to redirect through the education planning bureaucracy education development funds that politicians now control as that bureaucracy becomes better at rational, equitable planning. This is, of course, a major reason for setting up the DPE.
- (5) Key areas of development will likely continue to benefit from long-term TA consultants. The exact timing and focus is an area where the DPEs should increasingly be responsible for planning, with perhaps some flexibility built into the project.
- (6) Probably the most important issue to consider in the design and implementation of the World Bank follow-on projects is that of development sustainability of project gains at the end of the projects, since there is no assurance that further outside funding will follow the World Bank aid. Two important lessons learned have been incorporated into the planning for the World Bank follow-on project in Balochistan: (1) the adding of new teachers to the GOB recurrent budget after no more than one year on donor funds, and (2) the use of temporary contracts to hire personnel for needed work without adding them to the permanent payroll. Presumably such techniques will also be included in the planning for the World Bank follow-on project in the NWFP. Perhaps the best technique to ensure that development sustainability is continuously considered is to select a TA team leader with expertise in sustainability techniques and a charge to focus on sustainability issues, both in phasing out TA and in guiding financial planning.

4. Educational Management Information Systems (EMIS)

4.1 Introduction

The central purpose of an education management information systems is to support education system management policy making, planning, and administration and management activities. Development of such a system within an hierarchical institution that does not have a history of supplying or demanding timely, relevant and accessible information profiling its operations is a long-term institutional development process. When management does not demand this information, and as such, traditionally makes decisions based upon political, cultural and rule-of-thumb criteria, simply increasing the supply of quality data is but one aspect of a strategy to foster information based decision making. Without data utilization, an EMIS will not contribute to improved education system access, equity, quality, and efficiency. In addition to the operational information supply characteristics of the EMIS, the evaluation assessed:

- The organizational placement and integration of the EMIS
- The institutional commitment to the EMIS
- The policy dialogue and social marketing of data based decision making
- The degree of integration of information resources (EMIS subcomponents) in order to monitor the linkage between objectives, activities, resources, and outcomes
- Activities supporting the integration of EMIS data into management and policy making processes
- Activities supporting decentralization of planning, budgeting, monitoring and evaluation functions

4.2 Balochistan EMIS

4.2.1 Overview

The initial EMIS work plan and analysis of the existing information flow were prepared in early 1990 under the Basic Research and Implementation in Developing Education Systems (BRIDGES) project. This work fed into the establishment of the BEMIS under PED in October 1990. The core school census activities appear to have been solidly institutionalized, in that the process has remained relatively stable, staffing has been adequate and the process has been repeated a number of times. Great emphasis has been placed on ensuring the validity and officiality of the core census data. This stability, in addition to institutional support, has allowed BEMIS to establish itself as the official data collection wing of the Directorate of Primary Education. They have branched out into a number of other related data collection activities to support PED program components. The BEMIS development has also benefitted from relatively horizontal access within the DPE and a high degree of institutional receptivity. This environment facilitated an open dialogue which resulted in a number of policy changes which were critical factors in the successful operationalization of the BEMIS.

4.2.2 Data Collection

School census data collections have been occurring bi-annually in October and April since October 1990. The earlier data collection efforts were plagued with problems in terms of responsiveness and quality. Although the October 1990 data was of acceptable quality, the April 1991 collection was especially problematic. This data set was discarded and in response the data collection system was restructured. Greater training was provided and learning coordinators were utilized as data collectors between the school and Sub District Educational Offices. The data collection cycle has progressively become more efficient: it took 7 months for all of the April 1992 questionnaires to be returned, which resulted in a directorate edict that primary education officers must respond to data requests in a timely fashion. The October 1992 questionnaires only took 3 months to be returned. The goal for complete return of questionnaires is 2 1/2 months. Data forms are signed and verified by the school level official, the SDEO, the DEO, and the Director of Primary Education. The data collected since October 1991 has been of relatively high quality and the data collection tool has remained stable, meaning that BEMIS now has multiyear school census data.

BEMIS preceded the establishment of the National EMIS (NEMIS) in July 1991, and their existing data collection instrument was utilized by NEMIS in the development of a standardized national data collection instrument. In fact, the acting director of the BEMIS under PED became the Balochistan NEMIS representative.

4.2.3 Data Processing

Data entry forms are recorded upon receipt within the BEMIS unit, both electronically and manually. The manual record is later checked with the computerized list to ensure consistency of the log of returned data entry forms. Both these lists are compared with the master school list to verify the completeness of the data collection. Then, the forms are entered into an Rbase program utilizing a relatively simple menu-driven data-entry application. A random sample of data entry forms are compared to their database records for each data entry operator's daily entries. If they are error-ridden, the whole batch is reentered. In addition, range and context checks, utilizing the previous years data, are performed at a later stage to isolate questionable records. These flagged records are then pulled and either resolved at the BEMIS site or referred back to the field officers for verification and error explanation.

The data entry period has been relatively stable at 1 1/2 months; data validation and editing has required a stable month. Data aggregation and reporting required another month. In order to assure the officiality of the data, these reports are also signed and verified by the Director of Primary Education (for primary data). Both validation and reporting procedures have been automated through the use of relatively simple scripting files. These are, in effect, short programs which accomplish specific tasks: create table where each record contains gender disaggregated enrollment by age and grade, or create tables where each record contains school name, id and enrollment where this years enrollment is greater than 150% of last years enrollment, or a variety of other conditions of concern. This approach is indicative of a desire to achieve some of the benefits of automation while minimizing reliance upon development of significant programming capability on the part of BEMIS staff.

All data processing is performed by BEMIS staff. In regards to senior staff (non-clerical, data entry personnel) 8 are GOB employees, 3 are on contract to GOB, and 2 are PED contractors (1 expatriate TA, and 1 program assistant). All clerical and data entry personnel are GOB employees. This staffing pattern has positive implications for sustainability when considered in conjunction with the relative stability of the data collection and processing operations over the past two years.

During the last three months of the PED EMIS TA's contract, an attempt is being made to focus on the design and development of extensive documentation and SOP's for data collection and processing activities. Thirty five separate activities have been identified. BEMIS is currently executing the April data collection and the TA will not provide assistance in the data processing tasks unless absolutely necessary. This is in order to identify areas in which staff do not possess sufficient and sustainable capabilities.

4.2.4 Other Sub-Components

BEMIS is involved in a number of other data collection and processing activities. BEMIS essentially provides a data facilitation service for the various components of the PED project. Because they are the central source for DPE information processing activities, a certain amount of internal data consistency and coordination is ensured.

Human Resources: A survey of human settlement areas was undertaken. The following data were collected:

- kind of village
- estimated population
- primary school age children by gender
- parental attitude towards girls education
- leaders attitude towards girls education
- availability of education facilities for girls and boys
- availability of land for construction of school buildings
- basic health facilities at the village level
- means of transportation

This data is intended to augment the school census data for purposes of school site selection. The qualitative data included is important for evaluating the degree of village receptivity towards the education of girls. Also, the population estimate is important in light of the lack of accurate population data at the provincial or lower levels.

Personnel: Biographical data on teaching personnel were collected in conjunction with the core school census in October 1992. This data set is the foundation of a personnel management system. Currently, there is a "Crash Teachers Accelerated Training Programme" in process which targets 8000 untrained teachers in the system. There is also a "Mobile Female Teachers Training Programme" aimed at preparing women teachers to teach in girls schools in rural areas. In light of these activities, it is crucial that the personnel system is implemented to track the training and qualifications of teachers within and entering the system in order to provide data with which to target further INSET and PRESET training needs and activities.

Financial Management: The financial management system is currently manual and funds are tracked by source and budget component. As might be expected from a manual system, disaggregated data is not readily accessible and the available aggregated data does not provide a direct linkage between resources and specific activities. An electronic system was developed by an expatriate consultant in Winter 1990/1991. This system was aborted after initial pilot testing. Feedback indicated that, although it was technically sound, the financial management system was not appropriate for the institution. It was overly complex and implicitly did not mirror the existing manual information flow.

After this initial failure, PED personnel decided that since this system would likely meet the most resistance, development of the other systems should take precedence. Three years later, a simpler FEMIS is being developed reflective of the current manual process. This approach seems sensible: computerization of the existing system will greatly increase the accessibility and timeliness of the disaggregated data currently being collected in the manual system. Once the initial system is implemented, further enhancements can be introduced to provide more sophisticated tracking of resources. It must also be noted that the Directorate of Primary Education has formal reporting responsibilities to the Directorate of Finance and as such, the FEMIS must accommodate existing reporting requirements.

Textbook Distribution: The textbook board is a semi-autonomous group responsible for textbook production. There is a yearly survey of schools in regards to textbook requests. This information is aggregated and sent to the publishers through the Director of Schools. The textbooks are delivered to a central warehouse in Quetta and suppliers sell the textbooks to consumers and also provide the transport of the texts. Community organizers indicated that textbook acquisition is especially problematic for community schools. Requests for textbooks are not filled. BEMIS is planning to include actual school textbook supply data in the school census. This information is critical in providing monitoring capability of the distribution process. In addition, a textbook distribution study is in process.

Inventory Control System: An inventory control system has been established to track BEMIS equipment. This includes equipment installed by BEMIS in other departments.

4.2.5 Training

Training has been a recurrent process. About 5% of the trainees have been female. This percentage reflects the lack of availability of female personnel within the system. Eight hundred data collectors have received training focussed on execution of the data collection instruments. Forty supervisors have been trained in sampling and validation procedures in order to facilitate supervision of the data collectors. Management training has also been provided for senior staff and the notion that management should receive training has been accepted.

Training for computer operators and assistants is phased in three levels: introductory, intermediate and advanced. They are trained in the use of: Wordperfect, Lotus 123, RBase, Harvard Graphics, Norton Utilities, PC Tools, and Central Point AntiVirus.

4.2.6 Institutional Context

The EMIS and policy and management TAs have had informal horizontal access within the DPE and the Directorate of Schools which has fostered an environment of continual dialogue. A number of policy changes occurred relatively early on in the BEMIS development process. The impetus for these policy changes was based in lessons learned from roadblocks encountered during the development of the BEMIS unit. These policy changes and general support for the BEMIS appear to be the result of day-to-day advocacy efforts aimed at directorate management.

Initial operator staff assigned to BEMIS were of poor quality and had limited background utilizing computers. In that dismissal of government employees is a virtual impossibility, input into the personnel acquisition process becomes paramount. In general, there is an informal understanding that has been reached that BEMIS must have some input into the personnel selection process. It has also been agreed that staff cannot be regularly transferred out of BEMIS, because this would present serious problems in regards to the long-term human resource development process of institutionalizing technical capability. Specifically, new service rules permit that half of all BEMIS operator appointments be made by direct recruitment from outside the government, subject to training and educational requirements. Additionally, BEMIS has a deputy director in charge and two assistant directors. These changes are indicative of the institutional support for the BEMIS. Other changes include:

- Public data release is formalized. It is signed off on at all levels culminating with the signature of the Secretary of Education.
- Formal inclusion of data reporting criteria in closed performance evaluation of field staff and teachers.
- Per diem expenses (TADA) for data collectors are not disbursed unless data collection forms appear complete and accurate.
- All new personnel contracts are directly with the GOB.

4.2.7 Data Utilization

The simple fact the BEMIS data is being utilized also creates institutional incentives for ensuring that it is accurate. BEMIS data is being used for site selection, maintenance of existing schools, assigning teachers based upon need, and building additional classrooms. The existence of good data provides a resource for those persons within the system that want to disburse resources in a more rational manner. Also, since data is being distributed to DEO and SDEO offices in both hard copy and electronic format, it is that much more likely that errors will be noticed. Eighteen computer cells have been established at the district level. This has resulted in better data validation due to greater attention paid to data accuracy by DEOs. A relatively simple database application has been provided to the DEO offices for basic access to school level data.

A series of statistical profiles containing BEMIS data have been prepared. Reports vary in data content, and information is presented in the number of different aggregation configurations. Summary data is effectively presented in graphical form. The profiles are as follows:

- Summary Data for Balochistan
- Enrollment Data by District
- Teaching Staff Information
- Master List of Schools
- Master List of Government Middle and High Schools
- Master List of Private Schools
- Human Resource Survey

The DEO and SDEO interviewed in conjunction with a community organizer indicated that the data set was useful, especially in identifying areas where there were no schools. Of those areas in which there were no schools,

the human resource survey was useful identifying which villages were receptive to girls' education. Although the DEO female did not have a computer in her office, she did have a organized chart listing critical information for each subdistrict within her jurisdiction. This appears indicative of a demand for information.

A widespread problem is that members of the provincial assembly (MPAs) have the final say on the location of new schools. They make placement decisions through district development advisory committees (DDAC) on which the DEO also sits. Historically, these decisions have been a matter of pure patronage. Currently, BEMIS is providing DDAC members with a need based list of potential school sites. Because, the number of possible sites on the list is much lengthier than the actual number of schools being decided upon, the decision of where to put the school remains with the MPA. But, the degree of perceived abuse is diminished if the MPA does indeed select school sites from the list. Anecdotal evidence indicates that this creative use of BEMIS information appears to be having an effect upon resource allocation. A report on schools with zero enrollment has been prepared. This is both indicative of an awareness of resource allocation problems and a good approach to providing information regarding the misallocation of resources.

Another inventive use of BEMIS information was in the creation and distribution of daily planners which contained summary data and other educational information from the BEMIS system in its introductory pages.

Data is being widely disseminated. BEMIS reports were observed in the offices of all senior education department officials visited.

4.3 NWFP

4.3.1 Overview

The initial EMIS work plan and analysis of the existing information flow were prepared in early 1990 under the Basic Research and Implementation in Developing Education Systems (BRIDGES) project. This work fed into the establishment of the NWFP EMIS under PED in October 1990. The core school census data collection instrument has undergone major modifications through each of its three iterations. In addition, EMIS development activities have occurred within a rigid vertically structured institution that has been distinctly unresponsive to the EMIS' goals. This has affected the staffing of the Research, Development and Evaluation unit (within which the EMIS is located), the quality of the data collected, and the degree of data utilization. In the face of these difficult conditions, the EMIS TA and the limited number of RD&E staff have made progress in the development of other EMIS subcomponents including a financial management system, a construction tracking system and applications to facilitate decentralization of information management responsibilities to the district and sub-district level.

4.3.2 Data Collection and Processing

The core school census data collection is performed annually. Data collection forms flow from schools to SDEO offices, then to the DEO offices and finally to the Directorate of Primary Education. The initial 90/91 data collection was extremely problematic due to the lack of reliable master list of schools, computers and staff. Data entry was unsuccessfully contracted out to the federal Academy for Educational Planning and Management (AEPAM). Subsequent data entry activities have utilized private sector personnel to augment the limited data entry staff within the RD&E department.

Although DEOs and SDEOs received training in the execution of the data collection instrument, this approach was ineffective. In response, learning coordinators were utilized in order to facilitate the gathering of information at the school level and the movement of this information to the SDEO offices.

The 90/91 data collection instrument was 19 pages in length and was viewed as a contributing factor to the disappointing execution of the instrument. For the 91/92 collection the length was cut down to 12 pages, but no response, incompletely filled out forms and blatantly incorrect information continued to be a problem. In response, the data collection form was radically simplified to one page. This appears to have resulted in very high quality (although of limited content) data and a response rate of over 99%.

A composite of the first two data collection responses was used to create a master list of schools. DEOs have voiced concerns about its accuracy but have been unable to identify specific errors.

Turnaround times for data collection and processing have also greatly increased. The 90/91 census took 9 months, the 91/92 took 7 months and the 92/93 was completed in 4 months.

Limited staffing has constrained data validation. The data entry error rate has been found to be very low; a small random sample has indicated that it is less than 1%. Validation of the internal consistency of the yearly data and the interyear data is underway. In addition, the data sets are being evaluated to verify the regularity of data reporting by school over the three data collections. As problems are identified they will be forwarded to the appropriate DEO and SDEO offices for resolution. This follow-up should promote an environment of accountability which will hopefully result in increased accuracy of future data collections.

4.3.3 Staffing

Staffing has been a major problem. This is indicative of limited institutional support for EMIS activities. Of the six senior posts sanctioned, only one has been filled, that of the Deputy Director RD&E. Although personnel have been identified and recommended for two of the three vacant assistant director positions, none have been filled. One of these persons, currently occupying the post of key punch operator, is undergoing masters degree training in education in the United States. The deputy director is actually a federal employee on loan to the province whose request to be permanently transferred to the province has been pending for two and half years. This person was an original member of the Management Unit for Study and Training (MUST) located in NWFP and has extensive experience over the past 15 years with educational data.

Two contractors are currently providing EMIS "field supervision" to the DEO EMIS cells and six contractors are providing support for computer "computer operations." Their function is to provide training and support to the DEO clerical staff. These positions are currently under consideration for sanctioning.

4.3.4 Other components

Financial Management. Two financial management programs have been developed by private sector consultants retained by PED. The first application is designed for the DEO and SDEO offices. Another system has been developed to track Program Loan Account Expenditures (PLA) which are donor funds. (See Finance section for more information on these programs.)

Construction Tracking System. A construction tracking system was developed for the Planning and Development unit within the DPE, which primarily manages construction projects. It was tested but use was discontinued. It does not appear that there was any demand within the P&D unit for this type of application.

Personnel Management System. Currently, a personnel management system and a teacher trainee monitoring system are under development.

4.3.5 Data Utilization

School census data is widely distributed. A summary report has been produced in addition to a more encyclopedic complete database report. Also, district level data is being provided to DEO offices in hard copy format. Thematic mapping is being used to effectively communicate indicator variation by district. A data entry program has been provided in order to evaluate the feasibility of data entry at the district level. After this data is entered, the district will have an electronic copy of their data set, and this data set will be compared to the information entered at the provincial level to evaluate the error rate.

The reports are being used to: (1) rank district need for new schools; (2) prepare annual teacher supply plans by district and tehsil; (3) identify shelterless schools; and (4) identify structures that require maintenance and expansion.

4.3.6 Institutional Context

There appears to be little institutional support for the EMIS activities. The EMIS TA does not have a role in attempting to change this orientation; activities are limited to establishing an information foundation by providing the highest quality data possible. It appears that the vertical institutional structure prohibits lateral communication and informal lobbying efforts on behalf of the EMIS in order to foster demand for data and analysis. In addition, the PED program has not embarked upon a formal program to stimulate interest in the use of data and analysis to support decision making.

It was indicated that the early bifurcation of the directorate of education resulted in a substantially understaffed and underexperienced directorate of primary education with responsibility for 18,000 schools. In addition, there was a scandal in which it was discovered that there were 1200 ghost teachers in one district resulting in the embezzlement of ten million dollars over five years. Both these factors and a tradition of policy decisions being made in the absence of data has resulted in an environment of decision-making on rule-of-thumb criteria with a very short-term time horizon. With this in mind, it is not very difficult to infer that laying the groundwork for a long-term upgrading of both institutional information resources and decision-making capabilities are not paramount on the agenda of senior management. An important implication of this orientation is that greater information on the educational system is likely be viewed as a political liability, presenting evidence of huge problems and inefficiencies within the system instead of a resource with which to pursue constructive action. The EMIS TA is responding to this problem by focussing more attention on the provision of applications and training to the DEO offices.

4.4 National EMIS

4.4.1 Overview

The National Educational Management Information Systems (NEMIS) is an umbrella project to provide data collection and processing capabilities and computer training to the provincial and lower education system levels. Data consolidation and analysis is performed at the federal level, in addition to education research coordination and information support for policy makers and planners. The project is UNESCO/UNDP funded with USAID providing the hardware and software. It is important to note that this is not a resource rich project. It has only one expatriate technical advisor and one local consultant assigned to each of four provinces and three other areas. Provincial project advisors are located under Assistant Secretaries/Deputy Directors of Planning and Development who report to the Secretary of Education.

Provincial field positions have been occupied for only one year. Performance has varied from province to province and some personnel issues are only now being resolved. Government staff assignments have also been a major problem. Even so, provincial activities have occurred at a dizzying pace, focussing exclusively on the collection and entry of a relatively standardized national data collection instrument. Because the primary focus has been on the creation of a data set, lesser attention has been placed on institutionalization, official verification and data quality issues during the initial phase of this project. Two data collections have taken place: 91/92 and 92/93.

A wide variety of training activities have taken place under NEMIS. They have utilized the shotgun approach: train anyone you can get your hands on. Eighty-five hundred people have attended training sessions. Training sessions have included:

- Data collection and verification;
- General application training: Lotus, WordPerfect, utilities, foxbase;
- Systems workshops: personnel, financial, technical & vocational ed;
- Programming;
- Information system design and management; and
- Database access and utilization.

4.4.2 Punjab

The 91/92 data collection commenced with training for DEOs and 300 data collectors who then trained an additional 1200 data collectors. There were problems with this collection concerning the mishandling of forms and honesty of the data collectors. Translation cells were set up to translate the forms into English and then proceed with data entry. At first, various Education Directorate personnel were temporarily assigned to perform data entry, but this approach did not work. In response, data entry was contracted out to a local company. Random checks on the accuracy of the data entry process affected payment to the private firm. Total entry time was 4 months.

The publication of data apparently surprised senior management in that it showed that something had been done. An advisory committee had agreed that the data could be disseminated. After initial publication, data requests began to grow.

In preparing for the second census, DEOs received additional training in addition to data instrument execution statistics by districts. This appears to have increased DEO attention to the speedy execution and return of the data collection forms. Although the provincial government has sanctioned a number of positions, only two programmer slots and four data entry slots have been filled. As a result, the data entry was again subcontracted.

The 1991 data set was never officially signed, presenting obstacles to data usage in an official capacity. Efforts are being made to ensure the 1992 data collection is officially signed.

Training for statistical cells is underway. Training is being provided to nine different groups including:

- Personal assistants to senior management;
- Middle management;
- Computer operators in DEO offices;
- Advanced computer operators in DEO offices;
- Secretariats;
- NEMIS Government of Sindh counterparts: programming and DBMS;
- Librarians from libraries and donor agencies.

