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B

PRIMARY EDUCATION DEVELOPMENT PROGRAM

QUARTERLY REPORT 3

For the period July 1 through September 30, 1990

OVERVIEW

This report covers activities in both provinces during the third quarter of the contract period. As was true during the first two quarters, activities during this quarter were centered on following up Program start-up activities begun in the first two. This overview summarizes the activities to which primary emphasis was given in this three-month period. The summary is followed by fuller descriptions of the major activities undertaken in each province.

In general, primary emphasis was placed on:

- o Continuing activities to build on the results of the organizational studies conducted in both provinces to redesign the school directorates, creating a Directorate of Elementary Education in NWFP to become operational during 1990/91 and a Directorate of Primary Education in Balochistan to become operational at a later, more suitable time.
- o Acquainting newly arrived members of the technical assistance team (four of the six arrived in June) with the personnel, plans and functions:
 - of the EMIS, with Project BRIDGES, USAID, and UNDP staff;
 - of the other donor primary education projects (UNICEF, Pak-German Bas-Ed, World Bank PEP-II, Aga Khan Foundation, USIS, Peace Corps, Asia Foundation, and UNDP);
 - of relevant units in the Directorates of Education and related institutions in the two provinces (the Curriculum Bureaus, extension centers, teacher training colleges, Textbook Boards, etc.); and
 - of relevant MOE units at the Federal level (the Curriculum Wing, the Primary and non-formal Education unit [PNE], and related planning units).
- o Continued planning to coordinate PED activities with these plans and projects.
- o Supervising the completion of the study of private

primary school education in Pakistan contracted to National Educational Consultants (Pvt) Ltd.

- o Helping to finish the preparation of the 1990/91 Annual Workplans in each province and participating in the Steering Committee meetings to review and approve the Workplans.
- o Designing and conducting two-week PED workshops on the preparation of annotated teachers' editions of textbooks in the NWFP (one for language and social subjects specialists, one for mathematics and science specialists). Several members of the Pak-German Bas Ed Project also attended each workshop.
- o Planning the first year activities of the two UNICEF-funded mobile teacher training units in Balochistan with the UNICEF Quetta office field staff and designing the teacher training curriculum.

MAJOR ACTIVITIES

- o **Human Resources Survey**

(See Quarterly Progress Report 1 and 2 for a description of the survey and a copy of the NWFP survey design which differs only slightly from that for Balochistan.)

In Balochistan, by the end of the third quarter, data from all the Phase I villages in the 20 districts had been collected and entered. The data collection for Phase II, which was to have started as soon as Phase I data were complete, did not begin until September because of a misunderstanding. (There had been discussion of whether or not to collect data in Phase III villages because their remoteness and difficulty of access would make the survey costly. The HRS coordinator mistook this discussion to apply to Phase II as well and thus did not begin data collection in Phase II villages in July when Phase I data collection was complete.)

In the NWFP, beginning in July, Kawsar Naheed, (the survey coordinator), Andrea Rugh, and Nick Cowell, all of whom had been involved in the survey design and in the development of the questionnaires and researcher instructions, prepared training plans and pilot-tested both the researcher training and the questionnaire. The questionnaire was then printed.

No further work was done on the Human Resource Survey because of the lack of funds available to the Directorate to pay for travel and other costs necessary to conduct the survey in 8,000 villages of NWFP.

o **Private Education Study**

(See Quarterly Progress Report 1 and 2 for description.)

On September 23, a meeting was held in USAID/Islamabad to review the draft of the final report. Suggestions for revision and reformatting the report and for additional data analysis were made.

Earlier reviews of progress on the study and of early drafts had made it apparent that there would be problems in collecting the data needed to make this first study of private primary education in Pakistan as fully explanatory and comprehensive as planned. By early September, therefore, a decision was made to conduct a follow-on study suggesting ways in which to continue the effort and begin implementation of the study's recommendations. Ms. Shahnaz Wazir Ali, the former Secretary of State for Education, has been contracted to conduct the follow-on study.

o **Directorates of Primary Education**

In NWFP a committee headed by the former Additional Secretary of Education reviewed the organizational study prepared by outside consultants and sent their conclusions to the Chief Minister in early July. On the basis of that summary, the Directorate of Education was established and positions authorized. A copy of the staffing summary is included in the appendix to this report. Job manuals (short position descriptions) were also prepared, submitted, and approved for the top-level authorized positions.

The full report has been circulated to the Departments of Finance, Law, P&D, and Services and General Administration for their review and comments. All but the P&D have returned their comments. Thus far, the only disagreement is from Finance which objects to raising the grade level of the DEO position from 18 to 19.

As reported in Quarterly Progress Report 1 and 2, the Balochistan Directorate of Education has taken no further action on the recommendation of the organizational study prepared by outside consultants for that province. A study of the devolution of authority to the divisional level has been authorized and a consultant selected. Work is to begin in the fourth quarter.

o **EMIS**

Rafique Khattak and Javed Quershi, EMIS coordinators designate in the NWFP and Balochistan, respectively,

spent three weeks at Harvard in August working with Tom LeBlanc and Jorge Valdes on training plans and schedules in preparation for EMIS start-up in October, with the annual school census.

Although Valdes and LeBlanc were scheduled to return to Pakistan for a nine- or ten-month period, they were unable to return until the fourth week of September, delaying further the start of EMIS training and development. Fortunately, Ernesto Cuadra worked for four days in Balochistan and five in the NWFP and helped immeasurably in further developing the proformas.

The time required to complete USAID's procurement process will not allow the computers and the necessary peripherals to be in place in time to meet the EMIS schedule for entering annual school census data, which is to be collected in October.

Events have proceeded more swiftly in Balochistan. Ijaz Malik purchased computers for eventual administrative use and have made them available for training EMIS data-input operators until USAID-purchased computers arrive on October 6. Two additional computer experts, one seconded from the Ballad Project and one employed as a consultant, have been on hand to provide computer keyboard skill training and to input the human resource survey data, which had stopped when Quershi went to Harvard for additional training.

The same arrangement for purchasing computers has been made for the NWFP but until everyone is assured that the Director of Primary Education will receive his personal ledger account shortly, no tenders are to be offered.