Some training has been contracted out to private firms. One problem with onsite training is that the provincial government only has three computers. Computers on their way to the field have been used to set up temporary training laboratories. Computers placed in the field have been located in the secondary DEO offices. Four machines have been shipped and the other 14 will be shipped immediately after DEO staff receive training.

4.4.3 Sindh

There had been personnel conflicts between the NEMIS coordinator of six months and the government coordinator. Both have been replaced and after negotiations between donors, the World Bank PEP III EMIS TA has been assigned to coordinate PEP III activities with the NEMIS representative. These personnel were placed this month. In addition, the government coordinator is the only government employee that has been assigned. After the 91/92 data collection, total lack of staff created a problem for data entry. A temporary task force was created consisting of employees from the since dissolved statistical office, NEMIS personnel, contractors and federal personnel in order to perform the data entry. It was performed at a frenetic three shift pace, after which the task force was dissolved.

On a more positive note, the government has sanctioned three positions for each of 32 districts: a programmer, a computer operator and a secretary. Currently, nine computer cells have been installed in the district offices that coincide with divisional headquarters. Immediate concerns are to operationalize more computer cells and proceed with 91/92 data cleaning. Data entry at the district level is planned for the 92/93 data collection. There is also a lack of equipment: laser printers, photocopiers, binding equipment and storage facilities.

4.4.4 Balochistan and NWFP

The NEMIS representatives in Balochistan and NWFP have not had the staffing problems of Punjab and Sindh due to PED efforts. In both provinces, NEMIS and PED efforts are coordinated. In Balochistan, the NEMIS project advisor's office is located in very close proximity to the BEMIS center. He works with BEMIS staff on a day to day basis, and used to be the acting director of BEMIS under PED. There is no notion of separate data gathering activities.

In NWFP there has been a clearer distinction between the two activities although the level of coordination has been increasing. The EMIS representative is located within a statistical cell currently being established under the Chief Planning and Development Officer, Directorate of Education. This year, NWFP EMIS staff are performing the data processing for the NEMIS data collection. Currently, NWFP EMIS is executing a one page data collection instrument while NEMIS is executing the standardized four page national data collection instrument. The current rationale for the separate data collections is to provide a cross-check for data validation and to estimate the effectiveness of the two different collection tools. Once the effectiveness is assessed, the two tools should be consolidated as is appropriate.

4.5. Analysis

4.5.1 Overview

It is difficult to compare the outcomes achieved in Balochistan and NWFP even though both activates were provided with comparable resources. It is even more problematic to compare the outcomes achieved under the NEMIS umbrella with those achieved under PED. Generally, the primary goals of both the PED and NEMIS activities have been to create/rationalize the supply of educational information available to decision makers and to institutionalize the systems, processes and human resources developed in the process of the making this supply available. On both these criteria, substantive information supply and institutionalization of data processing resources, Balochistan appears to have made the most progress, especially in regards to institutionalization. NWFP has focussed primarily on the supply-side of the process, while NEMIS, at the provincial level, has also primarily focussed on obtaining and processing data.

A partial list of factors that influence the degree of success achieved in institutionalization of data processing capabilities and data utilization are as follows:

- Degree of institutional receptivity and commitment;
- Institutional familiarity with informational based policy making and management;
- Focus and strategy of program TAs and their resulting influence upon institutional commitment and involvement;
- Government commitment to personnel provision;
- Relative size of the institution, affecting its degree of bureaucratic inertia; and
- Degree of wastage within the system. This is a "measure" of the potential "loss" to parties within in system as it moves towards rational resource allocation. It also provides a "measure" of the resources that could be mobilized by the "losers" in order to obstruct the creation of a comprehensive information base.

It is also important to note that fostering demand for information and analysis within a system that does not have a tradition of decision making on these criteria is no simple task. Generation of a supply of education information must precede extensive formal activities to foster demand. Context specific data is needed to effectively advocate the need for integration of information into the day to day management of an educational system. At the same time, the exercise of initial data gathering, processing and dissemination activities can lay the foundation for later focus on data utilization in that this process can aid in the building of a coalition of personnel already sympathetic to the need for improved resource allocation and monitoring.

It is also important to realize that the development of data processing capabilities has very little to do with educational planning and management other than by providing the infrastructure for quickly and reliably collecting

education data. At the same time, this investment radically diminishes the marginal costs of future data collection, therefore relaxing the supply side constraint to data utilization. An analogy to government investment in transportation infrastructure in order to facilitate the needs of commerce is appropriate.

Development of the information supply infrastructure precedes a focus on data utilization and management factors. In the short term information supply will increase while demand will remain relatively fixed. This means that while the supply of information will increase and the unit cost of information will decrease the overall quantity of information utilized will remain constant. It is only in the longer term demand phase, focussing on policy, planning, and administration and management support, that the demand curve will shift outward resulting in greater quantity of information utilization.

This perspective also has implications for sustainability. No information supply operation is sustainable. When budgets are constrained, "lobbyless" activities are cut. The natural constituency for an EMIS are managers, planners, budgeters and policy makers who demand and use information on a day to day basis.

4.5.2 Decentralization

Activities aimed at DEO and SDEO officials consist of provision of equipment, general training in a suite of general purpose applications (word processing, spreadsheets, database), provision of district specific data, some training in data analysis techniques, and provision of custom applications to meet administrative requirements and to provide access to district data. Greater emphasis on provision of canned applications is being provided in NWFP while more training of computer operators in data analysis is being offered in Balochistan.

Most computer usage observed was basic word processing, limited spreadsheet budgeting, and data entry into customized application program. Educational system managers do not appear to use the computer, but rather, give instructions to computer operators who actually utilize the machines. This modality means that the constraints on usage patterns are the analytical abilities of the computer operator and the ability of the manager to communicate instructions to the computer operator.

There is absolutely no connection between one's "computer skills" and their analytical, planning, budgeting and management capabilities. If a manager possess the latter skills, then computer provision and training will facilitate his ability to utilize those capabilities, but the converse of this statement is fallacious. The current activities focussed at this level should be viewed more as a general introduction to and familiarization with information technology than anything else. Further training in planning, budgeting, data analysis and management and decision support should be provided to the DEO and SDEO level. This training will support future decentralization of specific functions.

4.6 Conclusions

4.6.1 Recommendations

Due to the fact that the PED project only has one year remaining and the two EMIS TAs are leaving by the fall, recommendations are broken into two categories: short-term recommendations are geared towards the remainder of the project, long-term recommendations are geared towards the potential World Bank project to continue activities in Balochistan and NWFP.

4.6.1.1 Short-Term (During the next 12 months)

1. Document existing data processing activities as reference for others who may follow.
2. Continue to operationalize remaining district computer cells. Provide as much training and follow-up as possible.
3. Extensively lobby for government assignment to unfilled positions.

4. Complete development of application programs in progress by field testing systems under development, provision of training and finalization of operations manuals. Ensure that final versions of source code are located within the DPE.

5. Attempt to establish a mechanism by which the DPE can contract competent programmers on an as needed basis.

6. Develop a cost profile for the EMIS as a whole and its various subcomponents and activity categories. Indicate the variable costs of undertaking additional data processing assignments. Also, quantify wastage in the system in terms of nonfunctioning and under-enrolled schools, repetition and dropout and other system inefficiencies. Because EMIS systems utilize expensive looking imported technology, it is important to quantify the costs of not having an EMIS in regards to inefficient resource allocation.

4.6.1.2 Long-Term

1. At the provincial level, focus activities on providing support for data utilization in planning and policy making. Develop capability in data analysis, separated from the data processing activities within the EMIS unit. Provide hands-on training in performing and utilizing data analysis in the planning process.

2. At the DEO and SDEO level provide extensive training in managing data directly relevant to DEO responsibilities. This can be done in conjunction with decentralization of specific functions. In this case, use this training as an opportunity to familiarize DEOs with and prepare them for their new responsibilities.

3. Provide training in activities to support policy dialogue and policy marketing based upon data and analysis: use of presentation graphics, communication and presentation techniques and social marketing.

4. Integration and continued development of EMIS subcomponents. The long term goal should be a unified system that can relate policy objectives, development and recurrent activities, implementation progress, financial resources, and educational outcomes.

5. Continue to provide technical and budgetary support for data processing activities (EMIS centers).

6. Utilization of information technology to enhance the mundane day to day operations of management and administration. This should be done in conjunction with administrative reforms. Simply automating existing manual systems will not really address the problem because many of the existing manual systems are ill-conceived; the process of informationalization of these systems is an opportunity to focus attention on their inherent problems.

7. Identify spatial location of schools using the village as the unit of analysis. This is a relatively low-tech approach to limited GIS activities. This will allow spatial analysis of information at the village level and higher levels of aggregation. The advantage is that this approach does not require acquiring the actual spatial coordinates of schools, which would be expensive and present potential intelligence concerns. It would require the digitization of existing base maps, but would not necessarily need to include much map information beyond village location and administrative boundaries.

8. Foster technocratic involvement with the education system by non-government bodies. This could include universities, the education foundations, the private sector and other potential stakeholders.

9. Encourage the utilization of the provincial EMIS centers as service-oriented centralized education system data processing centers both within the education system and by other donors. Discourage separate data collection activities. This does not mean that these centers should serve as a centralized analysis unit once this information is collected and entered.

10. Continue to support some form of weak central role vis-à-vis NEMIS or some analogous structure. Locating data processing facilities at the provincial level is sensible for two reasons: 1) Because education resources are managed at the provincial level, locating EDP facilities at this level encourages timeliness and relevance by providing resources at the decision making level, and 2) In light of historical friction between federal and provincial governments over their spheres of authority. Coordination is not necessary if activities are located within only two provinces (e.g. Balochistan and NWFP). But, if activities are to cover the whole country, then it is clearly necessary for a weak central unit to coordinate data gathering activities, support the federal ministry of education and to exploit economies of scale in terms of training and application provision and support.

5. Financial Support for Primary Education

5.1 Introduction

The original terms of the PED agreement called for continued and increased financial commitment to primary education by the provincial governments. This section of the mid-term evaluation concentrates on the following issues:

- 1) Budgetary allocation and expenditure of the provincial governments on primary education with due regard to annual growth rate specified in PIL No.8;
- 2) Funds budgeted and expended in the two provinces for providing incentives to rural female teachers;
- 3) Provision made and sum expended on supply of textbooks and other instructional materials to disadvantaged areas in the two provinces;
- 4) Funds expended on repair and maintenance of existing and new buildings;
- 5) Extent to which the financial management systems adopted in the two provinces reflected the financial resources on primary education, such as funds received from all the donors and provincial sources;
- 6) The state of computerization of the financial management system and its reliability of data on primary education;
- 7) Budgetary and accounting procedure followed by the provincial governments to ensure proper allocation and expenditure on primary education;
- 8) The degree of control exercised by the Directorates over the expenditure under the PED Program in the two provinces;
- 9) Classification of expenditure on the basis of sub-heads provided in PIL No.8 and their reconciliation with provincial budgetary heads, such as the establishment of Personal Ledger Accounts (PLAs) for recurrent and development budgets in line with the government budgets; and
- 10) Problems and inefficiencies in the financial management system and constraints in the realization of the stated results and remedial measures required and alternatives to be followed in the remainder of the PED Program.

5.2 Growth Rate Percentage Change

Under section 4.2 (d) of the Program Grant Agreement, the Government of North West Frontier Province and the Government of Balochistan are required to allocate funds in addition to the funds generated by Sector Assistance Grant as are sufficient to ensure a real growth of at least 5 percent in case of NWFP and 8 percent in case of Balochistan. On the basis of the data provided by the two provinces, year-wise growth rate based on allocation during the preceding year is shown in the table below.

Percentage Change in Budgetary Expenditures in Balochistan and NWFP

Financial Year	Balochistan		NWFP	
	1991-92	1992-93	1991-92	1992-93
Budget Estimates				
Development	246 %	5 %	1845 %	106 %
Recurring	38 %	18 %	54 %	5 %
Total	55 %	14 %	79 %	20 %
Revised Estimates				
Development	35 %	63 %	255 %	108 %
Recurring	25 %	39 %	33 %	10 %
Total	26 %	32 %	47 %	25 %
Actual Expenditure				
Development	35 %	63 %	256 %	66 %
Recurring	25 %	39 %	30 %	40 %
Total	26 %	32 %	43 %	44 %

5.2.1 Percentage Change in Budgetary Expenditures in Balochistan

Estimates— It is observed that in the case of Balochistan the budget estimates for development expenditure were higher by 246 percent in the year 1991-92 over the year 1990-91. Recurring expenditure for the same year increased by 38 percent. The total increase in the budget estimates (development and recurring) was higher by 55 percent. In 1992-93, the increase in budget estimates over the year 1991-92 is 14 percent (-5 percent in development expenditure and 18 percent in recurring expenditure).

Revised Estimates—The revised estimates indicated an overall increase of 26 percent in 1991-92 over the base year of 1990-91 which comprised 35 percent rise in the development and 25 percent in the recurring estimates. In the year 1992-93, there is an overall increase of 32 percent in the revised estimates - a minus growth of 63 percent in development and an increase of 39 percent in the recurring expenditure.

Actual Expenditures—The actual expenditure showed an overall growth of 26 percent in the year 1991-92 over the previous year (35 percent increase in development and 25 percent in recurring). In the year 1992-93 there is an increase of 32 percent consisting of a 63 percent fall in development accompanied by 39 percent rise in recurring expenditure.

The overall increase in the funds allocated by the Government of Balochistan is more than the percentage growth stipulated in section 4.2 (d) of the Program Grant Agreement which comes to 18 percent (8 percent plus an inflation rate of about 10 percent).

5.2.2 Growth Rate in NWFP

Budget Estimates—In the case of NWFP, in the budget estimates for development expenditure there was 1845 percent increase in the year 1991-92 over the year 1990-91 whereas increase in the recurring expenditure during the said year was 54 percent thus making a total increase of 79 percent over the previous year. The total increase in the budget estimates (development and recurring) worked out to 20 percent in 1992-93. The increase in development estimates was 106 percent with 5 percent increase in recurring estimates.

Revised Estimates—The revised estimates showed an overall increase of 47 percent in the year 1991-92 over the preceding year which comprised 255 percent rise in the development and 33 percent in the recurring estimates. In the year 1992-93, there is a total rise of 25 percent in the revised estimates. A growth of 108 percent in development and 10 percent in the recurring expenditure was recorded.

Actual Expenditure—The actual expenditure indicates an increase of 43 percent in the year 1991-92 and a fall of 44 percent in 1992-93. The fall in the actual expenditure is not real because the figures relate to about nine months and are not for the full year. The overall increase in the funds allocated by the Government of NWFP is more than the stipulated requirements.

However, it should be pointed out that in the case of Balochistan, the actual expenditure shown for the year 1992-93 is a mere repetition of the revised estimates. As actual expenditure has been made only for nine months, it has to be ensured that the rate of growth does not fall below the required percentage. In the case of NWFP, the actual expenditure shown in the current year is lower than the preceding year by 44 percent. There is an obvious need for accelerating the pace of expenditure to reach the target level.

5.3 Year-wise Allocation by the Governments of Balochistan and NWFP

The year-wise Funds allocated for Primary Education Development Program by the Governments of Balochistan and North West Frontier Province are given in the tables on the following pages.

Funds Allocated by the Government of Balochistan (Rs. in million)

Financial Year	1990-91	1991-92	1992-93	Total
Budget Estimates				
Development	43.500	150.608	143.300	337.408
Recurring	507.995	702.976	828.059	2039.030
Total	551.495	853.584	971.359	2376.438
Revised Estimates				
Development	37.030	49.935	18.350	105.315
Recurring	522.893	654.175	909.227	2086.295
Total	559.923	704.110	927.577	2191.610
Actual Expenditures				
Development	37.030	49.935	18.350	105.315
Recurring	522.893	654.175	909.000	2086.068
Total	559.923	704.110	927.350	2191.383

Funds Allocated by the Government of North West Frontier Province (Rs. in million)

Financial Year	1990-91	1991-92	1992-93	Total
Budget Estimates				
Development	15.244	296.462	610.818	922.524
Recurring	1065.604	1639.057	1717.711	4422.372
Total	1080.848	1935.519	2328.529	5344.896
Revised Estimates				
Development	82.920	294.262	610.818	988.000
Recurring	1245.975	1658.779	1826.668	4731.422
Total	1328.895	1953.041	2437.486	5719.422
Actual Expenditures				
Development	81.978	292.152	100.762	474.892
Recurring	1267.271	1642.352	984.070	3893.693
Total	1349.249	1934.504	1084.832	4368.585

5.4 Year-wise Sectoral Distribution of Expenditure

Year-wise sectoral distribution of expenditure under Primary Education Development (PED) Program in the two provinces is given below.

Sectoral Distribution of Expenditure under PED Program in Balochistan and NWFP

Financial Year	1990-91	1991-92	1992-93	Total
Balochistan (Rs.in million)				
Administration and Management	16.358	10.895	10.880	38.133
Teacher Supply and Training	0.075	1.824	10.047	11.946
Instructional Material	0.069	2.143	5.446	7.658
Construction	41.685	86.095	76.633	204.413
Contingencies (Other)	0.000	0.000	0.000	0.000
Total	58.186	100.957	103.006	262.149

NWFP				
Administration and Management	61.995	93.646	51.903	207.544
Teacher Supply and Training	0.474	9.272	104.348	114.094
Instructional Material	10.400	4.375	4.375	19.150
Construction	32.820	438.470	398.655	869.945
Contingencies (Other)	38.359	38.898	36.200	113.457
Total	144.048	584.661	595.481	1324.190

5.5 Year-wise Details of Expenditure for Stated Purposes

The details of expenditure in NWFP under PED Program for stated objectives, namely, upgrade of textbooks and instructional material, provision of textbooks and instructional material to less disadvantaged areas, repair and maintenance of the new and existing buildings and incentives for rural female teachers are shown in the table below

Year-wise Details of Expenditure for Stated Purposes - NWFP (Rs. in million)

	1990-91	1991-92	1992-93
Upgrade of textbooks and instructional material	-	-	-
Provision of textbooks and instructional material to less disadvantaged areas	-	-	-
Repair and Maintenance of the existing buildings	15.155	-	-
Repair and Maintenance of new buildings	-	-	-
Incentives for rural female teachers	-	-	-

As shown on the tables above, year-wise details of expenditures for stated purposes, namely improvement of textbooks and instructional material, repair and maintenance of buildings and incentives for rural female teachers are not available. The reason becomes obvious with examination of The Chart of Classification of Federal and Provincial Governments Receipts and Disbursements, which does not list the heads of accounts in this specific manner. Therefore, the accounts are not maintained under these heads.

The Chart of Classification is prepared by the Auditor General of Pakistan under Article 170 of the Constitution of the Islamic Republic of Pakistan which reads as under:

"170. The accounts of the Federation and the Provinces shall be kept in such form and in accordance with such principles and methods as the Auditor General may, with the approval of the president, prescribe."

Changes in the classification of accounts are made by the Auditor General. The Education Department should approach the Finance Department to include these heads. Accounts should be maintained to ascertain whether expenditures are being incurred to meet intended policy objectives. It may, however, be stated that the budgeting process starts in October in each financial year (July-June) and any change now made in the heads of accounts will not be effective for collecting the necessary data for the coming year. The existing system should be made more efficient to cull out data of specific interest in line with the requirements of PED Program on receipts, disbursements and unspent balances at any given date.

5.6 Procedural Requirements under PIL

The procedure laid down in PIL No.8 for flow of funds from the Federal Government to the Provincial Governments was, by and large, followed.

In accordance with the PIL, the funds provided by the USAID under the Primary Education Development Program were to be placed in a Personal Ledger Account (PLA) both in NWFP and Balochistan with non-lapsable status. Whereas the Balochistan Government complied with this requirement, the Government of NWFP could not give non-lapsable character to the PLA on account of objection raised by the Accountant General.

In the case of Balochistan, the unspent moneys lying in the PLA at the end of the Financial year do not lapse and can be spent next year and thereafter on the PED Program. However, this is not the case in NWFP, with the result that the unspent amounts have to be provided in the next year's budget through a Supplementary Grant. It was disclosed during the course of discussions with the officials of the Directorate of Primary Education, NWFP that the USAID funds credited to PLA are released for expenditure to PED only when detailed justification under each head of account is provided to the finance department. The accountant general also demands a formal sanction of the finance department before releasing the money for expenditure. This happens in spite of the fact that the Annual Development Program (ADP) is approved by a steering committee consisting of the additional chief secretary, planning and development, secretary, finance department, secretary, education department, secretary, planning and development and secretary C & W. This results in delays of up to three months to obtain release of funds for each expenditure. This is not in line with the procedure and needs to be rectified to ensure smooth flow of funds. The release should be automatic without need for any formal approval.

The Additional Secretary, Finance Department pointed out that since the Directorate of Primary Education could not use the funds released to them during during years 1990-91 and 1991-92, the provision lapsed. The Finance Department went out of its way to provide funds in the budgets of the succeeding years. It created a difficulty for the Government because, in a situation of competing claims, whatever is left unspent in the budget is transferred to other priorities and is utilized. There should, therefore, be pressure on the DPEs to spend the money on the objectives assigned to it during the financial year. It is obvious that the utilization process in the Directorate is slow and needs acceleration.

5.7 Summary of Recommendations

During the next year:

- 1. The actual expenditure shown for the year 1992-93 in Balochistan is a mere repetition of the Revised Estimates. As actual expenditure has been made only for nine months, it has to be watched that the rate of growth does not fall below the required percentage.**
- 2. In the case of NWFP, the actual expenditure shown in the current year is lower than the preceding year by 44 per cent. There is an obvious need to accelerate the pace of expenditure to reach the target level.**
- 3. The role of the Directorate of Primary Education is more of an intermediary than that of a supervisor. It receives bills from the implementing agencies and disburses the funds. The overall supervisory role of the Directorate should be strengthened to exercise necessary checks and balances.**
- 4. The existing system should be made more efficient to cull out data of specific interest in line with the requirements of PED (or any given program) on receipts, disbursements and unspent balances at any given date. The Education Departments in the two provinces may approach the Finance Departments to include the Heads of Accounts in line with the categorization of expenditure specified in PIL No.8. The accounts should be maintained in**

a manner such that, at a given point of time, it should be possible to find out whether the expenditure is being incurred on the objectives which the policy makers have prescribed. It may, however, be stated that the budgeting process starts in October in each financial year (July - June) and any change now made in the Heads of Accounts will not be effective for collecting the necessary data for the coming year.

5. The Accountant General in NWFP demands a formal sanction of the Finance Department before releasing the money for expenditure, in spite of the fact that the Annual Development Program (ADP) is approved by a Steering Committee consisting of Additional Chief Secretary Planning and Development, Secretary, Finance Department, Secretary, Education Department, Secretary Planning and Development and Secretary C & W. This results in much delay—it may take up to three months to obtain release of funds for each expenditure. This is not in line with the procedure and needs to be rectified to ensure smooth flow of funds. The release should be automatic without the need of any formal approval.

6. There is an urgency for physical inspection and propriety audit of expenditure by qualified and competent auditors.

In the long-term:

6. In order to ensure implementation of the objective of accelerating the pace of primary education in general and female education in particular, it is essential that there should be one window for planning, development, execution of programs, receipts and disbursements, evaluation and remedial actions on all matters relating to primary education with a data base network to facilitate the process.

7. There should be a comprehensive data network in the two provinces facilitating timely access to information about all receipts and expenditure on primary education including information about foreign donors. Such a comprehensive network should also be designed in the other provinces as well as at the Federal level. There should be a master computer with terminal facilities at the level of the Directorates in the provinces and the offices of the Accountant General in the provinces.

8. The fund utilization process in the Directorate is slow and needs acceleration. In a situation of competing claims, whatever is left unspent in the budget is transferred to other priorities and is utilized. There should, therefore, be pressure on the Directorate to spend the money on the objectives assigned to it during the financial year.

6. Gender Equity and WID Activities

6.1 Introduction

The purpose of this section is to evaluate WID activities within the USAID Primary Education Development (PED) Program during each phase from design through, implementation and evaluation. Particular concern was placed on:

1. How the interests and role of women (compared to men) were taken into account and on the ways that women (compared to men) participated in the processes;
2. The effects, positive or negative, of the program concerning women's (compared to men's) access to income, education and training, and with respect to workloads, role in household and community, and health conditions;
3. The availability of gender-specific data for each of the program stages;
4. How women's integration in AID activities affected the sustainability of program outcomes in terms of equity among male and female beneficiaries of the program.

6.1.1 Project Rationale: Focus and Challenges

The rationale of PED's aid strategy to support WID activities is straightforward and explicit in the Project Paper. Rather than simply transferring resources, the project directs its effort in such a way as to develop organizational strengths in both the public and private sectors through the ministries of education, as well as through private and community efforts at the local and provincial levels. Thus strengthening the public and private sectors should in turn stimulate the Ministry and make the public sector more active and effective.

By encouraging and strengthening women's participation both sectors will thus increase the educational capacity of the country, and the client population will benefit on both sides.

The program strategy also has its challenges. The program focuses on the entry of females in areas which have been traditionally dominated by or exclusively reserved for males. Initial changes rely on the employment of women who must work in environments that are unfamiliar and often unfriendly. Restrictions to greater participation may be caused by responsibilities that, for a variety of reasons, are unmanageable and which might in turn imperil precisely those qualities which PED needs most; namely, the high levels of motivation and commitment of the female teachers, learning coordinators, and administrative personnel in the education directorate.

6.2 Institutional Development

The PED Program is one of the most comprehensive in primary education with respect to WID activities as the program was designed to directly address the low levels of girls' enrollment and persistence in Balochistan and NWFP. As such the interest and role of women are specifically and consistently addressed throughout the design, planning, implementation and evaluation stages of the program.

In the years since the program was initiated, enrollment for girls has increased in Balochistan from 73,000 in 1989/90 to 101,000 in 1992/93 and during this time the ratio of boys/girls has shifted from 5.2/1 to 3.6/1. In North West Frontier Province girls' enrollments have increased from 389,000 to 508,000, which slightly exceeded the targeted enrollment figure of 507,374 for the period. Even more significant is that enrollment was largely increased in the rural areas. Before 1990 when PED began, the female enrollment was almost exclusively (over 75%) in Quetta. The 1992 data indicate that the percentage of girls in primary education outside of Quetta is now almost 50% of the total.

6.3 Program Implementation

The field implementation of the PED program began fully with the placement of the TA teams in Balochistan and NWFP. Previous to that, however, a thorough study was conducted in preparation for the PAAD. A review of major points in the research, design and implementation of the program is given below.

6.3.1 Research and Design

In reviewing the research and design process during the earliest stages of the program, the Project Paper and Working Paper documents were used as the basic source for analyzing the areas where early attention was given to WID. Contributors to the PED program design included 13 U.S.A.I.D. professionals, 10 from the Government of Pakistan and 10 consultants, for a total of 33 contributors, three of whom were female.

The Working Papers were used in the preparation of the Project Paper and set the stage for the implementation of the program. The six papers contained in the document focus on planning, the development of an information system, teacher supply and training, instructional materials, and a social soundness analysis. A total of eight authors contributed to articles contained in the document: seven males and one female. The greatest detail is given to gender issues in the social soundness analysis and the teacher supply and training papers also describes gender concerns; the papers on instructional materials and school construction contained some references, while the papers on planning and EMIS were generic and contained no references to gender issues.

6.3.2 Participation and Roles of Women in Program Implementation

The role of women in program implementation will be described in this section by reviewing the gender composition of the PED TA teams and short term consultants, the programs and content of materials produced in the four primary components of the program.

The original scopes of work written for the PED Project Paper recommended no specifics on the WID component of the program, except to state that the program targeted providing education to girls. The SOWs may have been rewritten later, but as an initial step in identifying personnel to begin implementation there is no evidence to suggest that the selection of personnel was based on prior experience, knowledge, or interest in WID programs specifically. The final selection of personnel to fill the eight field TA positions included two females. Combined with the national counterparts, all of whom are male, the male/female ratio becomes 5:1 (The materials development TA in NWFP does not have a counterpart). In addition, short term consultancies provide further technical assistance as needed. A review of fifty-seven consultants providing assistance over the period of the program thus far showed that sixteen were women (or about 3:1 ratio). Although gender sensibilities are not necessarily a function of gender, in a bifurcated society such as exists in Pakistan where historically it has been very difficult, if not forbidden, for opposite sexes to communicate, there are obvious advantages to having more women involved in the development process.

Table
Gender Distribution of TA Teams in Four Program Areas

	Balochistan		NWFP	
	Female	Male	Female	Male
Team Leader				
Policy & Admin.		1		1
Teacher Training		1		1
Materials Dev.	1		1	
EMIS		1		1
Total	1	3	1	3

In terms of the numbers of women in the PED field technical assistance staff and consultants participating in the program the participation ratio is creditable considering the remoteness of the program locations. Nine positions are held by six men (two positions are held by one person) and two women. The positions of highest authority: chief of party and TA team leaders are held by two men. Although repeated attempts were made to identify female candidates to fill long-term TA positions, it is difficult to recruit female professionals for long-term assignment in far flung regions where the social climates can also be extremely inhospitable to women. Nevertheless the quality of the program has been significantly influenced by the participation of the proportionately few women whose contributions can be seen in many critical areas, from the writing of the PAAD to community development. The human resource survey asked questions based on female observations and experience which proved critical to breaking the myth that parents and leaders did not want their girls to attend school. At the grass roots level women were able to reach other women to effectively organize community school programs in ways that would have been extremely difficult, if not impossible for men.

6.3.3 Professional Training and Study Tours

Professional training and study tours have been provided quite equitably, with a preference toward recruiting women for long-term degree courses in policy and planning. Long-term and short-term overseas professional training in degree and non-degree programs also has been provided by the PED program. As of May 1993, sixty-eight placements had been made for training: forty-six (68%) from Balochistan; twenty-two (32%) from NWFP. Half of the total number of trainees selected were female: twenty-one (62%) from Balochistan, thirteen (28%) from NWFP (See Table below).

Table
Gender Distribution of Long- and Short-Term Training Provided by
PED by Province in months and (number)

	Balochistan		NWFP		Total Months (n)
	female	male	female	male	
Planning & Management	90 mos (5)	40 mos (4)	20 mos (3)	40 mos (6)	190 (18)
Teacher Training	6 (6)	6 (6)	2 (2)	1 (1)	15 (15)
Curriculum	9 (8)	24 (3)	-0-	-0-	33 (11)
Education (General Degree) (2)	36	-0-	-0-	-0-	36 (2)
Study Tours (Less than 2 weeks)	7.5 (5)	10.5 (7)	16 (8)	4 (2)	38 (22)
Totals	148.5 (21)	80.5 (25)	38 (13)	45 (9)	312 (68)

*List provided by the Academy for Educational Development

The majority of training has been in short-term, non-degree programs: fifty-four (79%) in all. Of the fourteen degree placements, most of which were in education planning and management, eight (57%) were female; seven from Balochistan and one from NWFP.

6.4 Summary of Findings

The following summary reviews findings based on an evaluation of the WID activities as they followed a three step approach with: 1) small focused studies to understand the problem, (2) development of quality inputs, and (3) experimentation and evaluation to ensure the relevance of the intervention with the main objective of improving educational access and the quality of the educational system.

6.4.1 Institutional Development. Institutional development has been successful in terms of establishing a Directorate with a new structure and framework for primary education to provide women with access to positions in management and decision making. In both provinces key management positions have been reserved for female staff to bring more women into policy making roles. Management and technical training of women employees is ongoing.

6.4.2 School Facilities. Increasing educational access for girls has been approached with a view that primary schools must be provided within a safe and comfortable walking distance for young girls, in safe and easily accessible locations, with boundary walls, toilets and potable water—basic amenities which often are not present in existing schools.

To guarantee increased access in the rural areas, at least sixty percent of the new schools are built for girls. In order to identify the demand for girls schools, a human resource survey was taken to identify the location and number of villages that do not have a girls' school, the attitudes of village leaders and the families toward the education of females, and to identify someone who will donate land for a school. The outcome in Balochistan has been a 23 percent increase in the number of female schools sanctioned since PED started. An additional 120 female schools per year for 92/93 and 94/95 are planned for villages under the community support program. Ninety-six female schools sanctioned this spring are included, the increase is 41 percent since 1989/90 and growing at a steadily increasing rate. All 240 schools are rural and staffed by a local female teacher trained under the Mobile Teacher Training Program.

6.4.3 Teacher Supply, Training and Supervision. Teacher training courses have been successful in contributing to substantial increases in the number of teachers trained, especially in the rural and far flung areas. In general the need for more trained female teachers is due to limited training programs. In NWFP 3,000 females will be needed to staff the 1,500 new primary schools that will be built as part of the social action plan. Recruiting women teachers to serve in the rural areas is difficult. Men and women who live in urban areas (where there is a surplus of female teachers) are reluctant to serve as teachers in rural village schools and understandably females are more reluctant than males.

Some of the findings concerning supply and demand for female teachers include the following:

It was believed that girls would be restricted from boy's schools and only would be allowed to attend girl's schools. However, results of the human resource survey in NWFP, for example, showed that in 60 percent of villages without a girl's school, respondents reported that the majority of the parents would not object to having their daughters attend existing schools with a male teacher up through class three. Forty percent of villages, it was reported, would not object through grade five.

Age rules have been relaxed so that women who have left teaching to have families may return and so that older males with adequate background may also be employed as teachers

Current allowances favor urban teachers; therefore increases in allowances to those willing to teach in rural areas have been offered, particularly for females. Female residences and cluster hostels with appropriate facilities and safeguards, such as boundary walls and chowkidars, and where necessary transport should be provided.

In service training programs have been designed to make teachers more effective. One of the BRIDGES studies found that some Pakistani teachers using certain teaching practices in a systematic way produced student achievement twice as high on average as those produced by teachers who did not use these same systematic practices.

6.4.4 Instructional Materials. The instructional materials cells have been very effective in terms of practicing the three-step approach to develop and produce materials for increasing participatory teaching methods that are locally appropriate for all children. The concern is to change instructional practices from an emphasis on rote learning and recall of information to active learning, to what some call "hands-on" or practical learning, and to problem solving.

The current curriculum content is heavily loaded towards teaching children what they need to continue their education—that it has high internal relevance, but does not include content that is directed towards teaching children practical knowledge and life skills. It is generally unbalanced and does not serve the student who does not go on to advanced levels. In particular the curriculum has not served girls, for whom much more knowledge and skill development is needed in personal health, hygiene, sanitation, nutrition, and training in the practical sciences related to their future roles as wives and mothers.

However, the newly developed materials use gender inclusive language and visual representations and are prepared to actively elicit responses from children from diverse perspectives—i.e. girls and boys, in the front, back and middle of the classroom.

6.4.5 Donor Coordination. The PED program has provided leadership in establishing a system to monitor and report on donor coordination which, in future will be linked with SAP. In terms of direct cooperation and collaboration of efforts toward increased girls participation, the UNICEF office has been most consistently involved with the PED team in Balochistan on Mobile teacher training, curriculum reform, human resource survey, and the district saturation program. In general there has been cooperation with a wider number of agencies in Balochistan than in NWFP.

6.5 Innovative Approaches of Benefit to Females

The PED program has supported the development of community, private, non-governmental participation at the local provincial and community levels through creation of the Frontier Education Foundation and the study of community schools. With continued support, encouragement, and recognition, these initiatives may pave the way to significant and possibly unprecedented increases in female participation rates in education.

6.5.1 Private Foundations and NGOs. A potentially promising private sector approach to funding primary education can be found in education foundations. In particular, the NWFP Foundation provides a way in which individuals and NGOs may borrow money for the purposes of funding private schools. Though the composition of the governing board is predominantly either government or government appointed individuals and predominantly male, with some business or banking expertise it could provide a means toward revisions in the regulatory framework of private education.

In Balochistan, where structure characteristically seems to follow practice, the Private Education Foundation has awaits vetting in the Law Department. However, the Society for Community Support for Primary Education has been formed to support grass roots activities—initially community schools. In sharp contrast to the NWFP foundation, the governing board is predominantly comprised of female professionals who represent the diversity of cultures as well as social attainment in Balochistan.

6.5.2 Community Schools. An innovative grass roots approach to increasing girls' access to schooling which may prove more effective in some rural areas has been the establishment of girls' primary schools by community members which later become sanctioned by the government. The multi step process begins with the identification of middle or matric pass female from the village or walking distance from a given village and includes verification of her documents by DOE's office, written test of math's, Urdu reading and writing and conversation,

assessment of the village, and the formation of a village education committee (VEC). Once the VEC is formed the school can start on a trial basis. This increases local participation initially without government influence. Once the need is established and the school is underway, the post is sanctioned by the government. Training, followup and supervision are supplied to the teacher and the VEC.

6.6 Conclusion

The findings summarized above indicate that PED has initiated and implemented a program which has shown success in the attempt to increase female participation rates in all areas of the primary education system. Participation rates for women were favorably higher in Balochistan than in NWFP. Perhaps this is due to cultural differences between the two provinces, but the mission was struck by the numbers of women visible in the PED offices and in visits to the field in Balochistan as compared to NWFP. Though the numbers indicate that both provinces are seeing strong gains in primary school female participation rates, Balochistan has come from much farther behind. Perhaps the reason for the rapid gains lies in the participation rates of women in the field through programs such as Mobile Teacher Training and Community Education which focused on reaching women directly and speedily. It is too soon to know, but perhaps the sustainability of the program can be measured by the extent to which the gender gap is closed in all areas of policymaking, planning, materials development, financial support, and teacher training.

7. Curriculum Development and Instructional Materials

7.1 Introduction

The objectives of the curriculum element of the program are to increase literacy with appropriate curriculum, bring the curriculum of the provinces in line with evolving social and economic conditions, and integrate emerging technologies in instructional materials. The progress made towards these objectives are indicated in a Curriculum Development Index which monitors five areas: appropriateness and relevance of existing curriculum, quality of instructional materials, field assessment of effectiveness, curriculum development resources and expertise, and dissemination of curriculum and instructional materials.

The table below shows the target index for the end of the program in 1994 against the index of achievement for 90/91 and 91/92. As shown by the index, NWFP has rapidly advanced in this area and is expected to reach the target by September 1994. New instructional materials have been developed for dissemination to Kachi classes province-wide in NWFP and for field testing in Pakki classes. The materials are developed and improved through field testing followed by revisions by writers and evaluators. Supplementary student learning materials and teacher guides for their use have been developed, field tested, revised as needed, and are being supplied to schools free of charge. Pilot program to teach English to both teachers and primary school pupils by Interactive Radio is being tested for use with instructional materials for pupils and teachers.

Curriculum Development and Instructional Materials Index

NWFP				Balochistan			
90/91	91/92	Target 1994	Target 1999	90/91	91/92	Target 1994	Target 1999
4	9	12	16	-	4	14	-

7.2 Balochistan Overview

The Balochistan Materials Development and Training Cell (BIMDTC) was developed in response to the needs to supplement instructional materials that accommodated interactive teaching methodologies with student participation in the learning processes.

The BIMDTC was organized to fit the unique needs and characteristics of Balochistan Province. A planning committee recognized these needs as follows:

- o There are a majority of single teacher, multi-grade schools
- o The active involvement of pupils in learning is often very restricted
- o There is a wide age-spread of students.
- o The schools have many untrained teachers
- o The textbook life span in the classroom is short

7.2.1 Textbook Development

Based on these criteria, a textbook reform plan for primary education was developed and endorsed by the Federal Curriculum Wing in Islamabad in 1990. Prior to 1990 only official Pakistan textbooks were available in the schools. The content and presentation of subject matter and concept development did not fit with interactive teaching and problem-solving teaching methods. The textbooks were not designed for classes where teachers taught multi-grade classes. Printed on poor quality paper with low quality binding, they have a short life span of 3 to 4 months.

The textbook reform plan was implemented with the initial phase of developing new textbooks. There are also plans to develop teacher's guides and supplementary materials for all classes and subjects at the primary level. The textbooks are designed to be student centered with one new book for every subject for each class spanning grades one through five. The textbooks, although built on existing subject matter content, include self directed activities and lessons for students to perform on their own, independent of the teacher.

7.2.2 Linkage with Other Agencies

Inter agency and federal bureaucracy support and cooperation was essential to this development and the success of the BIMDTC. The BIMDTC is designed as a service component to develop, field test and disseminate textbooks and primary instructional materials. The BIMDTC adheres to the broad guidelines established by the Curriculum Wing in Islamabad.

The federal role in curriculum and textbook development is important. While the intent of the federal education agency is to promote the development of more effective teaching materials, they must be involved and apprised of the potential impact on teaching and learning. It is of paramount importance that the PED recognize the responsibility of the Curriculum Wing to approve manuscripts of textbooks produced by other agencies, i.e., BIMDTC. before they are used for instruction in the classroom.

7.2.3 The Production Setting

The BIMDTC staff conducted a series of meetings with the Curriculum Wing, Textbook Board, the Bureau of Curriculum and Extension, and the Department of Primary Education to discuss the reform measures. The staff members responded to concerns, and coordinated activities among the participants. With the support of the federal agencies, the BIMDTC was able to embark on a program of writing and developing instructional materials. The BIMDTC staff who create the materials in a workshop setting are a trained team, representatives of the primary teaching force. Computer technology support is provided the writing team with the use Desktop Publishing which provides modern production and editing capabilities to insure the preparation of high quality pre-press materials.

7.2.4 The BIMDTC Workshop

The workshop setting is conducive to working in groups. The environment is large, airy, and clean. Most of the writers are females and they feel comfortable in this surrounding. They appear to be eager to share their excitement and commitment in working on the project. In a visit to the Cell, the writers taught two lessons to the other team members with one lesson in Urdu and the other in Maths. As they conducted the lessons, they became involved and excited. They interacted with the "students" in the group encouraging them to question and respond. The lesson ended with a review of the objectives and an informal evaluation with the students. In feedback sessions following the presentations, the presenters spoke of their positive feelings of presenting a lesson that was not a rote exercise, but one that required the application of thinking skills and learner participation.

7.2.5 The Continuing Development Process

An editing and revision session is scheduled in May, 1993 with the editors functioning as content experts meeting with the writing teams every two weeks. This process will familiarize the writers with the editors and their roles and requires the writers to work as a team testing each new idea and lesson. In the process of developing the lessons, it is important to "think about teaching and learning in a new way that requires students to ask questions, perform activities, and play an active role in their learning process."

The editors will focus on the areas of course content, time allocations, student lessons/chapters, and the clarity of the teacher guides. The writers are eager for the feedback of the editors but at the same time have reservations of the activity. They are concerned that their work will be changed so assurances are being made to the writers that they know the methodology and editors make content recommendations. As this process continues, it is the goal that the editors and the writers will develop a team approach with open support and cooperation.

Currently, the Kachi and Class I materials are tested in small group settings. As the program develops, a formative evaluation and criterion reference testing component will provide evaluation instruments for use by supervisors, teachers, and evaluation teams to assess the content, and quality of materials. Also student achievement evaluation instruments based on the objectives are being developed.

7.2.6 Textbook Development Plans

BIMDTC works in concert with the Textbook Board, a major publisher and distributor of textbooks in the Balochistan Province. With the availability of computer technology with Desktop Publishing to provide modern production and editing capabilities, the BIMDTC has entered into a partnership with the Textbook Board. A consultant has been commissioned to consult with members of the Board to review the Board's process of publishing from the development of the manuscript to the actual printing of the document. Following production, there will be a 3 month training program for subject area specialists designed to upgrade skills in technology which leads to design, type setting, and scanner illustrations. Following the training of subject area specialists and through coordination with the Cell, the specialists (3) will have computers and printer that will provide the specialists with technological capability. Software will be in Urdu enhancing the learning and the relevance of the program.