In the NWFP, LeBlanc and Khattak have adjusted the census proforma to meet the needs of the Textbook Board, to conform to national data requirements as set forth by Mellor of the UNDP, to meet the needs of the secondary schools, and to meet some of the information needs for school construction. Final translation into Urdu will take place in October, once one more round of adjustments to meet user needs has been made.

o Coordination with Other Projects, Donors

Given the large number of educational projects underway or planned that affect primary education in the two provinces, it is imperative that we continue to be well-acquainted with the plans and personnel of each project to ensure systematic cross-project coordination. To that end, the following meetings were held:

- With UNICEF's Yasmin Ehsan, Head of Education, and Dr.

Siyal, of the Curriculum Wing, to further discuss the coordinated research, development, and technical assistance activities between PED and UNICEF.

The first workshop at the Federal level, a two-day orientation workshop to be led by Jim Hughes and Mona Habib, will be held on November 14/15 at the Curriculum Wing.

After much discussion, both UNICEF and the Wing have taken the view that each province can proceed at its own pace and in its own time, a solution we had urged. As currently planned, PED's curriculum development activities are closely tied to the PCRP and much more delay while waiting for "national" consensus on timing and start-up would seriously impede curriculum and instructional development activities in the two provinces for which PED is responsible.

- The UNICEF-Government of Japan-PED collaboration continues in Balochistan on the mobile teacher training program.

- Discussions and collaboration continue with the Pak-German Bas-Ed project, which provided both participants for the PED annotated textbook workshop and sample annotated textbooks.

o Workshops on the Preparation of Annotated Teachers' Editions of Textbooks

Two workshops were held at the NWFP Textbook Board on this topic, each for two weeks. The first was attended by language and social subjects specialists, the second by specialists in mathematics and science. A copy of the final report of the Workshop is included in the appendix to this report.

MAJOR ACTIVITIES THAT HAD BEEN ANTICIPATED FOR THE THIRD QUARTER

Some changes were expected in these activities since the projections were made before the provinces' Annual Workplans and implementation schedules were made final.

o Annual Workplans

- Work with Ijaz Malik, Shah Jehan Khan and their staffs to complete development and gain approval of their 1990/91 Annual Workplans by USAID, the provincial Steering Committees, and other provincial authorities. Submit to USAID.

Status: Accomplished.

- Develop PED Annual Master Work Plan and submit to provincial Department of Education authorities and USAID for approval.

Status: The Annual Master Work Plan has been prepared for the NWFP but is not yet final for Balochistan. When complete, it will be submitted to USAID and officials in the two provinces.

- Develop individual long-term advisor work plans and submit to provincial Department of Education authorities and USAID for approval.

Status: Individual long-term workplans have been prepared by all members of the team except the two team leaders. They will be completed shortly and the total package submitted to USAID and officials in the two provinces.

o **Private Education Study:**

- National Educational Consultant and PED consultant Rashid Ahmed will finish data collection, analysis, and final report by September 30, 1990.

Status: Completed. A new, follow-on study has been commissioned and will be undertaken in the fourth quarter. Copies of the final report of the Private Education Study have been distributed to USAID and officials in the two provinces.

o **EMIS**

- BRIDGES will begin the training of EMIS coordinators from Balochistan and NWFP at Harvard in July/August in a small, informal training/planning workshop. Training of field personnel in data collection, data entry, report generation, etc., will begin in both provinces in September (provided computers are available at that time).

Status: The Harvard training took place as planned. Training of field personnel, to have begun in September in both provinces, began in Balochistan but not in NWFP for lack of computers and the trainer from Harvard. Balochistan was able to find a capable trainer who was seconded to the PED, and the province purchased computers from its own budget. The Director of Primary Education in the NWFP will purchase computers when USAID money becomes available, probably in the fourth quarter.

- Complete approval process for school census proformas in both provinces, print, and prepare for distribution.

Status: The approval process for the school census

proformas proceeded as planned, although Balochistan moved much faster than the NWFP. Printing will take place in the fourth quarter in both provinces. Balochistan should have the forms finished at least two to three weeks before NWFP.

- With BRIDGES staff, prepare a planning/administrative report clearly delineating and assigning the roles, responsibilities and authority of PED, BRIDGES and the provincial Secretariats in EMIS development, with particular reference to the UNDP and its responsibilities. Submit drafts to USAID, Secretariat officials, and UNDP for review and comment, and the final draft to USAID and Secretariats for approval.

Status: A first draft has been prepared by Don Warwick, clarifying the role of BRIDGES in relation to PED and EMIS Development. Discussions with all team members to clear up any misunderstanding and to revise, if necessary, will be held during the team meeting on November 20-22 in Peshawar.

o Human Resource Survey

- Complete data entry and initial analysis of Human Resource Survey, Phases I and II, in Balochistan. Decide on whether to proceed with Phase III (small, remote, hard-to-reach villages).

Status: Data entry has been completed for Phase I, and data collection begun for Phase II. (See the earlier discussion of the Human Resource Survey for a fuller explanation.)

- Supply appropriate data set to UNICEF and Directorate of Education authorities for use with the Mobile Teacher Training Project.

Status: This has been done for Phase I data in Balochistan.

- Prepare and test a demonstration of the utility of the HRS data file for use with USAID and education officials.

Status: Not done. Was to have been accomplished at Harvard during summer 1990 but the data diskettes that arrived at Harvard were undecipherable, and no one familiar with the data file remained in Quetta while Javed Quershi was at Harvard.

- Complete the training of data gatherers and supervisors, and begin data collection, entry, and data analysis of Phase I vilages in the NWFP.

Status: Not accomplished. (See the earlier discussion of the HRS.)

- Correlate HRS study data with school location, school mapping, and school construction planning.

Status: In the plans but not yet accomplished.

- Set up the HRS data file in the EMIS, using the data as training material for EMIS data entry staff.

Status: Accomplished in Balochistan. Same data base structure will be used in the NWFP. HRS data collection has been so delayed in NWFP, however, that it can not serve as training material for the EMIS training operation.

- Examine the possibility of the use of the HRS data file as one base line for formative evaluation of progress in school construction.