7.2.7 BIMDTC's Approach Versus the Traditional Textbook Development Approach

The traditional approach used by the Textbook Board in developing a textbook is to commission a text, and employ one or two authors to write the materials. There is a process of review; however there is not a team approach, and relatively little, if any external criticism, field testing or revisions. With the BIMDTC's writing team, there is a great deal of dialogue exchange among the teachers on the team. They share and draw their classroom experiences and discuss a variety of teaching approaches, i.e., using poems as well as stories in Urdu. The writing team is also sensitive to the gender issue often inserting stories about a boy being the mother's helper in the kitchen and a doctor being a female. This type of team building and sharing of information and knowledge is a key element in the training of the Textbook Board subject specialists. Releasing the specialists to upgrade their skills and approach curriculum development in another way is a major commitment of the Textbook Board to implement a complete textbook reform.

7.2.8 Concerns for the Future of BIMDTC

It is important that the BIMDTC continue its dialogue and planning with the Bureau of Curriculum and the Directorate of Primary Education. The pre and in-service training of teachers should include training in the interactive methodologies required by the textbooks produced by BIMDTC.

As the new textbooks are being developed, it is difficult to visualize curriculum alignment, or how the curriculum, texts, and the tests relate with one another. This challenge is compounded by the increased development of concept and subject integrated texts. It is not advisable to develop these modern curricular materials and simply distribute the materials to teachers. Teacher training has to be the program that links the teacher, instruction, testing and curriculum together.

BIMDTC plays an important role in working with primary teachers to support the activities occurring in the educational reform process. As the program progresses, the Cell envisions that, at the request of the Textbook Board for grade level texts, they will have trained writing teams available to accomplish the writing in an effective and expedient manner. To accomplish this, the Cell foresees the need for attachments to secure teachers on special assignments to become members of writing teams. The planning would involve 3 phases of training teams with 12 on each team making a complement of 36 trained and skilled writers available at any given time. The issue of gender equity is integral to the team development of these writers. As with the present team, which is comprised largely of females, future writing teams that are gender specific would provide a qualified talented pool of females who are responsible and responsive to the needs of children not only in the written work in texts but in the activities to accomplish the objectives desired.

7.3 Instructional Materials Development - North West Frontier Province

7.3.1 Background

The federal education institution, the Curriculum Wing, the Curriculum Bureau, the Textbook Board and NWFP's Directorate of Primary Education all play central roles in curriculum and instructional materials development and distribution. These departments hold shared responsibilities for the oversight of primary education at the Federal and Provincial levels. Their legal responsibilities are defined and specific in the area of instructional material development. Five donor agencies now provide support to the federal and provincial offices for the development of instructional materials and a sixth donor agency is scheduled to come on board.

A major goal of the PED Program in NWFP has been to restructure inter-agency relationships for a more effective and efficient instructional materials operation. This re-structuring occurs in a bureaucratic environment where message transmission and response time is slow and communication can be quite difficult. To further the re-structuring goal, an Instructional Materials Development Cell (IMDC) was established. The IMDC is attached to the Directorate of Primary Education as a bridge organization among the Curriculum Bureau, Textbook Board, and the donor agencies. This has enabled the IMDC Technical Assistance Team (TA) to initiate and implement instructional materials program activities closely linked with teaching and learning and the greatest probability of enhancing the quality of teaching and learning.

7.3.2 Program Development

The IMDC has held itself accountable to following a three step process of program development consisting of: 1) small focused studies to understand the problem, (2) development of quality inputs, and (3) experimentation and evaluation to ensure the relevance of the intervention with the main objective of improving educational access and the quality of the educational system.

The IMDC activity commenced with a two week workshop on writing materials. Invitations were extended to 48 teachers who had expressed an interest in writing. The participants were PTC or CT teachers with 3 to 5 years successful teaching experience at either the B Ed or M Ed levels. The workshop was supported by the PED Program with the Directorate of Primary Education and the Textbook Board. All supporting agencies were represented at the workshop. The teachers were assigned to writing groups with subject matter specialists in each group. The groups developed a series of lessons and made cross group presentations. From this initial workshop 16 participants were selected for the ongoing cadre and 13 accepted. This cadre commenced development of instructional materials and trained master trainers and teachers to use the materials and to teach the methodologies necessary to teach the program.

Classroom teachers were surveyed by the cadre to identify areas of concern. The writers then began the task of classifying national curriculum objectives and writing measurable instructional performance objectives for Kachi, first, second, and third grades in the subject areas of Urdu, Pashto, math, and science.

The initial materials development was for the Kachi (kindergarten) classes. Three sets of instructional materials were developed including: (1) beginning Urdu reading, writing, and comprehension materials; (2) beginning Math/Science materials in Urdu medium; and (3) beginning Pashto reading, writing and comprehension materials.

The sites selected for the field testing were diverse in locations, population and cultures. Schools were randomly selected by sampling design, and training was given by the IMDC staff and ASDEOs.

The objectives of the field testing program were to identify areas of the program that: (1) taught the objectives developed for the Kachi class in Urdu, Pashto, and math/science skills; (2) provided the teacher with help in effectively teaching children; (3) related to an environment known to children; and (4) incorporated an interactive teaching methodology.

The training of classroom teachers in presenting and teaching the Kachi material was an important part of the workshops. The first group of teachers was trained by the IMDC staff while the second group of teachers was

trained by ASDEOs at a central point when the materials were delivered. In both instances, teachers knew that there would be monitoring of materials with achievement testing scheduled at the end of six weeks.

7.3.3 Current Status

Testing of materials has continued with evaluations and revisions. The materials have been approved by the Curriculum Wing and Kachi materials are now ready for use by all schools in NWFP in September, 1993. In addition, instructional materials for first grade (Pakki) are developed, field tested in experimental classes and ready for pilot testing in 600 schools beginning in May, 1993.

In addition, developmental work has begun on new instructional materials for multi-grade classrooms, of which there are many. The training component for teachers will be critical to the success of this program.

There have been significant developments in the program. However, the sustainability of the program is of concern since much of program's success can be traced directly to the visible and effective leadership of the PED Technical Assistant who is without a national counterpart. The cadre members who were interviewed all expressed concern for the program's future in the absence of a trained counterpart to continue leadership and guidance.

7.3.4 Interactive Radio Instruction (IRI)

The English instruction in government schools in NWFP has been under scrutiny because the level of difficulty of instructional materials is formidable for teachers' use and hard for students to understand. Many teachers are weak in English usage and the English they teach is poorly pronounced.

An interactive radio instruction program which has been effective in teaching English in Kenya is being adapted to the Pakistani context to determine its viability as an alternative to the written instructional materials used in the current program.

7.3.4.1 Program Development

The IRI program consists of a series of 18 minute radio broadcasts to teach English to primary school children. The scripts, though similar to those used in Kenya, are adapted to the Pakistani context and utilize objectives that match the English curriculum objectives in Pakistan.

IRI is an integrated approach to teaching English. The primary component is the series of radio programs that are broadcast to the children. The second component is the teacher support system which includes initial training, teacher's guide, supervision, and finally, teacher-led activities that follow the radio broadcasts.

The IRI Department of the IMDC is a well organized productive area. The producers were eager to share their work and discuss plans for starting the program in September. The script writer was adapting material for Pakistani children and the writers were planning teacher training. During the onsite visit, tapes were played that are to be aired in the fall. The tapes were clear and easy to understand. With little direction, a classroom teacher could follow the tapes and instruct students in the appropriate activities.

The Department also had a video tape of a classroom where students were listening to an IRI tape. The students were following directions of "Stand up" and "Sit down." They were enjoying the activity and when asked to verbally respond to directions they were quick to do so. The teacher was visible and supportive but was not the main focus of the lesson. The process seemed to go smoothly and students appeared to be learning.

The program calls for 300 radios with batteries to be distributed to the schools. Concern was expressed about security of these radios which will need to be addressed in teacher training sessions and by DEOs. If teaching English is a priority, then care will be taken to secure the radios, but it is unwise to think that there will not be some loss.

Thirty lessons are ready for the fall. The department is planning six lessons a week with 120 lessons to be completed. The department is enthusiastic about the reception to their program. The IRI is an example of a cooperative effort of Pakistan Broadcasting, the PED Program, the DPE, and talented teachers and administrators working together.

7.3.5 Summary of Findings and Recommendations

The IMDC represents a powerful educational success that should be nurtured and replicated. The IMDC's instructional materials development program has been well planned and implemented. The establishment of the IMDC in the Directorate of Primary Education reinforces the critical linkage of the DPE between and among PED, the federal agencies and donor agencies. The probability of sustaining the program will be enhanced by continued training of permanent IMDC staff and especially a PED TA counterpart to carry on the work after the PED close out.

1. Every effort should be made to assure the immediate assignment of a TA counterpart to be trained during the final year of the program.

2. With its designation as a "Cell", the BIMDTC has been accepted, but is not a sanctioned post with a "Schedule of New Expenditures" (SNE) assigned to it. As such, the Cell is actively creating instructional materials that will impact children of Balochistan but it has not been given the organizational status to assure its continued leadership. It is recommended that every effort be made for BIMDTC be assigned SNEs within the next twelve months.

3. In an effort to coordinate the training of teachers in the methodologies required by the new instructional materials, it is recommended that the curriculum and teacher training Cell and the BIMDTC be housed together and we recommend that the Government of Balochistan acquire the present facility to accommodate both training and curriculum offices.

There are several very positive aspects of this program that should be used as a basis to further determine the sustainability of the process and the program:

(a) The concentrated effort to coordinate the instructional materials cell with both the Textbook Board and the Bureau of Curriculum;

(b) The continued and expanded use of technology should be a key part of future development as it serves and enhances the BIMDTC pool of creative talent without limiting or directing the development of instructional materials of value to teaching and learning in the classroom.

(c) The BIMDTC plays a critical role in the in-service training of teachers; the development of instructional materials linked to classroom teaching and to the training of effective teachers needs to continue.

A critical note needs to be sounded. There must be linkage with the teacher training colleges. It is necessary that pre-service teachers be trained in methodologies to know and practice techniques that support the interactive approach required by the new instructional materials.

8. Teacher Supply and Training

Diverse and innovative activities have been undertaken to increase the supply, training and supervision of teachers. In Balochistan the Three-Month Crash Training Program and Mobile Teacher Training Project were developed as an alternative approach to recruiting and training teachers, especially women in the rural areas.

Primary School Teacher Supply and Training

	NWFP			Balochistan		
	90/91	91/92	92/93	90/91	91/92	92/93
Supply of Teachers						
Male	28731	31793	36657	12200	12473	13428
Female	9820	9691	11978	531	563	634
% Certified						
Male	70%	74%	72%	44%	48%	76%
Female	64%	70%	71%	49%	53%	68%
No. trained						
Mobile Female Teach Train (Balochistan)				86	250	120

8.1 Balochistan Teacher Supply and Training

A 1991 study on teacher supply in Pakistan, reported that the Government of Balochistan's Primary Education Program (PED) goal was to increase female primary enrollment by 220% and male primary enrollment by 150% by the year 1999. The study analyzed teacher requirements for: (1) the supply of qualified individuals adequate to meet projected requirements for teachers in the future; (2) availability in locations where they are needed; and (3) the adequacy of teacher training capacity to meet training requirements for the future.

The study reported that the province would require approximately 1800 additional female teachers and 2000 male teachers by 1999, taking into account the redistribution of teachers already in the system. In real numbers, this amounted to a 110% increase in the number of female teachers compared to a 16% for male teachers. The new posts for female teachers would be required in all districts of the Province, especially in urban and rural areas.

Prior to 1970 there were only 500 primary schools, but after Balochistan became a province in 1970, there was a rapid expansion of primary education. By 1972, 120 teachers were enrolled in teacher training institutions with 300 to 500 teachers appointed yearly. With each teacher training institution having a very low number of fixed seats for students, the traditional method of training teachers was not a viable option. By 1990 there were 8000 untrained teachers in position and the challenge was not only to train the teachers needed by 1999, but to develop a program that would immediately clear the backlog of untrained teachers currently in position.

8.1.1 Program Development *Crash Program*

The Crash Teacher Training program was developed as an intensive 3 month training program with the result that, upon successful completion of the course, the teacher is equal to a teacher trained for 9 months. Untrained teachers, nominated by their District Education Officers, and working on a regular basis are eligible for the program. The training is held during the vacation periods alternating in the north and south. Teachers attend the program at their own expense often living in hostels or they bring their bedding and stay in the classrooms.

The program is conducted by master trainers, usually males who are high school teachers. However, the program targets trainees who are primary teachers and usually female. The female teachers in the training who were taught by male trainers of their same community expressed concerns about this arrangement. Also, the high school teachers tended to express high degrees of interest in subject matter content and stressed the importance of mastering the subject matter. This secondary education preoccupation with subject matter mastery takes precedence over the process of interactive teaching and gauging instruction to the needs of the individual student that is required to teach at the primary school level.

The course and subject offerings of the Crash program appear to be all inclusive from the History of Education in Pakistan to Essential Hygiene Diets. Included are the survival skills of time tabling, multi-level teaching, and time periods. The weakness of any program compressed into a short time frame leaves little or no time for learning about child growth and development, learning patterns of children, or alternative teaching strategies for special students.

The Crash program is an ambitious attempt to train 8000 teachers by 1994. It appears that the program will meet that target. Upon successful completion of the program, the teachers are awarded a Primary Teachers Alternative Certificate (PTAC). Whereas the Primary Teachers Certificate (PTC) is valid throughout Pakistan, the PTAC is valid only in Balochistan. However, the reward is that teachers have been supported through the program, are now trained, and have received a PTAC Certificate that is equivalent to the PTC Certificate for all service and monetary benefits.

Mobile Teacher Training Program

The PED Program is specifically concerned with improving girls' access to primary schools, and, in particular, improving participation of village girls in school. With 80% of the population of Balochistan scattered in small remote villages, the lack of communication between and among villages, and conservative tribal traditions, the problem of access is compounded. There have been shortages and often non-availability of female primary teachers in these remote and far flung areas. Female teachers trained in the teacher training institutions have not been eager to move to an unknown remote village to teach. However, through the Human Resource Survey conducted by PED, it was found that middle or matric pass girls were available in villages and were willing to teach in their own villages.

The Mobile Female Teacher Training Program (MFTTP) is designed as a 3 month curricular program for middle pass or Matric trainees in the villages. The program offerings are similar to the Crash Program with an added emphasis on instructional and teacher made materials.

The reality is that there are relatively few Matric trainees in the villages and that most trainees will be middle pass. One requirement of the program is that the middle pass trainees must not only complete the MFTTP but also pass the Matric in order to be awarded the PTAC. This is possible through independent work, informal tutoring, working with elders, Iqbal Open University or through distance education. Since the teacher trainees are released for a half day to get their paychecks, it is suggested that the time be increased to a whole day. The teachers could meet in the morning for a regular training session either to assist with problems encountered in their teaching role or as an advisory session on their work toward receiving their Matric certificate.

Next Steps

An intensive program to assure PTC training for untrained teachers will be continued as well as the implementation of a field support program for teachers in position. The major thrust will be the development of pre-service and in-service activities. Balochistan will participate in the AIOU matric programs for women and coordination of activities will occur as a result of this cooperative effort.

The recognition of exemplary teachers and the encouragement of teachers' professional growth and development are areas that have merit and are often overlooked. Plans are to develop and implement policies that provide incentives and promotion.

8.1.2 Community Schools Experimental Program

There are many areas in Balochistan where roads are nearly inaccessible, villages are remote, communication is difficult and isolated conditions have forced the communities to depend on their own resources and family systems. The PED Program in Balochistan has initiated a small innovative educational program that supports community schools with a major goal of increasing access to education for girls. Through involvement with these remote communities a partnership has been developed in the planning and implementation of the Community School program. This is a vision that resulted in a planned program, has wide community support, and is growing.

Program Development

Community schools are a partnership with parents in the community to open girls primary schools in rural areas. Studies done previously showed that the lack of education for girls was largely due to parents not wanting their daughters to go to school. Following surveys about access of girls to education and meetings of the school community promoters with community leaders, it was found that a majority of parents were interested in education for their girls and the community committed to the development of a school.

This partnership between the community's village committee and the government has responsibilities for both. For example, the village committee assesses the number of girls going to school, provides the assurance that land and building are available for the school, monitors the progress of the teacher, ensures that the school stays open, and protects the teacher and the families who send their girls to school. The education department appoints a teacher, sanctions the post, and provides a budget with the understanding that after successful operation for 3 years, the village is eligible for a government built school.

One of the major problems has been in the staffing of schools in remote and far flung areas. After several attempts to secure females to teach in the rural areas a plan was devised to recruit middle or matric pass girls who live in the community. After successfully completing a written test on math's, Urdu reading, writing, and conversation and verification of her residency in the village, the girl is given a 3 month training course through the Mobile Teacher Training Program. Following the completion of the training, successful teaching, and completion of matric pass, the teacher is awarded a Primary Teaching Alternative Certificate (PTAC).

The pilot program in Zhob Division was successful and 22 new girls' schools from the MTTP and Community Support Program were opened. There are 800 girls enrolled mostly in Kachi and Pakki grades. This experiment is now being expanded into other divisions. As of April 15, 1993, 80 rural female schools with local teachers and active community committees sanctioned and operational.

8.2 Teacher Training: North West Frontier Province

8.2.1 Background

Extensive research, study, and planning have gone into assessments and recommendations for improved teacher training programs. These studies range from the inadequacy of teacher trainers to the quality of candidates entering the profession. When compounded by the results of the Teacher Content Knowledge tests, the result is a current need for a massive program to upgrade the profession through training and support.

Under the control of the Curriculum Bureau, the Government Colleges of Elementary Teaching (GCET) have the major responsibility for training teachers in the NWFP. A recent report cited five areas of major concern:

1. Management and Organization (centralized control, unclear statements of purpose and duties, lack of incentives, inadequate transportation budget, inadequate number of graduates, little connection between in-service and pre-service training);
2. Faculty and Students in the GCETs (female children and remote area students not well served, staff under-utilized, no career ladder, student intent not based on merit);
3. Courses and Curriculum (training mechanical and repetitive, instructional technique focuses on rote memory, unclear design or plan for courses, outdated textbooks and teaching materials, no course evaluation);
4. Educational Materials and Equipment (library and AV inadequate and largely unused);
5. Physical Plant (poor facilities and condition of buildings, need more hostel and classroom space, no teacher in-service training centers).

In an effort to determine the qualifications of teachers in the profession, a Study of Teachers' Content Knowledge was administered to a sample of teachers with up to 15 to 20 years of experience and a sample of trainees at the beginning and at the end of their one year primary school teaching certificate training.

The tests were fifth grade tests in math, science, and Urdu and the results indicated that a majority of the trainees scored less than 50 on the 100 point test at the beginning of their training, and there was no improvement at the end of the training even though half of the trainees' time was spent in content areas. Even more revealing was the fact that the experienced teachers fared no better on the test than the teacher trainees.

8.2.2 Program Development

Curriculum Bureau

A major commitment to the reform of teacher training was the re-organization of the Curriculum Bureau. The Bureau is responsible for supervising all 17 primary teacher training colleges, introducing curriculum innovations grades 1 through 12, conduct research in curriculum, and oversee in-service and pre-service training. These tasks have been accomplished with a staff of 6 whose office is in Abbottabad, 180 kilometers from Peshawar.

Distance has contributed to a lack of communication and coordination of programs and utilization of personnel. This has led to a re-organization of the Bureau with a branch office opening in Peshawar and an increase in personnel of 12 new posts making the Bureau adequately staffed and financed. In a meeting with the Curriculum Bureau, the members were candid and realistic about their roles in the re-organization and the charge to develop programs to improve primary education. To support the Bureau in the re-organization, program development, and implementation, a Committee to Strengthen the Curriculum Bureau has been established to develop specific details of plans and procedures to accomplish the tasks.

The Education Extension Center, an arm of the Bureau, is developing Reorientation Courses (ROC) for trained teachers. The courses will last from 3 to 4 weeks and conducted at educational centers. Although still in various stages of planning, the following courses and programs are being developed:

- Teaching Pashto to primary school students
- Training in the use of Teaching Kits
- Guidebooks for curriculum development
- Integrated texts in Urdu
- Material development in alphabetic and phonetic
- Integrated teaching
- Teaching of English to primary students
- Scope and sequence of learning activities

To support the re-organization and coordination with other agencies, Bureau representatives will be on a study tour of schools and agencies in both the United States and Asia.

8.2.3 Teacher Training

Approximately one third of NWFP's 45,664 primary teachers are untrained (teaching without a PTC certificate). The Directorate of Primary Education has contracted with Allama Iqbal Open University (AIOU) to train teachers without PTCs through AIOU's distance program. This arrangement is ongoing to assist teachers with securing the certificate. However, to participate in the program the teachers must be in close proximity to one another to allow them to attend the small group sessions required in the program. This provides a hardship for female teachers who lack transportation and mobility.

In-service training is being organized under the auspices of the Curriculum Bureau/Education Extension Center with support from PED on development of course content and learning activities. Although specific course offerings will be based on the needs and perceived weaknesses of the participants, the following 11 Effective Teaching Practices have been identified as critical to successful teaching:

1. Setting a framework for the lesson
2. Revision (review) of relevant past learning
3. Presenting content in small, logically connected, sequential steps
4. Student practice guided by the teacher
5. Independent student practice
6. Giving, correcting and returning homework
7. Using varied materials and teaching techniques
8. Spending school time on learning
9. Giving students clear, frequent and honest feedback
10. Creating an orderly environment and clear rules for behavior
11. Building student confidence and the ability to learn independently

Supporting these teaching practices are 9 Generic Teaching Skills, for example:

1. Motivating students to learn
2. Treating students as individuals
3. Teaching students independent thinking and higher level thinking skills
4. Effective classroom management
5. Teaching more than one class at the same time
6. Teaching pre-school or kachi classes'

7. Teaching problem solving techniques
8. Teaching methods of concept formation
9. Providing active learning experiences

Handouts have been developed for each of the Effective Teaching Practices and the Generic Teaching Skills. These handouts list effective teaching practices and describe the relationship of good teaching activities to teaching, home, or community experience. The handouts are written for trainers to be able to elicit discussion and usable teaching techniques from the teachers, however no formal assessment has been made of the materials. As pre-service courses are developed, the use of the Effective Teaching Practices and Generic Teaching Skills should be assessed. Each is based on solid research and development and provides a departure point to program development which should be carefully monitored.