Status: Not possible until the data files are complete.

o Improving Teacher Performance

- In NWFP, begin study design, Pakistani counterpart selection, and instrument development for an assessment of PTC Training.

Status: Warwick and Rugh arrived on PED consultancies in late September to begin this task with Cowell. It will be complete in the fourth quarter. No counterpart has yet been selected.

- In NWFP, begin to design study, select counterparts, and begin instrument development for a study of multigrade teaching.

Status: Rugh and Cowell began this task in September. No counterpart has yet been selected.

- In Balochistan, begin collection of data from secondary sources, discussions with education officials, teacher trainers, for a teacher supply and training plan.

Status: No action has been taken on this task.

- In NWFP, begin collection of data from secondary sources, discussions with education officials, UNICEF on the development of supervisory and learning coordinator effectiveness plan.

Status: Cowell has begun discussions with UNICEF and, with Rugh, has begun designing the plan, which will

include a training plan for learning coordinators, to be funded by UNICEF.

- In NWFP begin developing workshops focused on explicit teaching methods.

Status: Nothing has been accomplished yet.

o Improving Curriculum Development

- In Balochistan, continue the organizational analysis of the Curriculum Bureau.

Status: Ongoing. Should be completed in the fourth quarter.

- In NWFP, begin the organizational analysis of the Curriculum Bureau and Education Extension Center, and prepare for the organizational analysis of the Textbook Board.

Status: All the data needed for the analysis of the Bureau have been gathered. The preparatory work for the Textbook Board study has been collected. Two consultants will arrive in October to begin the analysis.

- In both provinces, continue coordination with Peace Corps in English language materials development and teacher training.

Status: Peace Corps training took place during August. Once the volunteers are in place and settled, further contact will be initiated to begin any coordination warranted.

- Begin the design of the contrastive linguistics analysis in Urdu, Baloch, Brahui, Pashto, Saraiki, Hindko, and Chitrali in concert with plans to develop a graded vocabulary in Urdu and Pashto.

Status: The design of the analysis and the graded vocabulary study began in early September with the arrival of Elena Bashir, who is working closely with Mona Habib, Mumtaz Monglori of the NWFP Textbook Board, and the Pak-German Project on the design and implementation of the activity.

- Develop and submit a working paper to UNICEF on the redesign of the PCRFP.

Status: Accomplished.

o Improving the Capacity to Produce Quality Instructional Materials

- In NWFP, conduct workshop on annotated teacher editions of textbooks for editors, textbook writers, and curriculum developers to improve skills in editing and writing, with special emphasis on the development of annotated teachers' editions. The workshop will be open to the curriculum development staff of the Pak-German Bas-Ed Project and to Balochistan Textbook Board staff, if their duties permit them to attend.

Status: Accomplished. (See earlier discussion.)

- Continue the organizational study of the Textbook Board in Balochistan.

Status: Ongoing. Is expected to be completed in the fourth quarter.

- Begin computer training of Textbook Board staff in Balochistan.

Status: Ongoing.

- Continue the development of the study in Balochistan on determining the potential "longevity" of textbooks in a variety of grade levels and school sites.

Status: The study is proceeding, as planned.

o School Construction

- In Balochistan, develop criteria for school location, review school designs, select alternatives, and prepare an initial list of school rehabilitation and construction schemes.

Status: Not yet accomplished. This task can not be accomplished until contract negotiations between the GOB and the A&E firm are completed and the firm is at work.

OUTSTANDING ISSUES (discussed in Quarterly Progress Reports 1 and 2)

o NWFP Participant Training. The Evaluation and Drafting Committee for the reorganization of the Directorate of Education has recommended that the proposed participant training, short-term training, and study tours in the U.S. be curtailed and the money transferred to building capacity in the NWFP to conduct the required training. The committee proposes that additional technical assistance be provided to help in building local training capacity. No action has yet been taken on their report but is expected in August 1990.

Acceptance of the recommendation by NWFP officials and USAID will require the reallocation of some program funds and changes in the scope of work and level of effort in PED, should that be the instrument USAID chooses to use for the effort.

Status: No action yet. Decisions on this and other aspects of the set of recommendations of the Evaluation and Drafting Committee have yet to be made. The fourth quarter should see action on all of them.

o UNICEF's Curriculum Development Project (PCRP) seems stalled. Should the project remain in limbo, as it has for over three years, PED, the provincial education authorities, and USAID will need to re-think and reprogram PED curriculum and instructional materials, development activities and aims.

Status: See the earlier discussion on coordination with other donors.

o The NWFP has accepted a proposal by the Peshawar office of UNICEF that they fund a training program for learning coordinators, even though in their 1989/90 and 1990/91 Annual Plans NWFP officials plan to undertake with PED assistance a Learning Coordinator Effectiveness Study (see the Annual Plan for NWFP). If the training is to be effective, its design should follow on the outcomes of the Learning Coordinator Effectiveness Study. This will require careful coordination with UNICEF.

Status: See the earlier discussion on this topic.

o To be maximally effective, site selection for UNICEF's mobile teacher training activity in Balochistan, which has already begun, should be based on data from the Human Resource Survey. Yet those responsible for the data entry and analysis will not be available to complete their work until early September or later because they are being trained for the development of EMIS, particularly the school census. Again coordination of timing and planning is vital.

Status: Darnell recruited a consultant to complete the data entry before the Mobile Teacher Training Project needed the full data set. Attention will have to be paid continuously to adequate planning and the coordination of the timing of various activities. Both Darnell and Robinson now have the project management software Instaplan and will begin exploring its use.

PROBLEMS, RECOMMENDATIONS

o **Lack of Counterparts.** Because of the shift in responsibilities resulting from the separation of the Directorate of Schools into Primary and Secondary

Directorates, none of those who will be responsible for operating the system of primary education will be in place before December 5-15. After that there will be a preparatory period during which people will be settling in and will not have time to function as counterparts.

If the TA team is to proceed with the major activities in the Annual Workplan, but without counterparts, outside people may have to be hired to supervise studies. Such an action would mean foregoing capacity-building opportunities. On the other hand, if the TA team does not proceed, the full set of activities in the Annual Workplan will not be completed.

o **Problems in Establishing the Personal Ledger Account (PLA).** The coordinator of the Human Resource Survey has been ready to begin data collection since mid-July. With no money available to pay teachers to collect the data or supervisors to help train them and oversee the effort, she has not been able to proceed with action that USAID could take to help speed up the process in the NWFP.

o **Contract Amendment (USAID-AED).** It is anticipated that additional workshops/seminars and additional short-term technical assistance, recruited locally or from abroad, will be required to meet contract and program goals. An amendment to the contract between USAID and AED will be required to provide for redirecting contract funds in order to meet the needs.

Status: Pending USAID action.

LEVEL OF EFFORT

The estimated total level of effort for the performance of the base period of the contract (February 1990 - February 1993) is 993 person-months. Exhibit 1 indicates the level of effort provided to date.

The following personnel provided contract services during this reporting period:

Long-term Advisors

	<u>Peshawar</u>	<u>Quetta</u>
Admn/Planner/Team Leader	Wade Robinson	William Darnell
Tchr. Trng. Specialist	Richard Cowell	Pat Emerson
Curriculum Development/ ISD Specialist	Mona Habib	James Hughes

Home Office

Project Coordinator	Barbara O'Grady
Admn/Financial Officer	Linda Rupard
Program Assistant	Anna Grady
Secretary	Susan Collison

Short-term Consultancies	Consultant	Dates
Private Education Study	Rashid Ahmad	June-September
Annotated Textbooks	David Giltrow	August-September
Teacher Training/ Multigrade Teaching	Donald Warwick	Sept-November
Teacher Training/ Multigrade Teaching	Andrea Rugh	Sept-October

Consultancies Planned for the Following Quarter

Financial Management Systems (Balochistan)	Dennis Martin	October-December
Textbook Board Studies - Production	Adrian Higham	October-November
- Editorial	Sheila Ross	October-December
Decentralization (Balochistan)	Nek Buzdar	October-January
English Language Instruction	Mary Anne Sennett	Nov-February

Appendices

Appendix A

**NWFP Directorate of Education
Staffing Summary**

ISSUES:-

(1) WORK LOAD TO BE TRANSFERRED TO NEW DIRECTORATE, BALANCE REMAINING WITH THE OLD DIRECTORATE:-

(a) Schoolwise work load:-

At present all categories of schools are controlled by the Directorate of education(Schools) NWFP, details are as under:-

S.No.	Level.	Number (as on 31.10.1989)		Total	Direct control.
		Male	Female		
1.	Primary.	6808	3241	10049	Sub:Divisional Edu: Officers through ASDEOs for supervi- sion purpose only. Admn:Budget and record maintained by SDEOs.
2.	Mosque.	4102	--	4102	
3.	Maktab.	155	--	155	
4.	Mohallah.	--	83	83	
5.	Lower Middle.	5	1	6	
6.	Middle.	624	161	785	SDEOs for all purposes.
7.	High.	790	168	958	DEOs for all purposes.
8.	Higher Secondary.	42	5	47	Dival:Directors for all purposes.
Total.		12526	3659	16185	

Out of 16185 Schools (Boys & Girls), 14395 Schools with an enrolment of 15,29,805 students and 53732 teachers and class IV servants will be transferred to the Directorate of Primary Education after bifurcation. Besides, the budget and administration of 785 Middle (Elementary) Schools (Boys & Girls) are under the direct control of Sub:Divisional Education Officers, who are the grass root level officers of Primary Education System and will form part of the Primary Education Directorate. As a result of reorganisation, 1005 schools will be left over to the Director of Secondary Education NWFP; and if Middle (Elementary) Schools are made a part of Secondary/Higher Secondary System then the total number of schools will become 1790.

TOTAL NO: OF SCHOOLS & THE NO: TO BE TRANSFERRED TO PRIMARY DIRECTORATE

S.No.	Level of Schools.	Number of Schools.	No:of Schools to be transferred to Primary Edu:Directorate (I - V)
1.	Primary(every type)	14395	14395
2.	Middle.	785	15185
3.	High/Higher Secondary.	1005	
			1790

Contd;P-2

WORK LOAD OF ADP 1990-91

(b) DETAIL OF SCHOOLS ESTABLISHED AND UPGRADED.

	<u>A.D.P.</u>	<u>PEP Programme</u>	<u>Totals</u>
1. Primary Schools (Boys & Girls) (establishment):-	= 1855	100	2855
2. Primary schools upgraded to Middle Status	= 126	40	166
3. Middle Schools upgraded to High Status	= 72 Schools +64 rooms in(Middle & High).		72
4. High Schools upgraded to Higher Secondary Status	= 5		5
			77+
			677

Note:- Besides, the PEP Programme will under-take the construction of 4 hostels and ware house for N.W.F.P. Text Book Board.

(c) ENROLMENT WISE WORK LOAD :-

The table given below gives a picture of the work load of enrolment to be transferred to Primary Sector and retained in the Secondary.

S.No.	Level	Male	Female	Total
1.	Primary(all kind)	12,00,378	3,29,427	15,29,805
2.	Middle.	02,62,858	0,45,076	03,07,934
3.	High.	00,86,445	0,13,358	00,99,803
4.	Higher Secondary.	00,03,733	0,00,249	00,03,982
	Total.	15,33,414	3,88,110	19,41,524

} Under the control of SDEOs.

Load of Enrolment

Primary	Middle	High/Higher Secondary	Enrolment to be transferred to Primary.
15,29,805	3,07,934	1,03,785	15,29,805

Note:- There are 1,74,361 (1,41,640 + 32,721) boys and girls students respectively from classes 0-V in Middle Schools and 29,390 (28,526 + 864) boys and girls students respectively in Class-V in High and Higher Secondary Schools.

(d) Staff Work load in and under the Directorate of Education Primary and Secondary in Provincial, Divisional, District and Sub Divisional Offices.