8.2.4 Conclusions and Recommendations

The re-organization of the Curriculum Bureau is a commendable activity, and the efforts to coordinate the activities of the Bureau, Textbook Board, the Directorate, and the PED office should have the desired impact of improving primary education in NWFP.

Future planning needs to more fully address the education of girls, especially in remote and far flung areas. NWFP has already introduced the concept of community schools where middle pass or females from the village can be supported as teachers.

Much planning and teacher training content has been developed in NWFP. The task is now to deliver the program to both pre-service and in-service teachers. This is a high priority area as plans for the coming year are being developed. There is a beginning but sustainability will only come with implementation.

Counterpart development, whether in the Directorate or in the Cells of the PED Program, needs to be nurtured in order to decentralize the program and develop feelings of ownership in Pakistani counterparts.

Teacher training needs the financial support to transport students to their practice teaching but also to assure that the GCET instructors are in the field monitoring the practice teaching activity on a regular basis.

8.3 Teacher Supervision - Learning Coordinators

The position description for the Learning Coordinator (LC) in both provinces is similar. It describes the major role of the LC as a provider of instructional supervision to primary teachers so that they are able to improve their professional skills. However, in many instances the LC position is seen as a "Junior Inspector," and in interviews, LCs remarked that rather than supporting and helping teachers in methodology and content their main tasks are administrative and "file work."

In our sessions, DEOs and SDEOs spoke of their heavy workloads. They felt they needed the assistance of the LCs to complete required tasks. In addition to their administrative duties, the DEOs and SDEOs also were charged with visiting schools, meeting with community leaders, and supervising teachers. There is no question that these people have many tasks to do; the DEOs, SDEOs and the LCs all understood the problems and were seeking solutions.

The LCs spoke about their main role and the importance they attached to the supervision of teachers. This becomes more significant when a trained professional plays a supportive role in the supervision of teachers located in remote areas. Usually these teachers are trained in a brief preparatory course on teaching and a trained professional can play a positive supervisory role. A common concern was the large number of schools assigned to LCs which made it difficult to supervise all the teachers. Some of the female LCs spoke of the added problem of transport to get to the schools. When they had to use public transport, they usually asked a relative or friend to accompany them for safety.

The LCs felt that their supervisory responsibilities were important and that constant support of a teacher often provides necessary professional encouragement. However, the shift in the development of instructional materials from a program of rote learning, copying, and teacher direction to an interactive program where students are working more independently requires new teaching techniques as well as different supervisory methods. This will necessitate additional training for the LCs to assist teachers with learning how to teach new materials.

There are other areas where teachers need assistance. One is in the area of multi-level teaching. Especially in remote and far flung areas, teachers will have several grade level classes in one room. They need assistance with teaching several groups at the same time. Lesson planning, classroom management, and pacing of subject matter is important in these classes. A trained LC can provide assistance in these areas.

Recommendations

1. Develop job descriptions for LCs that appropriately identify their roles and responsibilities
2. Training should be provided by the Instructional Materials Cells and the Curriculum Bureaus in the methodologies of teaching the new materials
3. Training should be provided the LCs on growth-oriented clinical supervision techniques
4. Following initial training, LCs should conduct workshops for teams of classroom teachers and head teachers in their area with emphasis on methodologies of teaching new materials and clinical supervision.
5. Transportation is a critical factor and must be made available for the LCs to do their job. Transportation must be provided that is safe and available.

9. Primary School Facilities and Construction

9.1 Introduction

Private contractors were to be used to design, construct, and equip new primary schools and related structures, based upon criteria mutually developed and agreed upon with AID, to accommodate expanded enrollments. Funds were budgeted and expended for the maintenance of existing and new buildings. The Education Department was to establish with AID a set of mutually agreed upon criteria for design and construction of all buildings.

Targets on construction and outcomes as of 1992-93 are shown below:

Primary School Facilities and Construction Progress

Facilities	NWFP			Balochistan		
	Base 88/89	Target	92/93	Base 88/89	Target	92/93
Total No. in Operation						
Girls (000s)	2533	-	3752	515	1050	634
Boys (000s)	6025	-	7643	3091	4050	3868
Schools with Buildings						
Percent Boys'	59%	96%	95%	36%	80%	60%
Percent Girls'	71%	94%	79%	20%	70%	47.5%
Construction Progress (Annual Target/Percent Completed)						
Year	90/91	91/92	92/93	90/91	91/92	92/93
New schools	586	484/75	1457	129/100	235/100	60/0%
Additional classrooms	na	2684/90	2509	716/100	1753/100	140%

9.2 Balochistan

9.2.1 Construction of Education Buildings by Directorate of Civil Works

All the development works in the Province of Balochistan are generally undertaken and maintained by the Communication and Works (C&W) Department. The C&W's priorities for infrastructure development and civil works construction depended upon nature, importance and size of the project. The construction of school buildings, because of the small size of individual buildings, was relegated to a secondary position by C&W. Hence, provincial Ministry of Education instituted a Directorate of Civil Works (DCW) under its own administrative control.

9.2.2 Present set up of DCW (Directorate of Civil Works)

The DCW is comprised of the following staff positions: a director/chief engineer, three executive engineers, sixteen sub-division officers, and forty sub-engineers.

DCW is responsible for execution of all academic buildings falling within the purview of the Ministry of Education. Until recently, almost all the engineers in the DCW were borrowed from C&W. Hence DCW inherited all the drawbacks with which its parent department C&W was infested. The DCW is a "mini C&W"; hence the

creation of DCW within Education Department increased the control of the department over construction but it certainly did not result in more efficient organization.

9.2.3 Building Construction

The PED Program is addressing a hoard of inappropriate construction practices resulting in slow progress and poor quality that not only reduces the life of building but it also increases maintenance costs, including:

- Incomplete drawings and specifications.
- No proper system for long term planning depending upon increase or decrease of work load for optimum utilization of available resources and manpower.
- Inequitable tender documents that mostly express the rights of the owner and obligations of the contractor.
- Inadequate procedure for selection of contractors.
- There is no provision for compensating the contractor for delays in payments.
- There is no escalation clause even for increase in wages and prices resulting from changes in the legislation.
- There is no clause for independent arbitration in case of disputes.
- Inequitable contract administration.
- Most of the staff responsible for contract administration are not familiar with construction planning, scheduling, monitoring and progress reporting and other aspects of the construction management.

9.2.4 Building Maintenance

There is no planned and comprehensive monitoring system for maintenance. Repair and maintenance is carried out by DCW only when requested by the users and even then subject to availability of funds from education departments. There is no inventory of buildings indicating location, name of school, details of space/rooms, time and type of repairs carried out, etc. There is no maintenance in accordance with the recommended maintenance schedule generally followed by some government agencies: white washing or color washing (after 1 year), gobri leeping roof (after 1 year), white washing ceiling (after 2 years) painting wood work (after 3 years), polishing wood work (after 3 years), and thatching (after 3 years).

9.2.5 Construction Management by Private Sector

In order to overcome lacunae, loopholes, and shortcomings, described above, the services of Architectural/Engineering firm were hired on December 05, 1991, for three years on an annually renewable contract. The agreement has recently been extended for the second year. The first year of A/E's performance was a period of turmoil and turbulence as the take over of supervision of buildings in progress from DCW was an uphill task. The firm hired the staff but many were unwilling to stay in far-flung areas and in a province of its own peculiar socio-political system. The consultants were perpetually learning and familiarizing themselves with the local environment, working conditions, and training and wooing their own engineers. The A/E firm has slowly but steadily controlled its problems and, in the meantime, developed good documentation necessary for survival and successful implementation of any system. Hence the A/E firm has had constantly to fight for their existence against outside pressures and opposition.

Quality

Due to shortage of time, only a few buildings in Quetta, Loralai, Qalat and Sibi Division were visited. The quality of Elementary College for Women in Quetta and Government Middle School, Cheena, Ziarat is excellent, while the buildings in other divisions/districts are reasonably finished with a few exceptions in Qalat Division.

Volume

During fiscal years, 1989-90 to 1990-91, construction contracts of 20 middle schools, 70 shelterless primary schools, 203 additional rooms, a warehouse, and an elementary college were awarded at a total cost of about Rs. 147 million. Against this, payments of about Rs. 32 million were made. Thus, payment was about 21 percent of the total contract amount, indicating that the project moved very slowly from 1989 to 1991.

Construction management by the A/E firm had a visible impact upon progress of the program. During fiscal year, 1991-92, the building construction and maintenance contracts were awarded at the cost of about Rs. 77 million whereas payments to the tune of Rs. 145 million were made, indicating that the program moved much faster in 1991-92 and speedy completion of buildings started during 1989 to 1991 as well as of the buildings started later.

9.2.6 Financial Resource Utilization

The total contracted amount for construction of school buildings and repair and maintenance of 250 schools from 1989 to 1992 was about Rs. 224 million against which payments of Rs. 177 million have been made to contractors. Thus, the utilization is 79 percent of the contracted amount and is appreciable.

The cost estimates for work worth about Rs. 105 million, during 1992-93, including construction of 30 middle schools, 60 shelterless primary school buildings, repair and maintenance of 200 schools, are ready. All sites have been approved by the Chief Minister but works have not started due to non-availability of funds for the year 1992-93. Release of funds without further delay is essential for effective implementation of the 1992-93 program.

9.2.7 Leading Steps Taken by A/E firm to Improve Construction Management

Criteria for Site Selection: Generally, the site selection for construction of a new school is considered the prerogative of the members of the provincial assemblies (MPAs), irrespective of the need for establishment of a school at a specific location. Also, no consideration was given to physical factors such as accessibility, sub-soil conditions, land configuration, topographical conditions, utility services environments, walking distances for kids, and, above all, safety. Consultants have prepared a comprehensive report on criteria for site selection. If site is selected according to parameters fixed by consultants, it would go a long way to improve quality of construction.

Proper Design and Drawings of School Buildings: The Consultants have prepared five sets of designs and drawings for school buildings to be built throughout Balochistan. The designs have been made according to divergent and diversified climatic conditions. Due consideration has been given to the height and the roof type according to different environmental conditions of the province. Proper design and drawings lead to quality construction and ultimately reduces cost. If design and drawings are defective, the contractor bids excessively to cover the inherent risks in such construction.

Appropriate Tender Documents: The A/E firm has prepared tender documents in accordance with FIDIC guidelines. The documents have been vetted by the legal department. Almost all the previous tender documents were unilateral and imbalanced and could be used as safe vehicles for misappropriation. The new tender documents, however, are equitable, balanced and would certainly add to improved bidding process.

Prequalification Criteria: The A/E firm, in consultation with USAID Project Engineer has developed a set of prequalification criteria for construction contractors. The criteria have been based on minimum requirements keeping in view the quality of contractors available in the province and the tribal system of the Province. A good contractor vitally contributes to quality and timely completion of the project.

Evaluation of Contractor's Performance: The A/E firm has prepared a report on contractors' evaluation in regard to the performance on construction of shelterless schools and additional class rooms, capabilities, and a minimum number of tools and plants owned. The contractors have been divided into four categories i.e., A (best), B (good), C (average), and D (not to be considered) and the DCW now issues the tender documents only to those firms with a history of satisfactory performance.

Report Formats and Feedback System: The A/E firm has established excellent proforma to get feedback from the site engineer. Accurate communication of up to date data and feedback between Project and Site offices is necessary to produce correct regular physical and financial status reports.

Although these reports cannot present absolute monthly positions, when studied over a few months trends can be detected for indications of special difficulties that can be expected of a particular activity or project. A constant comparison with the initial control estimate will allow adjustment or corrective actions taken and also reveal the lessons which should be learned and applied to future buildings.

Monitoring System: The A/E firm must keep a tight and regular monitoring system on the works at the job site as well as in project-office. Any slackness in this can throw this operational scheduling out of gear, the contractors could get relaxed, the quality and quantity is very likely to decline. The need for strict and workman like supervision, with almost a military discipline, is almost an absolute necessity at work sites. The monitoring system developed by A/E is far more superior than that of any Government agency and is yielding good results. The flexibility of increasing and decreasing manpower according to work loads is available only with the private organizations; government establishments essentially do not have this flexibility.

Excellent Documentation: Good documentation substantially contributes towards an effective implementation of any program. It will be unjust not to mention the commendable following documents prepared by the consultants which are beyond the capabilities of any routine government departments. They include: multi-grade class room design; implementation plan - new construction (1992-93); EC/BPESCP/SE/01, standard cost estimates April, 1993; progress report for period ending 28-02-1993 (EC/PR/EDR-BAL/93/02); criteria for site selection; evaluation of performance constructors/contractors; and packaging/grouping works to attract good contractors.

9.2.8 Maintenance and Repair of Buildings by A/E firm

The cost estimates for repair and maintenance of buildings are prepared by consultants after carrying out survey of buildings to be repaired. The costs estimates are according to the actual need of repairs. Contracts to the tune of Rs. 25 million were awarded during 1991-92 for repairs and maintenance of 250 schools and the work is in progress. The estimates are ready for Rs. 20 millions worth repair and maintenance works of 250 schools during 1992-93 but work could not be started due to non availability of funds. This indicates that 450 schools will be maintained and repaired at the cost of Rs. 45.00 million i.e., one school at the cost of Rs. 0.10 millions. There are a few reservations on repairs and maintenance which will be highlighted under findings and recommendations. However, services of A/E firm may be kept intact even during repairing and maintenance of buildings, i.e., carrying-out site survey, preparation of cost estimates and finally supervising the repair and maintenance phase. This is essentially required to avoid wasteful expenditure on repairs.

9.2.9 Construction of Building for Primary Education Directorate

The Directorate of Primary Education has purchased a plot for construction of its Headquarters. This is a matter of great comfort that Directorate would have its own shelter.

As many as 46 A/E firms have shown interest in planning and designing of the building of the Directorate. It is proposed that out of 46 interested A/E firms, only five or six well-known firms may be selected for soliciting technical proposals in the first instance. After evaluation and ranking of technical proposals, the financial proposal may be asked for. In my opinion, USAID's engineering staff on the program is quite competent to advise and help Primary Education Directorate during this phase. Selection of good consultants even at higher initial cost would be beneficial in the long run. Sound consultancy is the very basis for sound construction.

9.3 NWFP

9.3.1 Background

In NWFP, Communication & Works (C&W) department is mainly responsible for the execution of all developmental works. As explained by Mr. Abdul Qayyum, Chief Engineer C&W, during a courtesy visit to his office on April 27, 1993, C&W have in its basket a peculiar set of problems such as under-staffing as compared to the load of work, insufficient mobility, no opportunity for on-job training and improvement of education. According to Mr. Qayyum the annual development budget of C&W is about Rs. 3 billions and the successful accomplishment is only possible when the present staff strength is at least doubled and mobility is also enhanced proportionately.

He strongly advocated the re-organization of C&W into two independent departments such as roads and buildings, and creation of separate contract, designing & planning and implementation cells under respective departments. This would have an added advantage for the field engineers to give them more time for quality assurance and timely completion of the projects. Currently all phases of the project, such as contracting designing & planning and execution are looked after by field engineers.

Chief engineer was also enthusiastic to get his junior engineers, sub-divisional officers and sub engineers trained in PC1 preparation, site surveying, quality control, monitoring of projects and senior engineers, executive engineers and above, in the field of contract administration and construction management. During this age of specialization, he emphasized improvement of education during service because presently, the maximum technical education level of engineers in C&W is B.Sc Civil Engineering. Computer technology, being a need of the time, has yet to be introduced in C&W. According to Chief Engineer, whatever defects in quality and workmanship were observed during field inspection can be mainly and conveniently attributed to above ailment and deficiencies prevalent in C&W Department.

9.3.2 Construction of School Buildings by C&W Departments - Shortcomings of the System

Excessive Load of Work: As explained in preceding paragraphs, communication and works department is enormously overloaded with other developmental works within the province. The construction of a new two classroom building or addition of one classroom to an existing building did not carry much importance as attached to other projects of national priority.

Planning & Designing: The planning of primary schools in the province is primarily the function of the Primary Education Directorate according to the need of each district based on the population of primary school age (5 to 9 years) group. C&W has been constructing school buildings according to the typical design prepared by the department many years ago without giving any consideration to environmental conditions of location and availability of local materials. The specified design of a school building includes two rooms (each of 25' x 26') with a front veranda (25' x 9'). Provisions exist for construction of boundary walls and toilets for female schools but not for male schools. The buildings are oriented according to the shape of a piece of land and available access rather than wind and sun.

Drawings & Specifications: The specifications are a part of the contract documents that define the qualitative requirements of a project that is to be built. The specifications are generally defined as a detailed description requirements, dimensions, materials etc., as of a proposed building, machine, bridge and further as the act of making specific. The role of the drawings is to define the geometry of a project, including dimensions, forms and details. The specifications are intended to complement this by defining the nature of materials that are to be used and the description of the workmanship and the procedures to be followed in constructing the project. The contract drawings lack such information as the following: structural details of beams, lintels, roof slab; elevation of the buildings; detail of windows and iron mongry; lighting and fan points; reinforcement details; and concrete and steel specifications.

The details should be an essential part of bid documents and are to be understood by contractors for quoting rates and by supervisors by proper execution of the job. Currently, the contractors quote rates on the basis of Bill of Quantity prepared by C&W on basis of a percentage above or below the estimated cost.

System of Tendering: C&W department has a schedule of rates, on the basis of which the contractors are required to quote a percentage. The schedule of rate brings a certain amount of standardization and uniformity in terms of Bill of Quantities (BOQ) and specifications, but the system has its own drawbacks. These schedules are normally made on all province/Pakistan basis. Problems arise while tendering in some parts of the Province/Pakistan. These are not updated regularly. Generally the contractors are required to quote the same percentage for all items of BOQs, irrespective of varying rate difference.

Enlistment of Contractors: Contractors are enlisted in different categories depending upon the size of the project and capabilities of the contractor. The contractors are never evaluated on basis of their performance. The contractors showing poor performance should have been removed from the list, while the category of contractors

showing better performance should have been updated. This would be a punishment for bad performance and an incentive for good performance but evaluation performance has never been and is never a practice in the department.

Tender Documents: The tender documents are generally sketchy. They do not give details of specifications, BOQs, and the drawings. Quite often, the contractors are not issued the documents but are asked to examine these in the employer's office before submitting their bids. Inequitable tender documents are by far the most serious constraint with our construction industry.

Awarding the work to the lowest bidders: The lowest bid may be much below the engineer estimated cost. There are frequent instances when contractors submit an unworkable low bid just to get the job. Later, unfair means are employed to enhance the bid by filing unjustified claims or compromising on the specifications. If the contractor is not fortunate enough to get the change for enhancing a bid through unjustified claims or by playing with specifications the project would surely be left incomplete. A recommendation, on merit, of a workable bid which is not the lowest, runs the risk of being labelled as favoring a contractor and, therefore, audit observations which every engineer tries to avoid.

Inequitable tender documents, no escalation clause, indeterminate clauses and no arbitration clause are some of major constraints which are very detrimental to the growth of construction industry and above all to the growth of good contractors.

Variation Limit: The contract documents do not include a variation limit specifying to what extent the work can increase or decrease in relation to tendered price. This is normally 15-20%. Beyond this limit, the rates are required to be negotiated. This limit is often not specified and if indicated the contractors are asked to carry out with the work at the same rates even beyond the variation limit.

Flexibility: C&W does not enjoy the freedom of action within its domain to increase and decrease the manpower according to work load, hence it ultimately leads to wastage of resources.

Project Progress control and monitoring: It is essential to program, plan and monitor the actual work progress by setting target dates and employing means to meet them. There exists no system to monitor the progress. Most of staff responsible for construction management is not acquainted with planning and monitoring techniques; even a simple bar chart is never prepared.

Performance of C&W: The information has been extracted from Annual Workplan for Primary Education, NWFP, fiscal year 1989-90 under the head construction management. This was a sufficient indicator for C&W performance and immediate need for hiring a private A/E firm for undertaking the responsibility of construction management. According to the report presently C&W is entirely responsible for the planning and designing, construction supervision of physical facilities for Primary Education. Furthermore C&W often requires over a year to complete the construction of a two-room school. Finally it was proposed that the entire construction program including planning, designing, supervision and maintenance should be entrusted to the private sector. If the action had been initiated outright at that time to hire a private A/E, the Civil Work Component would have moved much faster—qualitatively as well as quantitatively.

Building Maintenance: Due to lack of interest and limited understanding of proper operation and maintenance, many good facilities rapidly deteriorate. The fault lies with owners, planners and managers who neglect to consider operation and maintenance as an important part of total operating budget. Since there is no well defined and established maintenance system, the allocated funds are easily usurped. A better operation and maintenance system requires an organization capable of preventive, corrective and emergency work on all parts of physical facilities. Finally it requires a sufficient financial budget to support the system. There exists no organized and planned monitoring system for repair and maintenance of physical facilities. Inventories of school buildings are never prepared.

9.3.3 Field Inspection

Within the available time, most of the school buildings were inspected before application of the cosmetics, i.e., plaster and paint. These buildings contain several structural as well as workmanship defects which will be highlighted in the forth coming paragraphs under "Defects and Deficiencies". The female hostels near completion at Peshawar, Dargai, Khawaza Khela are beset with typical defects and faults. The quality of school buildings at

Khaishki, primary school for boys at Azimabad, upgrade of Middle School at Rashakai and the upgrade of Govt. Girls School at Risalpur is generally acceptable.