S.No:	Directorate.	20	19	18	17	16	16	15	12	11	7	5	4	2	1	Total
						(G)	(G)									
1.	Primary.	1	8	33	112	407	42	8	23	642	214	317	59	39	516	2415
2.	Secondary	1	7	43	47	101	51	8	25	102	124	181	29	31	258	1008
	<u>staff load Primary Directorate</u>															2415
	<u>Staff load Secondary Directorate</u>															1008

(d) Teachers Trainingwise work load on Directorate of Education Primary and Directorate of Education Secondary:-

Selection, training and placement of the bulk of trainees (who are PTCs) will be shired to the Directorate of Education Primary while

a small number will be left over to the Secondary according to the following table.

No;of trainees according to the Selection figures of 1990.

Primary.	%age.	Secondary				%age.
		CT(Gen)	CT(Ag:Tech)	DM	Total.	
P.T.C.						
2030	75.88	385	+ 120	+ 140	645	24.11

Note:- Out of 2675 trainees, 2030 will be transferred to Primary Education Directorate.

According to PC-I and Annual Work Plan (P.E.D.Programme), there will be a large number of activities pertaining to teachers training through formal and distance study system which will be a regular feature and for which more staff in the Directorate of Education Primary will be required to work as counterparts of consultants to formulate policies and determine future needs. Besides counterparts, 3 to 4 fulltime supporting staff for curriculum development, teachers training and other studies will be needed in the Directorate of Primary Education N.W.F.P. The staff at Provincial Headquarters Directorate of Education (Primary) will be in addition to this staff.

(E) Budget Load:-

The Budget allocation of Primary and Secondary Education for the fiscal year 1990-91 and percentage of both the sectors is given below which gives an idea of the work load of each sector.

Budget allocation for 1990-91.

1	2	3	4	5
S.No.	Sector.	Amount.	%age of total allocation.	Budget to be transferred to Pry:Directorate of Education.
1.	Primary	Rs.1,22,23,98,140/-	64.563	Rs.1,22,23,98,140/-
2.	Secondary.	Rs. 67,09,18,550/-	35.436	
Total.		Rs.1,89,33,16,690/-		

The above budget figures of Primary Education are solely controlled by the Sub Divisional Education Officers - who will form part of the Primary Education Development Programme while this amount will increase when the Directorate of Primary/Elementary Education NWFP, Divisional Directorates & Offices of District Education Officers are established and made fully operational.

(ii) Divisional/District/Sub Divisional management posts-option reflected in the reference:-

Pages 85,87,89,91,93 & 95 of PC-I wherein posts of the Directorate of Education(Primary), Divisional Directorates of Education(Primary) and

Contd:-P-4

District Education Officers(Primary) have been given and approved by ECNEC Islamabad were included by the finance department on the behest of the Additional Chief Secretary(Chairman Steering Committee(P.E.D. Programme) and Secretary Finance department after discussions of Additional Secretary, Deputy Secretary and Section Officers/Budget Officers (Finance Deptt:) for two days with officials of Planning Cell(P.E.D. Programme)-responsible for preparing PC-I. These posts with the following details have been duly created by the Finance Department for 1990-91, also shown/recorded/reflected in this reference & are according to approved PC-I.

DETAIL OF POSTS(PROVINCIAL/DIVISIONAL/DIRECTOR)P.E.D.PROGRAMME REFLECTED IN P.C.I AND BUDGET BOOK FINANCE DEPTT: FOR 1990-91.

Directorate of Education (Primary).	20	19	18	17	Grade/Basic Pay Scale.										Total
					16 (G)	16 (NG)	15	12	11	7	5	4	2	1	
	1	8	33	112	401	42	8	23	642	214	317	59	39	516	2415

(iii) POSTS TO BE CREATED (HERE)IN PRIMARY EDUCATION DIRECTORATE AND SUBORDINATE OFFICES AND SUBSTRACTED FROM OLD DIRECTORATE:-

According to PC-I (P.E.D.Programme) and Budget Book (Finance Department 1990-91 the following posts have been created while the posts of SDEOs,ASDEOs, Learning Coordinators and supporting staff already exist in the budget.

PRIMARY EDUCATION DIRECTORATE(POSTS) CREATED AT PROVINCIAL/DIVISIONAL/DISTRICT LEVEL.

S.No.	20	19	18	17	Grade/Basic Pay Scale.										Total.
					16 (G)	16 (NG)	15	12	11	7	5	4	2	1	
1. Primary (created)	1	8	33	112	401	42	8	23	642	214	317	59	39	516	2415

Posts to be substracted from old Directorate.

2. SDEOs already existing.	-	-	-	56	308	-	-	-	553	89	143	19	-	231	1399
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Note:- Other staff from old Directorate will be substracted according to the load of work which will be transferred from it to Primary Education Directorate.

CHART - A

Work load in present Directorate.	Work load to be transferred to Primary (I-V) Directorate.
-Staff:- 85,298	-Staff:- 53,732
-Student:- 19,41,524	-Students:- 15,53,414
-Supervisors:- 36	-Supervisors:- 901
-Office work:-According to above schools, enrolment, budget, staff and training load.	-Office work:-According to above schools, enrolment, budget, staff and training load.
-Budget:- Rs.1,89,33,16,690/-	-Budget:- Rs.1,22,23,98,140/-

CHART - B

Staff in existing Directorate.			Proposed for new Directorate.			Recommended for new Primary Directorate.		
S.No.	BPS.	No.	S.No.	BPS.	No.	S.No.	BPS.	No.
1.	20	1	1.	20	1	1.	20	1
2.	19	1	2.	19	2	2.	19	2
3.	18	2	3.	18	4	3.	18	4
4.	17	11	4.	17	9	4.	17	4
5.	16(G)	2	5.	16(G)	-	5.	16(G)	-
6.	16(NG)	9	6.	16(NG)	7	6.	16(NG)	7
7.	15	2	7.	15	2	7.	15	2
8.	12	10	8.	12	11	8.	12	11
9.	11	18	9.	11	7	9.	11	7
10.	7	24	10.	7	14	10.	7	14
11.	5	29	11.	5	28	11.	4-5	28
12.	4	2	12.	4	5	12.	4	5
13.	2	2	13.	2	4	13.	2	4
14.	1	38	14.	1	22	14.	1	22
Total		151	Total		116	Total		116

(SHAH JAHAN KHAN)
DIRECTOR
PRIMARY EDUCATION.