9.3.4 Details of Defects and Faults

Steel bars were exposed to eye. There was no adequate cover. Sufficient concrete coverage normally provided protects the reinforcement against corrosion. The concrete cover specified by various codes is exclusive of thickness of plaster. If cover is less than prescribed by various codes, the cracks develop at the surface of concrete due to expansion and contraction of steel bars. The construction of elementary college at Naushero, Hostel at Dargai and at Khawaza Khela are worst examples. The abundant cracks were observed in the ceiling of ground floor at Khawaza Khela. The contractor has chipped and chiseled such places and at certain places, main steel bars were exposed/naked.

Bulges and ridges due to poor forms at Female Hostel, Peshawar, were being removed from the bottom of beams by chiseling but simultaneously, the concrete around the main reinforcement bars was cut, hence leaving the steel bars without any cover. This would lead to corrosion of reinforcing bars.

Honeycomb in concrete result from loss of cement grout from the concrete by leakage through the forms and/or failure to consolidate the concrete thoroughly. A contributing reason is the segregation of the concrete resulting from the efforts to flow the concrete into place by excessive vibration or resulting from the use of overly fluid mixes, mixes that are lean and harsh or mixes containing sand deficient in fines. Segregation also results from various handling errors.

Bricks: A large percentage of the bricks being used in construction of staff residences at Female Hostel Peshawar were deformed by rain falling on them when hot. Most of the bricks being used in construction at another site were over burnt called burrs or clinkers. Bricks are also used in masonry with very little control on width of joints. At least 20% joints are either hollow or so small that mortar could not be provided there. The construction and staff quarters at Peshawar, elementary college at Naushera suffers from this defect. The masonry joints even after painting are not straight.

Wardrobes in hostels (Peshawar, Dargai, Khawaza Khela). A wardrobe for use by four students measuring 4 ft x 4 ft and depth 9 inches is an extreme example of useless design and wasteful expenditure.

9.3.5 Establishment of Construction Advisory Unit under Administrative Control of Primary Education Directorate

Construction Advisory Unit (CAU) headed by additional director and supported by one Deputy Director has been created within Directorate of Primary Education. The CAU would function under direct administrative control of Director Education to ensure effective control of the Civil Works Component and improved co-ordination between A/E firm and education department. The CAU will carry out top supervision, manage formulation of projects, approvals, procedural and financial aspects of the project and control performance of the consultants. However the new additional director of CAU is unclear about the new assignment and needs training to meet the responsibility of the new assignment.

9.3.6 Contribution of USAID's Office of Engineering

During discussions at various levels and visits to the sites, the evaluation Mission observed considerable qualitative and quantitative improvements in construction related activities through the efforts of USAID's engineering staff assigned on the project. This has contributed to the improved co-ordination amongst education directorate, A/E firm, and Directorate of Civil Works in Balochistan. USAID Project Engineer at Peshawar has assisted DPE in multifarious capacities for successful implementation of Civil Work Component. Due to his persistent support and technical expertise, DPE has awarded designing, planning and supervision of its Headquarter building and Physical Condition Survey to private A/E firms. The construction management of school buildings will also be assigned to private organization in due course of time.

9.3.7 Training Needs

Balochistan

The employer is the only entity involved in all phases of a project, i.e., conceptualization, design, financing, implementation, supervision and, later on, operation and maintenance. The employer's role being unique and critical in a project team, he/she should have a clear vision and the ability vis-a-vis the project as an entity as well as the role played by various agencies, their relationship to the employer and how his/her own performance affects that of the agencies involved and as a result, the performance of the project itself. It is unfortunate that the employer agents/representatives (Project Directors) conceive the employer's role as limited to a detached paymaster and at best indifferent one in most cases. Neither Director (Civil-Works) nor the executive engineers and sub-divisional officers have any training in construction management. Similar is the case with the A/E firm's engineers but, as they compete in private sector, they work hard to show better performance without formal training.

Training for Government Engineers, A/E firm in the following areas is highly recommended: (a) Contract administration and construction management for Director of Civil Work, Executive Engineers and Senior Engineers of A/E firm; (b) What, how, and when to inspect - field inspection and effective implementation of schedules for junior engineers of the A/E firm and sub-divisional officers of the departments; and (c) Field visits to important projects of national priority.

NWFP

A wide scope of training is needed: a) Contract administration and construction management for Chief Engineer, Superintending Engineer and Executive Engineers; b) What, how and when to inspect - field inspection and effective implementation of schedules for sub divisional officers of the department; c) Field visits to important project of national priority.

9.4 Findings and Recommendations

9.4.1 Balochistan

1. Orientation of buildings: Usually the classrooms are oriented north-south for maximum exploitation of natural agents such as wind and the sun. In certain cases there are space limitations, but in rural areas generally there are no such restrictions. Hence buildings can be oriented according to specified criteria for different districts by Ministry of Housing and Works in National Reference Manual on Planning and Infrastructure Standards. Primary schools for boys in Karez Aisha and the upgrade of middle schools for girls in Shamsabad in Quetta Division have been orientated east/west although they could easily have been orientated north/south. Engineers should be very particular while laying out school buildings, especially, when there is no space limitation.

2. Cleanliness of sites and improvement in the main access to school: Most of the school buildings which are complete and in use are littered with construction debris and excavated stuff which is a safety hazard. The open tanks excavated in the ground for storage of water during construction by contractors must be immediately filled. This situation exists almost in every school which was visited by the assessment team.

3. Use of Opaque (non-transparent) glass in windows: In almost 99 percent of the schools, opaque (non-transparent) glass, usually fixed in toilets/bathrooms ventilators, was used in windows. The use of opaque glass curtails transmission of light. According to D(CW), standing instructions have been issued to all engineers for using plain glass in windows.

4. Waterproofing and Roof insulation of School Buildings: During inspection, it was found that water-proofing and roof insulation was not laid upon roofs. Presently, the roofs have been left bare. In most of the school buildings, there is no electricity, hence roof insulation can reduce the effect of solar heat to some extent. In the absence of water proofing, the buildings will leak in the rainy seasons, thus impairing the finishing of buildings and leading to extensive repairs to fittings and fixtures repainting of walls. The matter was discussed with consultants who were of the view that water proofing and roof insulation is not being done due to funds constraints. During field inspections the buildings constructed some few years back and spoiled by rain water were shown to consultants. It is recommended that it is wiser to spend more money initially for providing water proofing and insulation rather than incurring heavy expenditure on repairs maintenance.

5. Continuity of System: A/E firm has developed excellent documents pertaining to construction management of Primary Education Program. However, every system starts soon losing its validity and effectiveness if it is not implemented and followed in letter and spirit by the functionaries. It is recommended that a committee headed by Director Primary Education and attended by Project Manager, A/E firm and Director (CW) may review from time to time that the system is followed without even minor deviations.

6. Utilization of A/E Services: The utilization of A/E services even for repair and Maintenance buildings is very important. This would ensure appropriate utilization of available resources and elimination of gross misappropriation of funds.

7. Soundness/Stability Certificates After Completion of Buildings and Carrying Out Repair and Maintenance of Building: The primary responsibility for quality assurance still rests with DCW and the A/E firm should issue the following certificates: (1) Soundness/stability certificate for newly constructed and completed buildings; and (2) Certificate of satisfactory repairs maintenance.

The A/E firms would address the certificates to DCW with copies be sent to the Director of Primary Education.

8. Maintenance of Buildings: Currently Rs. 0.10 millions are spent per school on repairs maintenance and total expenditure that will be incurred on renovation of 450 schools is Rs. 45 millions. Repair and maintenance of buildings is taken very casually and it is considered the safest means of misappropriation. Presently, the repairs and maintenance requirement of school buildings are established by the junior engineers of the A/E firm. The repairs and maintenance needs may be realistic but what will be impact of these repairs? How far it would go to increase the useful life of building? Whether new construction will be preferable over repair expenditure? Are repairs costly? Can we substitute rehab with cheap repairs without impairing functional utility of the buildings? All such questions have to be carefully answered before increasing expenditure on repair and maintenance. It is recommended that proposed repairs to a particular building may be carefully and thoroughly examined by senior and experienced engineer of A/E to avoid unnecessary wastage.

9. Inventory of Buildings and Computerized Data: Data on building inventory should be computerized including location, name of building, upon construction completion, what type of repairs were done and when and at what cost.

10. Buildings Operations Manual: It is recommended that A/E firm develop a Building Operation Manual indicating type of repairs and defects, their removal; basic work procedures, area cleaning, equipment and supplies and also regulations and forms. Help can be taken from the building operations manual prepared by the University of Illinois Urbana - Champaign and maintenance guidelines for National Agricultural Council (NARC) Islamabad.

11. Payments to Contractors: All the contractors complained about delay in payments. Currently, the contractors are paid in three stages: First payment - plinth; second payment - roof; third payment - completion. It is recommended that the contract be paid in four stages: First payment, plinth; second payment, roof level; third payment, laying of roof slab; fourth payment, complete finishing of building.

9.4.2 NWFP

1. Orientation of Buildings: It should be made obligatory on all Executive Engineers, Sub Divisional Officers and Sub Engineers of the departments to orient the buildings North/South or according to recommended standards for particular location on the basis of environmental conditions and where there is no space limitation.

2. Plumbing and Electrical Drawings: There is no existing practice to prepare such drawings of services which are integral part of building. Presently, this is done by site engineers as they wish which leads to omissions and ill planned work. Service drawings are subsequently upgraded during actual execution and can be used as built drawings for locating defects which may appear at any later stage during the life of building.

3. Engineer Designs: Over specifying frequently leads over design and associated cost over runs. The wooden truss for 26 ft span at Khawaza Khela was overly designed by concerned sub-engineers. If the truss had been designed by an experienced and qualified engineer, 50% wood could be conveniently saved.

4. Infrastructure Development: Infrastructure development should begin immediately after site selection basic facilities such as roads, footpaths, water and electricity are available to the school.

5. Topography Survey of Sites: Topography survey of each site should be required to avoid such problems as improper drainage.

6. Plinth Protection: This is a very common defect. The plinth protection usually divorces itself from main structure within 2 to 3 months after laying. In order to ensure contact and bond with main structure it is proposed that 1/4" steel bars may be intruded into the adjacent wall and plinth protection at least by 4 inches. The bars may be spaced along length of wall at 12 inch interval.

9.5 Conclusion

9.5.1 Balochistan

The Civil Works component of the program has been very successful in the sense that it has achieved its planned targets of 1989-90, 1990-91 and 1991-92 very speedily. This is in spite of the fact that although the program took off in 1989 but first installment of funds was not released until 1990. The program is likely to achieve its planned targets for 1992-93 subject to availability of funds. The sites have been approved by Chief Minister and cost estimates are ready. The bids will be called as soon as funds are made available.

The main lesson which stems from this is that civil works component of any program requires a finite length of time to develop an acceptable design and to follow through the chain of actions required by competitive bidding process to the point of award of tenders. This process cannot be avoided and, hence, a certain length of time is required for preparatory work which is never provided in any documents.

Another lesson is that involvement of the private agency in the construction management of Civil Works component has yielded laudable results in quantitative and qualitative terms, in spite of the tribal socio-political system of the province, and whatever teething problems were faced by A/E firm for its survival and use of private consulting firm may be continued for any such future undertaking if contract administration and actual execution is to be made successful.

9.5.2 NWFP

It will be in the best of PED to entrust responsibility of construction management of school buildings to a suitable private A/E firm which would accelerate the pace of work and would also improve the quality. Engaging the services of A/E firm is usually the least expensive way to accomplish an engineering undertaking. The study of management of construction and maintenance of school buildings in NWFP by Engineering Associate Karachi during July, 1991 is a good reference to this context. C&W, already overloaded with developmental works of National importance, would be able to share time & talent for improvement of quality and timely completion of these projects.

10. Summary of Conclusions and Recommendations

PED is in many ways an excellent program. Among the program's greatest qualities we find an ability to allow for flexibility and diversity of style in the development of activities in the two provinces. The PED Program in Balochistan has been more successful than expected in developing coordinated primary education planning and administration, given the low level of development in the province, the scattered population, and the past failures to develop education in the province.

NWFP, on the other hand, has been slower to develop effective coordinated primary education planning and administration under the PED Program than expected. The higher level of development in the province had led to the anticipation of more immediate success. However, because of the more entrenched ways of doing things in the education bureaucracy, the NWFP has tended to be resistant to and less imaginative in policy and planning reform, even though a DPE was established earlier in the NWFP.

On the other hand, educational improvements in instructional materials development and implementation through inservice teacher training using master trainers, supervisors, and learning coordinators have been more effective in the NWFP than in Balochistan. This is also probably an effect of the institutional situation of well-established bureaucracies being able to resist reorganization and reform, as well as the personal strengths and characteristics of the TA team leaders and specialists.

Most of the recommendations in the following sections are presented with a view toward what can be reasonably expected to be accomplished during the final year of the program in order to assure smooth transition for World Bank follow on funding in a manner which will further the sustainability of primary education in Balochistan and the North West Frontier.

The USAID/ Islamabad Human Resources Development Office and the PED Program Technical Assistance Teams in both Balochistan and the NWFP will be considered together, as a mutually supporting Program team as is necessary for efficient and timely completion of the program in 1994. In the next year this team has two challenges to face together: (1) to manage developments in the PED Program through the last year to stabilize institutional developments and ongoing education development processes that can be achieved by Program end, and (2) to coordinate the transition to the World Bank follow-on projects, aiming at a smooth transition and long-term development sustainability.

In the next year, the following developments might be reasonably expected:

10.1 Administration and Management

Balochistan

1. With the DPE now established, it is poised to take over responsibility for planning such challenges as the refinement of BEMIS to maximize the possibilities of sustainability, the coordination of instructional materials development with inservice teacher training, the developing of a proper set of responsibilities for learning coordinators, the promotion of community participation in village primary schools, and the management of primary education expansion within the realities of the recurrent budget. The next year could establish the DPE as the center of primary education planning in Balochistan.

2. The role of the learning coordinator, the process of development of instructional materials, and the system of teacher training need to be better coordinated and could be by Program end to lay a firmer foundation for future development in the World Bank follow-on project. However, such planning for coordinated development would have to be focused on by the DPE leadership and the TA team leader in cooperation with the TA team and others.

3. The Society for Community Support for Primary Education in Balochistan in cooperation with the DPE could establish a firm foundation for the further development of community supported village schools.

4. To accomplish all this it is recommended that USAID and the TA team shift gears slightly. It is recommended that TA leadership shift from facilitating management to stimulating planning, especially of the coordination, sustainability, and community support issues above. It is further recommended that the TA team involved in instructional materials development and teacher training coordinate with the DPE, with the help of the team leader, to cooperatively plan more integrated instructional materials development, teacher training, and learning coordinator roles. USAID/ Islamabad ought to help the DPE efforts to overcome bottlenecks in the Pakistani bureaucracy, with certification of meeting conditionality, for example, so that the DPE can focus on establishing itself as the center of primary education planning in Balochistan.

North West Frontier Province

5. The DPE continues to require assistance from the TA teams to help in developing planning capacities. It is recommended that the TA team leader focus on this for the next year to help consolidate all development of primary education learning materials in the NWFP in the new IMDC, to increase authority for primary education planning in the DPE and away from the Planning and Development, Finance, and Communication and Civil Works Departments, and to develop the capacity for broader educational planning in the DPE and the Education Secretariat through selective recruitment and training.

6. It is recommended that the curriculum development and teacher training TA team members focus on the establishment of an IMDC by Program end. Perhaps USAID/ Islamabad could work to help establish the DPE as a center for primary education planning through influence to transfer all responsibility for primary education planning to the DPE, including the funds that politicians presently control for social and educational development in their areas.

10.1.1 Financial Support

7. The actual expenditure shown for the year 1992-93 in Balochistan is a mere repetition of the Revised Estimates. As actual expenditure has been made only for nine months, it has to be watched that the rate of growth does not fall below the required percentage.

8. In the case of NWFP, the actual expenditure shown in the current year is lower than the preceding year by 44 per cent. There is an obvious need to accelerate the pace of expenditure to reach the target level.

9. The role of the Directorate of Primary Education is more of an intermediary than that of a supervisor. It receives bills from the implementing agencies and disburses the funds. The overall supervisory role of the Directorate should be strengthened to exercise necessary checks and balances.

10. The existing system should have the ability to cull out data of specific interest in line with the requirements of PED (or any given program) on receipts, disbursements and unspent balances at any given date. The Education Departments in the two provinces may approach the Finance Departments to include the Heads of Accounts in line with the categorization of expenditure specified in PIL No.8. The accounts should be maintained in a manner such that, at a given point of time, it should be possible to find out whether the expenditure is being incurred on the objectives which the policy makers have prescribed. It may, however, be stated that the budgeting process starts in October in each financial year (July - June) and any change now made in the Heads of Accounts will not be effective for collecting the necessary data for the coming year.

10.1.2 Education Management Information Systems (EMIS)

11. Document existing data processing activities as reference for others who may follow.

12. Continue to operationalize remaining district computer cells. Provide as much training and follow-up as possible.

13. Extensively lobby for government assignment to unfilled positions.

14. Complete development of application programs in progress by field testing systems under development, provision of training and finalization of operations manuals. Ensure that final versions of source code are located within the DPE.

15. Attempt to establish a mechanism by which the DPE can contract competent programmers on an as needed basis.

16. Develop a cost profile for the EMIS as a whole and its various subcomponents and activity categories. Indicate the variable costs of undertaking additional data processing assignments. Also, quantify wastage in the system in terms of nonfunctioning and under-enrolled schools, repetition and dropout and other system inefficiencies. Because EMIS systems utilize expensive looking imported technology, it is important to quantify the costs of not having an EMIS in regards to inefficient resource allocation.

10.2 Instructional Materials Development

General Assessment: The strategy to achieve textbook reform has been approached in a unique manner in each of the two provinces and both have developed excellent programs, with Balochistan adapting materials and processes first developed in NWFP. The commonalities of interactive teaching, less rote learning, and student directed activities create an environment conducive to learning.

10.2.1 Balochistan

16. With its designation as a "Cell", the BIMDTC has been accepted, but is not a sanctioned post with a "Schedule of New Expenditures" (SNE) assigned to it. As such, the Cell is actively creating instructional materials that will impact children of Balochistan but it has not been given the organizational status to assure its continued leadership. It is recommended that every effort be made for BIMDTC be assigned SNEs within the next twelve months.

17. In an effort to coordinate the training of teachers in the methodologies required by the new instructional materials, it is recommended that the curriculum and teacher training Cell and the BIMDTC be housed together and we recommend that the Government of Balochistan acquire the present facility to accommodate both training and curriculum offices.

10.2.2 NWFP

18. All effort should be made by TA team leader to work with the DPE to assure the immediate assignment of a TA counterpart to be trained during the final year of the program to provide leadership and assure sustainability.

10.3 Teacher Training and Development

General Assessment: Diverse and innovative activities have been undertaken to increase the supply, training and supervision of teachers. In Balochistan the Three-Month Crash Training Program and Mobile Teacher Training Project were developed as an alternative approach to recruiting and training teachers, especially women in the rural areas.

19. Increase the quality of teacher training in short courses. Mobile Female Teacher Training Program has been modified following evaluation in Balochistan. It now has a three-month curriculum like the accelerated program and should receive approval for PTAC certification.

20. Upgrade Learning Coordinators to teaching status. Training should be provided the LCs on growth-oriented clinical supervision techniques. Following initial training, LCs should conduct workshops for teams of classroom teachers and head teachers in their area with emphasis on methodologies of teaching new materials and clinical supervision.

10.4 School Construction

10.4.1 General Assessment: Balochistan

The Civil Works component of the program has been very successful in the sense that it has achieved its planned targets of 1989-90, 1990-91 and 1991-92 very speedily. This is in spite of the fact that although the program took off in 1989 but first installment of funds was released in 1990. The program is likely to achieve its planned targets for 1992-93 subject to availability of funds. The sites have been approved by Chief Minister and cost estimates are ready. The bids will be called as soon as funds are made available. The main lesson which stems from this is that civil works component of any program requires a finite length of time to develop an acceptable design and to follow through the chain of actions required by competitive bidding process to the point of award of tenders. This process cannot be avoided and, hence, a certain length of time is required to be catered for preparatory work. But is never provided in any documents. Another lesson is that involvement of the private agency in construction management of Civil Works component has yielded laudable results in quantitative and qualitative terms in spite of tribal socio-political system of the province and whatever teething problems were faced by A/E firm for its survival and use of private consulting firm may be continued for any such future undertaking if contract administration and actual execution is to be made successful.

Recommendations

21. Orientation of buildings: Usually the classrooms are oriented north-south for maximum exploitation of natural agents such as wind and the sun. In certain cases there are space limitations, but in rural areas generally there are no such restrictions. Hence buildings can be oriented according to specified criteria for different districts by Ministry of Housing and Works in National Reference Manual on Planning and Infrastructure Standards. Primary schools for boys in Karez Aisha and the upgrade of middle schools for girls in Shamsabad in Quetta Division have been orientated east/west although they could easily have been orientated north/south. Engineers should be very particular while laying out school buildings, especially, when there is no space limitation.

22. Cleanliness of sites and improvement in the main access to school: Most of the school buildings which are complete and in use are littered with construction debris and excavated stuff which is a safety hazard. The open tanks excavated in the ground for storage of water during construction by contractors must be immediately filled. This situation exists almost in every school which was visited by the assessment team.

23. Use of Opaque (non-transparent) glass in windows: In almost 99 percent of the schools, opaque (non-transparent) glass, usually fixed in toilets/bathrooms ventilators, was used in windows. The use of opaque glass curtails transmission of light. According to D(CW), standing instructions have been issued to all engineers for using plain glass in windows.

24. Waterproofing and Roof insulation of School Buildings: During inspection, it was found that waterproofing and roof insulation was not laid upon roofs. Presently, the roofs have been left bare. In most of the school buildings, there is no electricity, hence roof insulation can reduce the effect of solar heat to some extent. In the absence of water proofing, the buildings will leak in the rainy seasons, thus impairing the finishing of buildings and leading to extensive repairs to fittings and fixtures repainting of walls. The matter was discussed with consultants who were of the view that water proofing and roof insulation is not being done due to funds constraints. During field inspections the buildings constructed some few years back and spoiled by rain water were shown to consultants. It is recommended that it is wiser to spend more money initially for providing water proofing and insulation rather than incurring heavy expenditure on repairs maintenance.

25. Continuity of System: A/E firm has developed excellent documents pertaining to construction management of Primary Education Program. However, every system starts soon loosing its validity and effectiveness if it is not implemented and followed in letter and spirit by the functionaries. It is recommended that a committee headed by Director Primary Education and attended by Project Manager, A/E firm and Director (CW) may review from time to time that the system is followed without even minor deviations.

26. Utilization of A/E Services: The utilization of A/E services even for repair and Maintenance buildings is very important. This would ensure appropriate utilization of available resources and elimination of gross misappropriation of funds.

27. Soundness/Stability Certificates After Completion of Buildings and Carrying Out Repair and Maintenance of Building: The primary responsibility for quality assurance still rests with DCW and the A/E firm should issue the following certificates:

- Soundness/stability certificate for newly constructed and completed buildings
- Certificate of satisfactory repairs maintenance

The A/E firms would address the certificates to DCW with copies be sent to the Director of Primary Education.

28. Maintenance of Buildings: Currently Rs. 0.10 millions are spent per school on repairs maintenance and total expenditure that will be incurred on renovation of 450 schools is Rs. 45 millions. Repair and maintenance of buildings is taken very casually and it is considered the safest means of misappropriation. Presently, the repairs and maintenance requirement of school buildings are established by the junior engineers of the A/E firm. The repairs and maintenance needs may be realistic but what will be impact of these repairs? How far it would go to increase the useful life of building? Whether new construction will be preferable over repair expenditure? Are repairs costly? Can we substitute rehab with cheap repairs without impairing functional utility of the buildings? All such questions have to be carefully answered before increasing expenditure on repair and maintenance. It is recommended that proposed repairs to a particular building may be carefully and thoroughly examined by senior and experienced engineer of A/E to avoid unnecessary wastage.

29. Inventory of Buildings and Computerized Data: Data on building inventory should be computerized including location, name of building, upon construction completion, what type of repairs were done and when and at what cost.

30. Buildings Operations Manual: It is recommended that A/E firm develop a Building Operation Manual indicating type of repairs and defects, their removal; basic work procedures, area cleaning, equipment and supplies and also regulations and forms. Help can be taken from the building operations manual prepared by the University of Illinois Urbana - Champaign and maintenance guidelines for National Agricultural Council (NARC) Islamabad.

31. Payments to Contractors: All the contractors complained about delay in payments. Currently, the contractors are paid in three stages: First payment - plinth; second payment - roof; third payment - completion. It is recommended that the contract be paid in four stages: First payment, plinth; second payment, roof level; third payment, laying of roof slab; fourth payment, complete finishing of building.

10.4.2 General Assessment NWFP: It will be in the best of PED to entrust responsibility of construction management of school buildings to a suitable private A/E firm which would accelerate the pace of work and would also improve the quality. Engaging the services of A/E firm is usually the least expensive way to accomplish an engineering undertaking. The study of management of construction and maintenance of school buildings in NWFP by Engineering Associate Karachi during July, 1991 is a good reference to this context. C&W already overloaded with developmental works of National importance would be able to share time & talent for improvement of quality and timely completion of these projects.

Recommendations

32. Orientation of Buildings: It should be made obligatory on all Executive Engineers, Sub Divisional Officers and Sub Engineers of the departments to orient the buildings North/South or according to recommended standards for particular location on the basis of environmental conditions and where there is no space limitation.

33. Plumbing and Electrical Drawings: There is no existing practice to prepare such drawings of services which are integral part of building. Presently, this is done by site engineers as they wish which leads to omissions and ill planned work. Service drawings are subsequently upgraded during actual execution and can be used as built drawings for locating defects which may appear at any later stage during the life of building.

43. **Engineer Designs:** Over specifying frequently leads over design and associated cost over runs. The wooden truss for 26 ft span at Khawaza Khela was overly designed by concerned sub-engineers. If the truss had been designed by an experienced and qualified engineer, 50% wood could be conveniently saved.

35. **Infrastructure Development:** Infrastructure development should begin immediately after site selection basic facilities such as roads, footpaths, water and electricity are available to the school.

36. **Topography Survey of Sites:** Topography survey of each site should be required to avoid such problems as improper drainage.

37. **Plinth Protection:** Commonly the plinth protection usually divorces itself from main structure within 2 to 3 months after laying. In order to ensure contact and bond with main structure it is proposed that 1/4" steel bars may be intruded into the adjacent wall and plinth protection at least by 4 inches. The bars may be spaced along the length of the wall at 12 inch intervals.

10.5 Summary Recommendation and Rationale

In a most general way this evaluation team recommends to (1) carry out the final year of the program within the existing structure, (2) to work toward a smooth transition for World Bank and other support follow-on funding to insure sustainability of the work.

Justifications for such a favorable recommendation include the following:

The program is on track, and has reached many of its objectives to improve the primary education system, especially for girls.

The program has reached many of its institutional development objectives.

The program's goals are important and ambitious. Beyond its own activities, PED has already started to act as a model for providing support in EMIS activities and in the development of curriculum and instructional materials.

Compared to other programs active in Pakistan, the overall attention to details and interconnectedness in policy and planning in some areas is commendable.

The staff commitment to continuing the strongest elements of the program for World Bank follow on funding are commendable.

ANNEXES

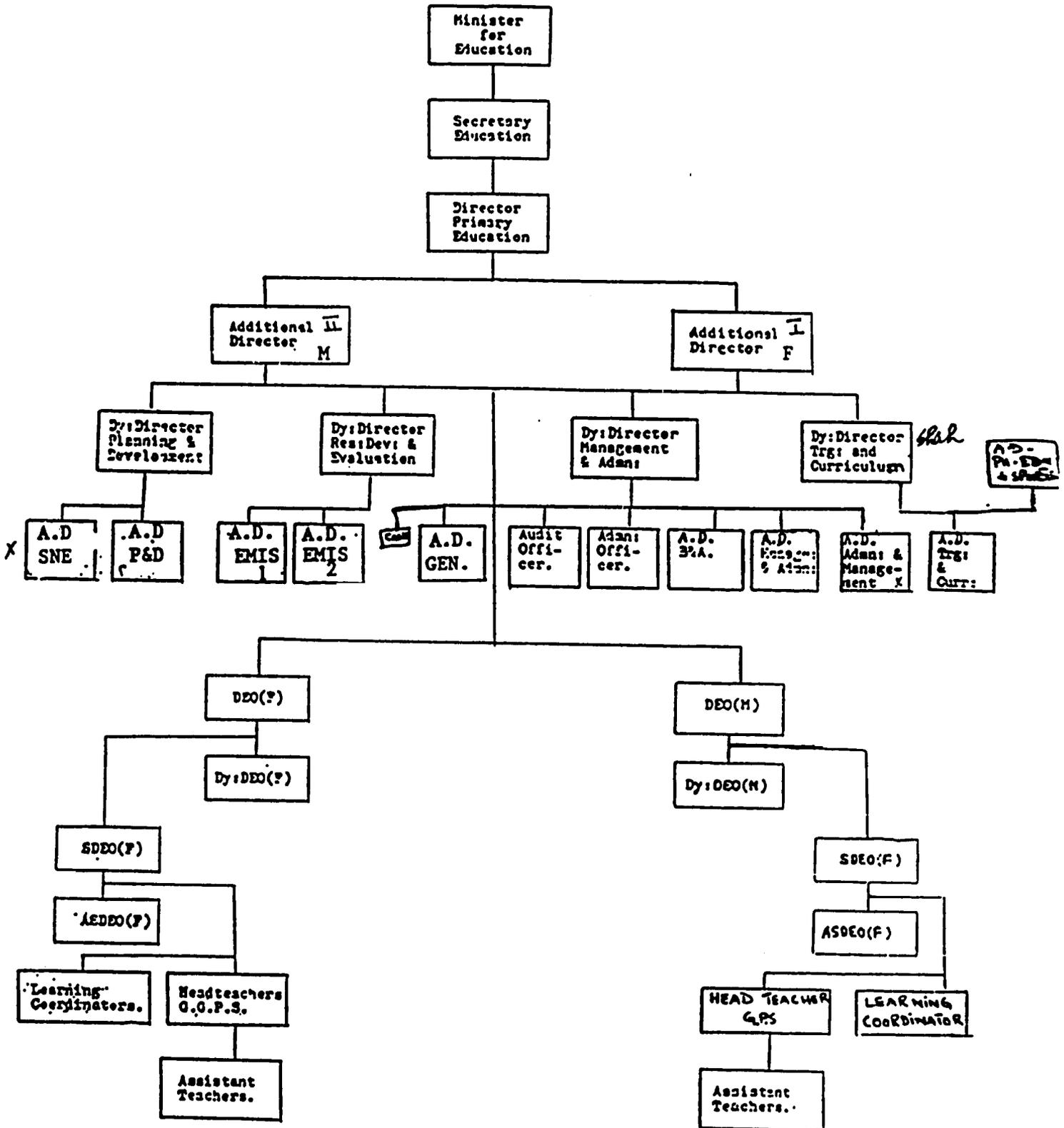
1. Organizational Charts

2. Scope of Work

3. List of Persons Interviewed

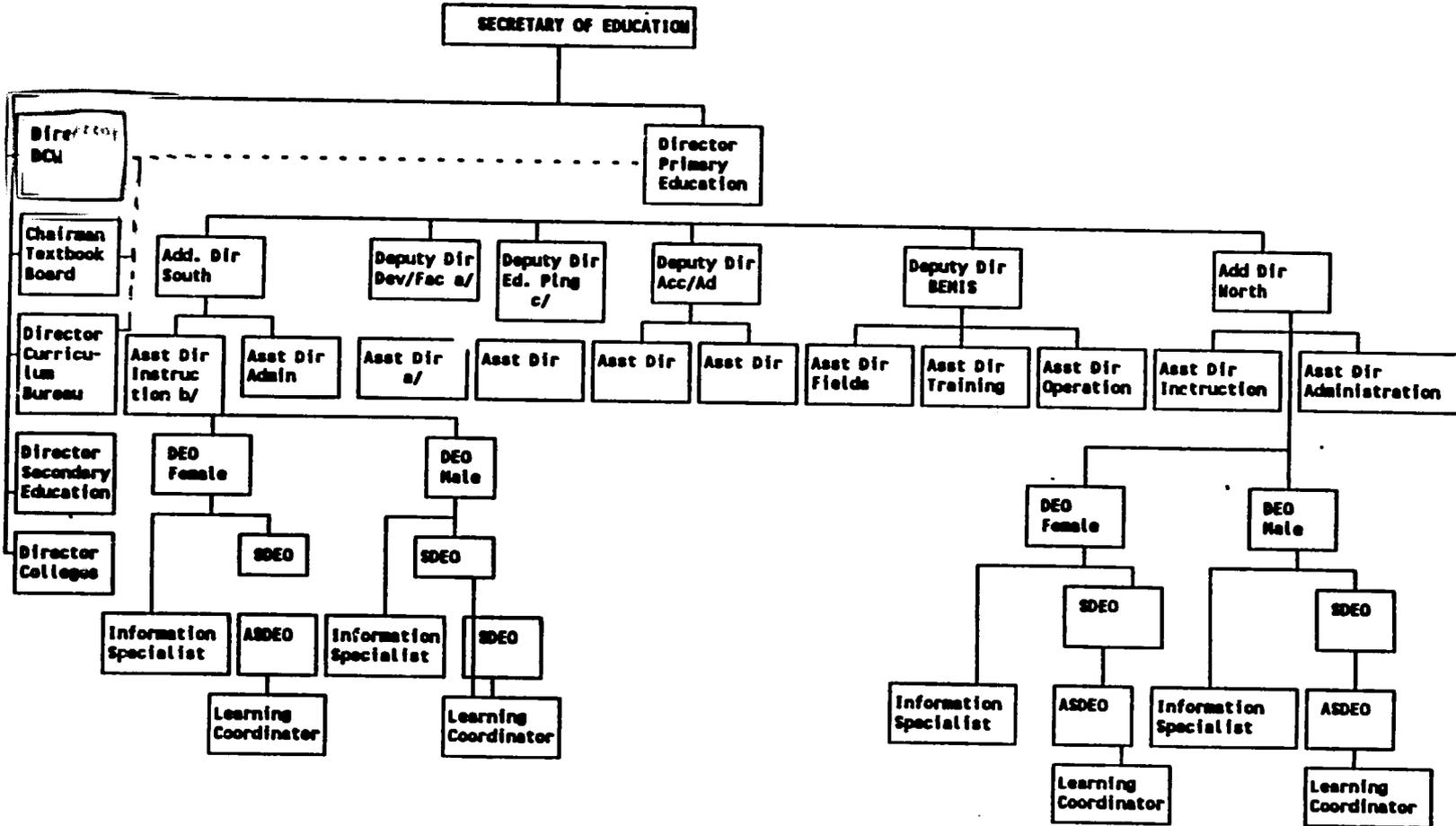
ANNEX 1

ORGANIGRAM OF DIRECTORATE OF PRIMARY EDUCATION WFP.



BALUCHISTAN EDUCATION DEPARTMENT - PROGRAM ADMINISTRATION SYSTEM

Chart 2



--- ROE Line of Authority
 - - - Program Coordination
 a/ Liaison officer for school construction, furniture and equipment
 b/ Liaison officer for teacher training and structural material
 c/ Liaison officer for private formation and scholarship program

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Annex 1

ANNEX 2

ATTACHEMENT 1

SCOPE OF WORK

I. Activity to be Evaluated

The Mission requests a mid term evaluation of the Primary Education Development (PED) Program. The evaluation should commence on a September 1, 1992. The PACD of the PED Program is June 30, 1994 with an authorized LOP funding of \$77 million. The PED Program is composed of four funding categories: sector grant - \$55 million; technical assistance (TA) - \$13.0 million; commodities - \$3.5 million and training - \$1.5.

II. Purpose of Evaluation

The purpose of the evaluation is to review and assess the effectiveness and impact of the Mission's PED Program. The evaluation team will assess the institutional and organizational arrangements as well as the policies and procedures instituted by the involved provincial governments since the beginning of the PED Program. The evaluation report will focus on the technical assistance teams' efforts in assisting the provinces to establish the desired institutional capacity and policy reforms needed to achieve the goals of the PED Program. The evaluation will guide Mission management in assessing the impact of the PED Program and in the implementation of PED Program during the next two years.

III. Background

The Primary Education Development Program was developed under the FY 83-93 U.S. Assistance Package to Pakistan to help establish a foundation for sustained economic and social development in Balochistan and Northwest Frontier (NWFF) by encouraging policy reforms in education. A total of \$280 million in sector grant (SG), training and technical assistance and related support was to be provided to the Government of Pakistan (GOP) during the program period of 10 years (6/89 - 6/99). In October 1990, due to the lack of certification required under the Pressler amendment, the USAID program in Pakistan was forced to begin phasing out. For the PED Program, this constraint to only finish what had been begun caused the LOP budget to be reduced from \$280 million to \$77 million and the PACD was also reduced from June 1995 to June 30, 1994.

The broad sector goal of the PED Program, as initially designed, is to strengthen the institutional capacity of the Northwest Frontier and Balochistan provinces to formulate and implement equitable policy that improves access to primary education and

its quality. The program involves (1) a continuing policy dialogue between A.I.D., the GOP and the two provincial governments on primary education and (2) substantial increases in literacy for these two provinces over the ten year period. The impact of the program on Pakistan's economy will hopefully result in increased and more widely distributed incomes, enhanced agricultural production, better health, lower fertility, and general social and economic development.

The more immediate objective of the program is to increase access, especially for girls, to primary education (Grades 1-5) and improve the equity, quality, and efficiency in the sector. With respect to enrollments, the original targets were to double the number of primary school students over ten years, increasing from about 1.5 million students in 1989 to approximately 3 million in 1999. Girls' enrollments were to nearly triple, significantly reducing current gender inequities in these two provinces. The rate of boys' enrollments would increase by a targeted 75 percent during this same time. Girls' enrollments would increase to 70 percent of the girls in Northwest Frontier Province and 35 percent of the girls in Balochistan.

The PED Program encourages the provinces to include private school enrollments in annual reports of access achievements, an activity which could help establish a favorable attitude towards private schools by the provincial governments.

Under the PED Program, a nationwide Education Management Information System (EMIS) is being developed in collaboration with UNDP/UNESCO. The system is designed to cover all four provinces with linkages to the Federal Ministry of Education. Data will be reported in the form of enrollment, attendance, completion, and dropout rates by gender. The basic design of the EMIS will be uniform across all provinces and will meet all provincial and federal statistical and information reporting requirements.

The EMIS will be electronic-based with computers serving as the storage and retrieval mechanism at the district level and serving the same function at the provincial and federal levels. For this national system USAID is providing computers, furniture and airconditioners and other related equipment for all four provinces and AJK. In the provinces of Northwest Frontier and Balochistan, technical assistance is being provided to implement the entire system.

An initial tranche of approximately \$24 million of the total sector grant fund was made available to GOP in FY-90. The second tranche of \$20 million was released to GOP in FY-91. The third SG of \$15 million will be made available to GOP in FY-92.

Continuing primary education policy dialogue is held between the provinces and A.I.D. leading to the annual establishment of mutually agreed upon goals and action benchmarks. The local currency funds matching the sector grants are administered by the GOP and the two provinces as part of their overall program for primary education.

Supporting Policy: Following are the conditions precedent and Covenants set forth in the Program Grant Agreement which need to be met by both the provincial governments before releasing the sector grant.

Budget Support Agreement to increase the provincial funds budgeted and expended for primary education at the real rate of at least eight percent annually for Balochistan and at least five percent annually for NWFP, over the next ten years, with FY-90 as the base year.

Directorates: Establishment of a Directorate for Primary Education in each province.

Increased Access: Construction; Using private architectural/engineering and construction firms design, construct, and equip new primary schools and related structures to accommodate the expanded enrollments; and budget and expend funds for the maintenance of existing and new building.

Site Selection: Establish mutually agreed upon criteria for design, construction, and selection of sites for all buildings.

Improved Quality: Budget and expend funds to provide incentives for rural female teachers.

Instructional Materials Availability: Budget and expend funds to provide textbooks and instructional materials for disadvantaged areas.

Instructional Materials Quality: Budget and expend funds to upgrade the quality of textbooks and instructional materials.

IV. STATEMENT OF WORK

The evaluation team will review the performance of the provincial governments and the technical assistance contractor with a view to:

- a) evaluate progress on the original program goals as specified in the Program Assistance Approval Document (PAAD), June 1989;
- b) evaluate revised program goals, after the Pressler amendment, and progress toward the stated purpose, as specified in the latest edition of the Purpose Level Monitoring (PLM) document, highlight current constraints and opportunities, identify and document lessons learned;
- c) evaluate role of TA and its effectiveness in meeting its scope of work as defined in its contract and detailed plan of work focusing primarily on the long term resident advisors but also assessing the use of short term U.S. and local consultants; note any problems between contractor's headquarters in the U. S. and field staff;
- d) assess the role of the private sector: (1) in the management, supervision and construction of schools and buildings for each education department in each province, (2) in the establishment of education foundations to promote and support the growth of private schools, and (3) in local communities in assisting the growth and development of primary schools;
- e) assess the current status of the EMIS: (1) by checking whether the hardware purchased under PED is functioning in the properly designated locations, (2) by evaluating the procedures established to collect, verify, store and report the EMIS data, (3) by reviewing the local capacity to implement and maintain the system as designed in Balochistan and Northwest Frontier provinces, and (4) how the system relates to PIL 8 in consolidating budgetary and expenditure information for all of primary education, not just USAID funds;
- f) assess the effectiveness of the interaction among main entities involved (USAID, GOP, Contractors) in managing the program and the degree of coordination in providing technical and material inputs in a timely fashion;
- g) assess the effectiveness of donor coordination in the two provinces in primary education noting whatever lessons have been learned and how coordination can be made even stronger in the future;
- h) assess the budgetary system recommended in Project Implementation Letter (PIL) 8, and evaluate whether it has been adopted fully or not; note what steps should be taken

to fully adopt the system to incorporate all of primary education

- i) trace flow of funds from federal to provincial governments, and suggest ways and means to eliminate the interruptions and determine the time required for transfer of funds from federal to provincial governments. Also, suggest mechanisms and procedures to improve the time period involved for transfer of funds.

Evaluation approach and methodology

The accomplishment of the above tasks will require a core team of four professionals, three expatriate and one Pakistani. The team is expected to review all pertinent background materials; design and utilize structured interview instruments, data collection forms and survey questionnaires; conduct in-depth interviews; gather statistics and data; and meet with key GOP officials to identify options and practical alternatives. The evaluation is to be conducted in both the provinces of Balochistan and NWFP and at the Federal level and will be coordinated and supported by the HRD office of the mission.

At the end of four weeks, the team will conduct an interim briefing of mission staff based on a first draft of the evaluation report. A final in-country briefing for project personnel, mission staff and GOP will be conducted by the team leader at the end of the fifth week. The team leader will then complete the final evaluation report during the sixth week. The form of the evaluation report will be decided in consultation with the HRD Office in the mission during the first week of the evaluation.

The team will spend at least one week in each of the two involved provinces. The team leader will spend an additional two weeks working on the final report in Islamabad.