Appendix B

**Annotated Textbook Workshop
Consultant Report**

To: Dr. Wade Robinson

From: David Giltrow (DG)

Date: September 8th, 1990

Subject: Consultant's report

This report is composed of three parts:

I. Brief observations about the two annotated textbook workshops held at the NWFP Textbook Board August 4th - 16th (math and science), and August 18th - 30th (languages and social studies).

II. A rough manual containing comments and handouts which might be helpful in planning future annotated textbook workshops.

III. Several activities which are either direct followup or suggested by the AT workshop experience and designed to further the aims of the PED Program.

Consultant's timetable. The consulting period was broken into the following segments:

July 25th. Travel to Washington, DC

July 26th - 27th. At AED, Washington. Discussions with Wade Robinson, Barbara O'Grady, Linda Ruppard, Peter Boynton, and brief meeting with David Sprague.

July 27th - 30th. Travel to Peshawar

July 31st Meeting with Mr. Shah Jahan Khan. Meeting with Prof. Mumtaz Akbar and Dr. Mumtaz Monglori. Planning of 1st workshop with Dr. Mona Habib.

August 1st - 3rd. Continued workshop planning.

August 4th - 16th. 1st workshop

August 18th - 30th. 2nd workshop

August 31st - September 8th. Report writing. Travel to Islamabad (4th). Meetings with USAID HRD officers, AED Management Training Project members, obtaining PRC transit visa.

September 9th - 10th. Return to USA, Inshallah

Considerations for future consultants. All members of the PED TA team are veteran short term consultants and were able to anticipate many of my needs. A standing invitation to stay with the Teacher Training Specialist was greatly appreciated. A computer printer was made available. Transport was available on a shared basis. Social occasions were also shared. Several observations can be made on these key matters for future reference.

1. I rented a laptop computer with FSU's permission and it proved invaluable in being able to generate the usual workshop "paper trail" of schedules, forms, handouts, and this report. Either a computer should be available for consultant's use in the future or they should be aware that one should be brought. The printer, old but adequate after some playing with the matchup to the program, happened

to be available. The project might consider having such a standby printer available for team members as well as consultant use in the event this Epson LX-800 is a temporary item.

2. I stayed at the USAID Staff House, partly because of the inertia to not move and partly because Nick Cowell had only just moved into his house and was establishing routines. I think team members will want to be circumspect about hosting consultants since they might end up conducting business 24 hours a day. It would have been useful to be in closer proximity to the team members, but my productivity might have suffered as the social interaction expanded. This is clearly a case-by-case decision, but the kind offer of hospitality is very appreciated by short term visitors.

3. With the arrival of a second vehicle and second driver, it should be possible to have more flexibility of transport. Since two of us (sometimes three) were involved with the daily Textbook Board schedule, and the COP was mostly out of country, I had no transport woes (usually a sticky problem). But I can see that with extensive upcountry travel the norm for team members, the COP will sometimes be put into an awkward position catering to all transport needs even with two vehicles and drivers.

4. Telecommunication problems (official and personal) were the only continuing logistical irritation since the outbound USAID fax/telex links go through Islamabad with long delays possible. The Pearl Continental Hotel services, while offered courteously to non guests, are expensive and not always prompt. Informal inquiries of other projects was not encouraging. The use of the T&T Office was unsatisfactory as 226 Rps were spent for naught as two fax attempts were fruitless and service was discourteous. The COP's efforts to get an international line and fax machine will yield, I'm sure, better accessibility to the outside world, including Islamabad, and greatly enhance telecommunication efficiency. But this is basically something outside the control of the COP, save dogged persistence to move slow institutions and then exercise patience with marginally reliable telecommunication technology.

5. Scope of work and actual work differences have been discussed and were, I'm sure, a case of isolated and unique circumstances with no further comments required here.

Note of thanks. Many people helped me during this brief visit to Pakistan and I am indebted to the assistance and cooperation of Dr. Mona Habib, Dr. Mumtaz Monglori, Dr. Nick Cowell, Dr. Wade Robinson as well as Mr. Mohammad Haleem and all of the other most helpful staff of the NWFP ~~Textbook~~ Board under the chairmanship of Prof. Mumtaz Akbar. The encouragement and active interest of Mr. Shah Jahan Khan was felt throughout and greatly appreciated. The various members of the Pak-German Bas-Ed Project added intellectual, practical, and collegial strength to both workshops in the spirit of cooperation to help education in Pakistan. Special thanks to Prof. Habib Rahman for mentoring yet another student in his long and distinguished career. Support staff of the USAID Liaison Office and Staff House helped simplify the stay in Peshawar, especially our driver, Mr. Nadir. And for the some 53 participants, their patience and good will was greatly appreciated. Assistance and flexibility from AED and FSU also meant a great deal.

PART I. OBSERVATIONS ON THE TWO ANNOTATED TEXTBOOK WORKSHOPS

SHIFTING PARADIGMS

As Prof. Habib Rahman commented during one tea break, we were introducing a "paradigm shift" in the workshops: presenting a whole new way of looking at education in contrast to how the participants had themselves learned, were taught to teach, and now deal with basic educational approaches.

For some, we have to conclude the shift was too great and they were unable to grasp the more active learning approach of effective teaching found in the annotated textbook model used in the workshops. For others, new ideas were found intriguing and worthy of future exploration. Likely, there were those in the middle who may be more sensitive to changing traditional teaching modes in the future when greater reinforcement comes along, but not now thank you very much.

Perhaps not fully addressing this diffusion of innovation issue presented us with some of the obstacles we experienced in trying to convey new concepts or reformulate old ones. The COP was fully aware of this in my discussions with him in Washington, but his absence and the lack of time in the planning of the workshops meant that we did not--or more realistically could not--adequately deal with the issue of consciously trying to create more "early adoptors" of the idea of annotated textbooks. Part III deals with followup activities which at least bear this needed paradigm shift in mind.

Related to this was the obstacle of using English as the language of the workshops. Though more Urdu was incorporated into Workshop II and there were teachers of English, a great deal more efficiency will be gained in future workshops when the sessions will be conducted mainly in Urdu, as Dr. Monglori indicated to us in the workshops review meeting on August 30th.