Deliverables

A. Format of the Report

The final report shall contain at a minimum the following sections:

1. Basic Project Identification Sheet

2. (a) Executive Summary of not more than three single spaced pages reviewing major findings and conclusions and (b) AID Evaluation Summary and Abstract of the AID Evaluation Summary Form (to be provided by USAID). These sections must be completed by the evaluation team.

3. Main body of the report, which shall review and analyze the questions and issues raised in the statement of work.

4. A concluding section which includes a list of lessons learned and recommendations.

5. A set of annexes that includes at a minimum the evaluation scope of work, a bibliography of individuals and documents consulted, and a completed evaluation summary in the format provided by AID/W. Fifteen copies of the final report shall be submitted to USAID/Islamabad for distribution to the concerned GOP agencies in Pakistan. The contents of the report shall distinguish clearly between the descriptive information underpinning the evaluation team's finding, interpretative information leading to conclusions, and the team's recommendations for possible modifications and further actions which stem from the conclusions.

Team Composition

The evaluation team shall include four members including one local expert having experience in financial management and budgetary procedures. One team member will act as team leader, with full responsibility for coordinating evaluation and drafting and presenting the final evaluation reports. Strong writing skills and evaluation experience are essential for all team members.

1. Team Leader

- a. Functions: Serves as senior project administrator, directing and coordinating the work of all team members. Designs, supervises the drafting of, and edits the final report. Will do overall evaluation of Policy reform sustainability and of EMIS.
- b. Qualification: Broad experience in planning and managing economic and social development programs in developing countries. Previous experience in such programs in Pakistan or the sub-continent is highly desirable.

Training and experience in educational administration, per se, is desirable but not essential. Proven expertise as a senior educator with specialization in primary school methods, materials, teacher supervision and teacher training. Training and experience in the evaluation of performance in these subject areas, as distinct from purely operational experience. Substantial experience in these subject areas, in, or in relation to developing countries in a technical assistance and/or primary education. Basic background training in education economics, public administration, or political economy, or in a combination thereof, is highly desirable. Proven expertise in evaluating the Education Management Information Systems.

2. Senior Education Program Planner

- a. Functions: Serves as deputy project administrator and as chief professional educationist. Assists Team Leader in coordination of work of other team members, as appropriate. Specifically, has direct responsibility for that section of the Scope of Work having to do with Educational Policy and Planning, including assessment of the issue of national commitment to educational development. Assists in editing the final report.
- b. Qualifications: Broad training and experience in educational development in developing countries, specifically in educational planning, or the economics of education, or preferably both. Demonstrated expertise in these special areas.

3. Primary Education Specialist

- a. Functions: Under the general guidance of the Senior Education Program Planner, assumes responsibility for the part of the program dealing with curriculum, instructional materials and teacher training. Assesses status of development of primary teacher training, supervision of primary school teachers, curricula, instruction methods and materials. Gives special attention to existing special experimental programs designed to improve above and other related areas of primary education.
- b. Qualifications: Proven expertise as a senior educator with specialization in primary school methods, materials, teacher supervision and teacher training. Training and experience in the evaluation of performance in

these subject areas, as distinct from purely operational experience. Substantial experience in these subject areas, in, or in relation to developing countries in a technical assistance and/or participant training setting.

4. Financial Management Specialist

- a. Functions: Under the general guidance of the team leader, will evaluate the financial management system to see if it is in accordance with USAID's PIL No. 8, and evaluate future plan for its implementation.
- b. Qualification: Proven expertise as a senior financial and budgetary planner with experience in planning budgets and financial systems.

USAID/ISLAMABAD

F-5700/92

FACSIMILE TRANSCIEVER COMMUNICATIONS SYSTEMS FAX DOCUMENT TRANSMISSION REQUEST FORM

Date : July 20, 1992
 From : Sarah Tirmazi - HRD
 To : Harold Freeman - EDC
 Washington D.C.

[X] Official [] Personal

(Signature) Sarah Tirmazi

Fax No. 617-332-5405

Approved: C. David Esch - Chief(A), PDM

(Signature) C. D. Esch

Number of Pages: 1 (including this page)

Message: Reference is made to the PED Program evaluation. We want to add the following four items in the SOW regarding WID activities which are being forwarded to you for your information. We have also advised AID/W to include these items in the PED evaluation SOW. IT IS AN AID/W suggestion/recommendation.

1. Design, Appraisal and Implementation: (a) How were the interests and role of women (compared to men) taken into account in each of the design, appraisal and implementation stages of the program evaluation? (b) In what ways did women (compared to men) participate in these processes?

2. Effects and Impacts: (a) What were the effects, positive or negative, of the program concerning women's (compared to men's) access to income, education and training, and with respect to workloads, role in household and community, and health conditions? (b) How were the interests and role of women (compared to men) taken into account in the evaluation stage? (c) Were significant factors concerning women (compared to men) overlooked at the appraisal stage?

3. Data Availability: Were Gender-specific data available for each of the program stages? (a) Design (b) Appraisal/approval (c) Implementation (d) Monitoring (e) Evaluation.

4. Sustainability: (a) How did women's integration in AID activities affect the sustainability of program outcomes? Were outcomes more sustained (or less sustained) when women were taken into account in AID activities? (b) Are the results achieved by the program equally sustainable between men and women beneficiaries?

Please send a copy of this fax to Ms. Lycette. Regards.

TO BE COMPLETED BY C&R

Date transmitted: _____

Time logged: _____

C&R Supervisor

RECEIVED
174-20

USAID/ISLAMABAD
FACSIMILE TRANSCEIVER COMMUNICATIONS SYSTEMS
FAX DOCUMENT TRANSMISSION REQUEST FORM

F-6702/92

Date : August 31, 1992

[X] Official [] Personal

From : Liaqat Ali Butt - Chief HRD

(Signature)

Liaqat A. Butt

To : Harold Freeman - EDC
Washington, DC

Fax No. 202-223-4059

Approved: David M. Sprague - Chief HRD

(Signature)

David M. Sprague

Number of Pages: 3 (including this page)

Subject: PED Program Mid Term Evaluation

Please note that for the subject evaluation, we have decided to request an additional team member, an Education Management Information System (EMIS) specialist. Initially, the team leader was to have evaluated the EMIS. However, we believe the complexity of the EMIS warrants an additional team member.

Attached is the draft revised SOW. The PIO/T amendment is still in circulation in the Mission. We hope to have it cleared fully in the second week of September, 1992. Meanwhile, please send us resumes for a team member for the EMIS slot.

You are already aware that we have postponed the evaluation until first week of November 1992.

TO BE COMPLETED BY C&R

Date transmitted: _____

Time logged: _____

C&R Supervisor

90

ATTACHMENT 1**SCOPE OF WORK****I. Background**

The team leader will no longer have sole responsibility for evaluating the National Education Management Information System (NEMIS). A description of the system is presented in the original SOW. Instead, the team leader, and other members of the team, as appropriate, will also look at gender related issues with respect to the performance of the PED Program, as stated in section II. There will be an additional team member: EMIS specialist who will evaluate the entire NEMIS system in all provinces of Pakistan, paying particular attention to the Balochistan and NWF provinces. The SCW for the EMIS specialist is presented in section III.

II. STATEMENT OF WORK

The team leader will not be solely responsible for evaluating the education management information system (EMIS); that will be done by the EMIS specialist. However, in addition to the scope of work, the team leader and other members of the team, as appropriate, will also evaluate gender related and women in development (WID) issues as follows:

1. Design, appraisal and implementation: (a) How were the interests and role of women (compared to men) taken into account in each of the design, appraisal and implementation stages of the program evaluated? (b) In what ways did women (compared to men) participate in these processes?
2. Effects and impacts: (a) what were the effects, positive or negative, of the program concerning women's (compared to men's) access to income, education and training, and with respect to workloads, role in household and community, and health conditions? (b) How were the interests and role of women (compared to men) taken into account in the evaluation stage? (c) Were significant factors concerning women (compared to men) overlooked at the appraisal stage?
3. Data availability: Were gender-specific data available for each of the program stages? (a) Design (b) Appraisal/ Approval (c) Implementation (d) Monitoring (e) Evaluation
4. Sustainability: (a) How did women's integration in AID activities affect the sustainability of program outcomes? Were outcomes more sustained (or less sustained)? When women were taken into account in AID activities? (b) Are the results achieved by the program equally sustainable between men and women beneficiaries?

III. Education Management Information Systems Specialist

a. **Functions:** Under the general guidance of the team leader, assumes responsibility for the part of the program dealing with the education management information system. The specialist will primarily evaluate the Balochistan and NWFP EMIS systems, but also the Punjab, Sindh and federal EMIS systems to a lesser extent. Will assess status of the development of the EMIS system and its various sub-components such as the financial management system and the school census, etc. Will assess appropriateness/potential usefulness of the information generated, and the extent to which the information is actually being used.

b. **Qualifications:** Proven expertise in evaluating education management information systems. Extensive training and experience in educational administration, with special reference to experience in developing countries in the fields of education and/or social services planning and administration. Expertise in management of large educational systems, cost analysis, and management training. Previous service in Pakistan or other sub-continent countries in educational administration or related fields desirable.

Mid Term Evaluation
Primary Education Development Program
391-0497

Construction Component

Scope of Work

Purpose of Evaluation

The USAID Mission to Pakistan is undertaking a mid term evaluation of the Primary Education Development (PED) Program. For a detailed description of the activity to be evaluated, the purpose of evaluation, background, statement of work, evaluation approach and methodology, deliverables, and composition of the evaluation team, see the attachment.

As part of the overall program evaluation, the Mission would like to have the construction-related activities evaluated as well. For this purpose, the services of a recognized Pakistani construction expert are required.

Background

Commensurate with the program approach, policy dialogues and reforms were initiated not only on the "software" side of the primary education, i.e., administration and management, teacher training and supply, curriculum, etc., but also on the "hardware" side, i.e., construction, management, and maintenance of primary education related facilities mainly primary school buildings.

Statement of Work

The construction expert will be required to join and work closely with the evaluation team of four expatriates and a Pakistani but strictly on the activities/issues related to construction. The expert will review the actions initiated under PED for improving management of construction and maintenance of primary education facilities with a view to:

- (a) Evaluating progress on the original program targets;
- (b) Evaluating the targets in the light of the Pressler Amendment. Highlight current constraints and opportunities, identify and document lessons learned;
- (c) Assessing the role the private sector in the management, supervision, construction, and maintenance of primary education facilities; and

- (d) Analyzing progress on construction activities; relating this progress with that of the other program activities and identify any bottlenecks in meeting the objectives of the program.
- (e) Providing recommendations that will enhance the effectiveness of the program and suggestions on how these recommendations can best be implemented. The consultant should also identify types of training that may be useful in overcoming limitations in the construction program.

Evaluation Approach and Methodology

See the relevant section in the attached document. The construction expert will work and coordinate closely with the core team. The focus will be on looking at the program approach in the construction component, not on counting school buildings.

Deliverables

The expert will submit the draft/final reports to be incorporated into or appended to the main report as appropriate and determined in consultation with the core team leader. The expert will also review the draft/final reports of the core team to ensure inclusion/correctness of construction related observation, findings, and recommendations.

Functions and Qualifications

The expert would serve under the general guidance of the project administrator (evaluation team leader). Would assume the direct responsibility for the evaluation of that part of the program which is related to construction/maintenance of buildings.

A minimum of a Bachelor's degree in civil engineering or architecture and professional registration with either Pakistan Engineering Council or Pakistan Council of Architects and Town Planners is required. Should have served with a well-known organization in very senior positions (head, general manager, chief engineer, etc.) for at least three to five years. Training and experience in evaluation are essential.

Clearance: HProctor, In draft
STirmazi, HRD: In draft

2

April 18, 1992

PED Program Evaluation

Addendum to Scope of Work - Financial Management Specialist

Background: Both provinces, Balochistan and NWFP, should be moving toward the setting up of a financial management system that ~~--- --- --- --- ---~~ all financial resources in primary education, both donor and provincial. Project Implementation Letter (PIL) No. 8 was issued in May 1990 to give guidelines to the provincial governments to set up the system.

The system should represent both the budgetary allocations and expenditures, and eventually be computerized.

In NWFP, the province has begun the computerization of the existing system, at least as far as the Directorate of Primary Education is concerned. However, this may not represent all primary education, in terms of all donor and provincial funds. In addition, it seems the Director may have little control over the mass of expenditures, i.e., the recurrent cost budget which pays for the salaries of teachers, district education officers, their deputies, and so on down the line.

In terms of PIL No. 8, it was found out that in NWFP, and presumably in Balochistan, the system was not set up to categorize all budgets and expenditures into the five categories proposed in PIL No. 8. For instance, the subset of administration expenditures occurs in many different accounts. The provinces are far from consolidating these accounts.

In NWFP, the province is starting to computerize at the micro level. PED consultants are transferring the existing system onto the computer. Attached in the December 07, 1992 memo are reactions by ERD to the system as of that date. The next few, but difficult, steps would be to bring in other donors into the system, in actuality, the remaining provincial finances, and the expenditures for teachers, DEOs, etc.

The "remaining provincial finances" are also complicated because primary schools that are part of the middle and secondary schools network are not administered, financially or otherwise, by the Primary Schools Directorate.

Given these varied problems of the financial management system, which represent themselves in a lack of reliable budgetary and expenditure data, it continues to remain difficult for donors to argue for provincial fiscal responsibility in the area of primary education. The more confused the system, the easier it is for provinces to substitute donor funds for their own allocations and expenditures. At the same time, it is difficult to determine inefficiencies in the system, which lead to a major wastage of resources, since the picture is totally unclear.

Statement of Work:

The contractor should examine the different issues presented in the background section above, for both Balochistan and NWFP, and present an analysis of the existing financial management systems in the two provinces. In particular, the contractor should make recommendations that the provinces can realistically achieve in the remainder of the PED Program in order to improve their FM systems.

In particular, the contractor should:

- o Examine the individual FM systems in Balochistan and NWFP to see how far along they are in being representative of all primary education financial resources, both donor and provincial.
- o Examine how far along both Directorates of Primary Education are in being financially representative of all primary education resources. Please include an analysis of the finances of primary schools that fall under the secondary education directorates.
- o How far have the guidelines issued in PIL No. 8 been followed by the provinces in developing their FM systems. Can their current system be consolidated on the basis of PIL No. 8, and within what time frame?
- o Examine the FM system in each province to see how well the representatives expenditures on primary education.
- o In both provinces, examine what control the directorates have over budgeting and expenditures on the salaries of teachers, DEOs, and so on down the line.
- o Examine what the computerized systems in both provinces represent.
- o In all of the points noted above, make recommendations based on the next year as to what is doable under the program.

The findings of this component of the evaluation need to arrived at in conjunction with the efforts of the rest of the team.

ANNEX 3

Annex 3
List of Persons Interviewed
April 12-28, 1993

Islamabad

Mr. Abasi, Curriculum Wing Chief
Mr. Bashir Pervez, World Bank
Ms. Aaliya Shahid, NEMIS

Balochistan

Mr. Malik Ijaz Ahmed, Director of Primary Education
Malik Ijaz Ahmed, Director, Primary Education
M. Anwar, Director Bureau of Curriculum and Extension
Sultan Iltaf, Chairman, Textbook Board
Zakia Yousafi, Deputy Director, Teacher Training
Manzoor Qambri, Deputy Director, BEMIS
Mobeen Shah, Deputy Director, Instructional Material Development
M. Ishaque, Deputy Director, Planning
Faiz M. Jaffer, Assistant Director
Sarfraz, Assistant Director, BEMIS
Bill Darnell, Team Leader, PED
Bill Fanslow, PED Technical Advisor, Teacher Supply and Training
Janet Robb, PED Technical Advisor, Curriculum and Materials Development
Jorge Valdes, PED Technical Advisor, Balochistan Education Management Information System (BEMIS)
J.J. Bamji, Technical Advisor, Construction Engineering
Qasim Iqbal, Financial Analyst, PED
Ghazala Siddique, Program Associate, BEMIS, PED
Daniel Shafqat, Program Assistant, BEMIS, PED
Rahila Mushtaq, Program Associate, Policy Administration, PED
Junaid Siddique, Program Associate, BEMIS, PED
Yasmeen Ameen Akhtar, Community Education Promoter, PED
Shabir Ahmed, Community Education Promoter, PED
Shahnaz Maqbool, Administrator, PED
Ahmer Shah, Management Assistant, PED
J.K. Baloch, Management Assistant, PED
Mr. Mobin Shah, Curriculum Wing
Mr. Atiq, Deputy Director Primary Education Curriculum Reform Project (PECRP)
Mr. Anis Iqbal, CRASH Program
Mr. Jamile Kirmahni, Subject Specialist
Professor Sultan, Chairman Textbook Board
Ms. Bushra Tahseen, Subject Specialist

Instructional Material Development Group.

Mr. Mobeen Ahmad Shah, Deputy Director
Fakhra Ramzan, Program Associate
Nuzhat Gulzar, Subject Specialist
Anwar Ali Chaudary, Subject Specialist
Manwar Sultana
Rishida Hussan
Mukhtiar Bano

Hakkima Qasim
Rashida Sardar
Rashida Saeed
Bushra Perveen
Hakkima Khatoon Changazi

Ahmed Sulemany, Director, Buildings & Structures
Ahmed Riazuddin, Project Manager, Primary Education Schools Construction Programme
Sher Dil, Chief Secretary, Gov't of Balochistan
Tariq Janjua, Finance Secretary.
Jacinthe A. Desmarais, Resident Project Officer, UNICEF
Yun Shangguan, Project Officer, UNICEF
Quratulain Bakhteari, Home Schools Consultant
Professor Anwer Khetran
Javaid Akhtar, Deputy Secretary (Dev), Finance Dept.
Jorge Valdes
Dr. Ruquiya Saeed, President, Society for Community Support for Primary Education
Chief Secretary to the Government of Balochistan
Secretary Finance to the Government of Balochistan
Deputy Secretary Planning, Education Department
Assistant Director, Donors Coordination
Other Officials of the Education Department

North West Frontier Province

Ms. Mumlikat Tajdaar, Assistant Director
Ms. Khurshid Ali, Assistant Director
Ellen Van Kalmthout, Consultant (PED)
Mrs. Saeeda Afridi, General Coordinator
Syeda Khalida, Assistant Director
Zahida Shah, Deputy Director
Mohammad Fayyaz, Deputy Director
Tom LeBlanc, PED EMIS TA
Mohd Jan Momand, Manager Engr.
Sar Biland Khan, Consultant (PED)
Richard Cowell, PED TA, Teacher Training
Samiullah Marwat, Assistant to Mr. Beg
Fazal-e-Qadir, Deputy Director (PEP-II)
Wade M. Robinson, Chief of Party, PED
Taj Akbar Durrani, Assistant Director (Gen.)
Nasir Ahmad, Assistant Director
Riaz ud Din, Administrative Assistant (PED)
Shad Begum, Female SDEO, Malakand District
Mrs. Farkhanda Akhtar Bhatti
Farhad Qazi, Chief Planning Officer
Sardar Muhammad, System Analyst, EMIS
Muhammad Ashraf, Statistical Officer
M. Shaukat Usman, Managing Director, Frontier Education Foundation
Mr. Farooq Awan and Mr. Mohammed Sarwar, Lateef Mir and Jamshed Khan, Curriculum Bureau
Shah Sahib, Education Section, Planning and Development
Ghulam Dastagir, Additional Secretary, Finance Department

Swat

Mumtaz, SDEO
Aziz Khan, ASDEO (Dev)
Mahmood Shah (ASDEO)
Sher Azim Khan, ASDEO (Sup)
Bakht Afsar, ASDEO (Sup)
Sherin Zada, ASDEO
Fazli-Aziz, ASDEO
Zuhra Sikanidar, ASDEO
Adalat Begum, SDEO
Wazir Ullah, SDEO
Fazli Naum, SDEO
Ali Masashilhu, DY DEO
Fasidoon, Learning Coordinator
Shah Rosmkham, ASDEO
Fazal Mohammad ASDEO
Ahmad Salim, Learning Coordinator
Mohammad Haroon, Instructional Material Developer, PED
Niaz Mohammad, Instructional Material Developer, PED

Malakand Teacher Training College

Miss Sabiha Begum, History
Miss Rehana Safiq, Physical Education
Miss Amatur-Rab, English
Miss Sultan Begum, Superintendent
Miss Amna Bibi, Urdu
Miss Hamida, Urdu
Mrs. Parveen,
Miss Nasim Akhtar

Construction:

Mr. Khatak, D.DC (PED)
Mr. Mohammed Jan Momand, P.E., USAID
Mr. Ahmed Jan, XEM, C&W, Quetta
Mr. Zulifqar Ali, SDO, C&W, Quetta
Mr. Rafique Muhammed, Sub Engineer, C&W, Quetta
Mr. Mumtaz, SDO, C&W
Mr. Ijaz Ahmed, SDO, C&W
Mr. S. Daud Jan, SDO, C&W
Mr. Sayyed, Contractor Nuashera
Mr. Khawaja Ahmed, Sub Engineer
Malik Amanullah, Contractor Khaishki
Mr. Barkatullah, SDO, C&W Dargai
Mr. Jam Alam, Contractor, Khawaja Khela
Riaz, SDO, C&W
Mr. Abdul Qayyum, Chief Engineer C&W, Peshawar
Mr. Arifullah, Additional Director, CAU, PED
Mr. Riaz Din, Project Manager, EC, Quetta
Mr. Farhat Hussain, Chief Engineer, EC, Quetta
Mr. Mushtaq, Senior Engineer, EC/Qalat Division
Mr. Yasin, Senior Engineer, EC/Sibi
Mr. Hanif, AE, EC/Sibi
M/s. Adbul Ghani, Contractor, Sibi
M/s. F. Z. Ehsan, Contractor, Sibi
Mirza Aslam Beg, Senior Engineer, EC/Dera Murad Jamali
M/s. Taj Muhammad, Contractor, Quetta
Mr. Karm Khan Jomezai, Chief Engineer/DCW

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