The process of discovering these and other drawbacks became most apparent in the small groups: the equivalent focus groups used by marketing researchers. That is, the workshops were pilot efforts to test reactions of writers and users to the AT concept, and how best to conduct such workshops in the future. The beneficiaries of these action research results are the NWFP Textbook Board officers and the PED technical assistance staff who now have more specific, practical results upon which to plan followup activities in several program areas.

SPECIFIC OBSERVATIONS AND RECOMMENDATIONS

As of this writing, I do not have the participant evaluations in front of me; these will be compiled by Drs. Habib and Monglori for detailed analysis later and thus these points might be modified somewhat. I can make several recommendations which reflect a personal viewpoint and were shaped by informal comments as well as observation. Many of these

have already been discussed and agreed to in the informal review immediately after the second workshop.

1. Duration of workshop and daily timetable. It appeared in both workshops that "workshop fatigue" set in by the beginning of the second week. The traditional "outing" is designed to overcome part of this need to escape the intensity of the subject matter and the tasks. It also builds teamwork. The second workshop had a short two hour outing to one of the resource centre established by one of the participants. While useful, a more realistic but more complicated and expensive approach is to have two parts to the workshop, each one week separated by a week (maximum two weeks) in between. More time during the day can also be gained, as has been suggested, by a residential workshop with work in the afternoons and short individual or small groups tasks in the evening. If this is at a cooler time of year or cooler setting, there would also be greater efficiency and stamina.

The daily timetable we adopted was heavy on content during the early part of the day with small group work commencing after or shortly before the tea break. It has been observed that shorter sessions with short exercises would both model the expected behaviour and provide checks on the learning taking place and immediate application of what has been presented. The small group work could continue as per the workshops. This scheduling approach should be tried in future workshops.

2. Small steps and a spiralling, iterative approach. Several concepts--objectives and teaching steps, in particular--would seem to require presenting new ideas and approaches in smaller, logical steps (as the effective teaching research tells us, the COP pointed out). This would mean dealing with the various kinds and levels of objectives in smaller bites than we took during the workshop. Time will be gained in the future because any AT workshops can have Urdu language examples in various disciplines available to the participants--a luxury not available in this first round. [Language is further discussed below.]

With smaller steps, it is possible to return to basic principles but with more sophisticated treatment of the topic as confidence is gained. Thus lower level objectives are introduced, teaching steps for accomplishing these objectives are introduced and linked with testing of lower level objectives. Then higher level objectives are introduced followed by teaching steps and higher level testing. The total time spent on objectives may not increase, but there may be greater initial understanding which lends to better learning later.

3. Product/process emphasis. We criticized traditional education methods in Pakistan as emphasizing rote learning. In essence, this is education with a specific product as the outcome: memorization of a given passage with just enough understanding to be able to give back relevant bits for an examination question. The danger faced in these introductory AT workshops is to emphasize a final product as well with the process behind how the product is made somehow assumed perhaps not very obvious.

One approach to help show process comes with the split week workshop format where answering the question "What is an annotated textbook?" is initially important to deal with early in the workshop. The second week is introduced by giving the overall process of designing and developing the annotated textbook, including the various stages of evaluation. This combines the curriculum development approach with the instructional systems outlook with its emphasis on process and problem solving.

4. NWFP Textbook Board annotated textbook components. The Textbook Board will want to carefully consider what the most important components of its versions of annotated textbooks should contain. The workshops' small groups which created sample units which varied in their selection of components. Likely a more streamlined model will emerge with additional modules added and subtracted as experience, cost, and field testing results provide data for making decisions.

5. Language and terminology. By using English at often a sophisticated level necessary for conveying abstract ideas, we placed an added burden on some of the participants who rarely use English or who rarely encounter non-Pakistani English speakers. This will be a diminishing problem as Pakistanis familiar with annotated textbook development are able to take over conducting workshops.

What is necessary with regard to language at this stage is to develop a fixed definition working vocabulary in Urdu and Pashto, if one does not already exist, of the various educational terms used in the workshops. Expressions like "Review", "Goals", "Objectives", "Re-teaching", "Enrichment", "Simple Media", "Formative", "Summative", "Test Items" may indeed have their precise equivalents in Urdu. But as we find in all situations, native or non-native English speakers, there has to be agreement on the meaning of the terms at the outset of a workshop. These terms can then be incorporated in a manual on the development of annotated textbooks, a manual on usage of ATs, and any other widely circulated publications likely to emerge from the PED Program related to educational reform, effective teaching, etc.

6. Facilities at the NWFP Textbook Board. I was generally pleased with the facilities but would recommend repair of the present broken air conditioner for use during the summer months and availability of tables seating up to 8 persons at a height comfortable for use with the existing chairs. These tables would allow the participants to more readily take notes, be arranged in a rectangular, conference shape, and have access to smooth, flat surfaces for layout exercises. I would suggest purchase of ten such tables, one of which could be used at the front of the room to hold items such as handouts, display materials and for panel discussions. If necessary, the tables could be designed so that the legs could be taken off or hinged with strong hinges for folding to take care of large meetings when the tables are not required.

A second chalk board would have proven useful, or perhaps a "white board" so that colors could more readily be used and seen. While the markers are expensive, the PED Program's commodities list could

include them. Similarly, a public address system would be useful with loud speakers installed in the ceiling squares. The overhead projector and screen were particularly appreciated by me and it was simpler for the second workshop participants to write their objectives on the foils rather than the chalkboard. If anything, I should have made more use of the transparencies by having the handouts summarized for main points when they were discussed.

For future workshop venues during the hot season, consideration should be given to a hill station location if possible.

7. More individual practice/time on task. We were not too successful in having the small groups divide up the tasks further into individual assignments. We also did not provide individual exercise sheets which would have been good model behavior. This can be done in subsequent workshops, however. This would improve the overall time on the various tasks we had them do and allow us to more carefully monitor individual comprehension of the various topics.

8. Use of locally produced annotated textbook examples. The examples we used were from American AT editions plus later examples from the Pak-German Bas-Ed Project. But suitable local examples were lacking. As the result of these first workshops, it will be possible to have examples of the AT concept in local languages using local pupil textbooks. This should have a definite acceleration effect in describing what an AT is to those unfamiliar with the concept, the layout, the content, the uses.

9. Use of video. In my Report III: Followup Activities, my space is devoted to exploring how a series of 8 to 15 minute single concept videocassettes could be developed and incorporated into a number of workshops and training situations where new ideas or existing ideas not widely known are being demonstrated. For example, one videocassette in the series could help participants visualize the daily life in a traditional, multiclass classroom where one teacher is not able to teach except by rote learning contrasted with the same problem in another school and the teacher is considered "an effective teacher". Thus the research recently reported upon can be demonstrated with more impact. Similarly, a teacher using an annotated textbook could be contrasted with one not using an AT.

10. Women participants. The increase in female participation in the second workshop was encouraging (about 25%). Most could clearly grasp the workshop's concepts and we trust that, like the men, they can put them to work as teachers and administrators. The significance of this is the emphasis on the PED Program to increase female teaching strength and also enroll a higher portion of girls into the schools. Involvement by women in AT development should help to encourage women (esp. newer teachers) to make good use of the ATs.

11. Training of trainers. In the review of the workshop on August 30th, it was agreed that a core of knowledgeable AT developers should be identified. These specialists would then attend a "training of trainers" (TOT) workshop which would provide the necessary organization, guidance, and experience for conducting subsequent

workshops on the general AT format, subject-related AT development, training in AT usage in pre-service and in-service workshops and courses, and creation of manuals on developing ATs, using ATs, and assistance in developing videos on the relevant topics. This TOT workshop could be held in conjunction with a regular workshop in order to give experience to the trainers.

12. Returning to diffusion. Whatever criticism people may direct at the NWFP Textbook Board, it is an existing institution with experience in producing a variety of materials. This is a valuable asset in trying to create any new instructional materials such as a series of ATs. It is also a natural way of linking textbook development and annotated teachers' editions. Hundreds of other projects would be quite envious of this existing resource.

The problem of implementing the workshops' ultimate purpose is not a matter of production, but of acceptance and usage. The lesson of the teaching kits should not be lost: teacher participation, training, and seeing value in the product is the central issue. The other legs of the PED Program tripod besides materials development are research & development, and training. To be able to relatively easily produce the pilot materials using R&D + Evaluation principles gives substance to training programs for new and experienced teachers. There is still much to be done but a good start has been made in research and now training for materials production. This should allow attention to be paid to the diffusion process. May it be that teachers write angry letters to the NWFP Textbook Board chairman demanding that they receive the latest annotated textbook editions!

13. Other topics. A number of fundamental issues arose in the course of the workshops: quality of textbooks, structure and content of existing curricula, quality of teachers, integration of subject matters in textbooks, use of language and math primers.

The nature of this consultancy--workshop rather than policy research and planning--precludes any substantive comments on these questions. But it was clear from examining the passages from the several textbooks that teachers would have a difficult time teaching from existing textbooks other than through superficial memorization or drill without additional materials and training. This is because the textbooks have been mandated to be so broad in scope, but unable by length considerations to allow any depth.

It was also clear that many workshop attenders themselves were often unable to get into a topic in sufficient analytical depth to allow for the necessary creativity and specificity to carry out what were novel tasks. This suggested the need expressed above for smaller teaching steps and also the need to give a vision of what was expected.

These two problems of depth and surface knowledge mirror the educational system generally. Thus the technical assistance staff together with their senior Pakistani partners should consider strategies for helping the juniors develop analytical skills while building the capacity to envisage alternatives to the present system.

Small group methods are probably the most effective way to start, including the use of simulation exercises.

A good starting point has been to look at annotated textbooks since they provide a vehicle for examining many aspects of the educational system, starting with textbook content and broadening out to teacher training, school facilities, and eventually the curriculum and examination systems.

The creative decision by the Textbook Board Senior Subject Specialist to explore annotated textbooks would seem to be like the proverbial camel putting its nose in the tent. Let us see in the year 2000 what progress the camel has made.

Submitted by David Giltrow, consultant
Peshawar, September, 1990

LEADER'S MANUAL FOR CONDUCTING ANNOTATED TEXTBOOK WORKSHOPS

This is a trainer's manual using a modular approach based on two workshops conducted in August, 1990, at the NWFP Textboard Board in Hayattabad, Peshawar. There was also cooperation with the NWFP Directorate of Elementary Education and the Academy for Educational Development (USA) as an activity of the Primary Education Development (PED) Program.

Compiled by:
David Giltrow, Ph.D.
Consultant

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PLEASE NOTE. This workshop leader's manual is a first draft and has not been pre-tested or otherwise evaluated. It reflects a collective effort which emerged from the two August workshops. The leadership and direction provided by Dr. Mona Habib, Curriculum Specialist, PED Program Technical Assistance Team, and Dr. Mumtaz Monglori who introduced the idea for the workshops and now carries it forward in his capacity as Senior Subject Specialist, NWFP Textbook Board, are especially acknowledged. However any errors and shortcomings are my responsibility alone. D.G.

PART 1. OVERVIEW FOR WORKSHOP LEADER

INTRODUCTION

The annotated textbook is an annotated teacher's edition of a pupil's textbook. It combines, on the two pages of an open book, help for the teacher as well as the same pages that the pupils have before them.

For Pakistan teachers, the annotated textbook (or AT) provides support and guidance in using textbooks which have highly compressed content and which, if properly taught, might require several days to cover a single page.

The AT is a means of improving education by giving teachers the practical tools and resources to be a more thorough, more professional teacher. While emphasis in this workshop manual is on the teacher, the AT is designed with the characteristics of primary school pupils and the nature of the school setting in mind. Thus, teachers in multi-class schools can use the suggested exercises to keep one class productive while attending to the other.

This manual is the result of two workshops held for authors, editors, administrators, teachers, and curriculum specialists. Some of the experiences are reflected in this manual but refinement is needed following analysis of pre-test/post-test results and evaluation of the workshops. It is written with future workshop leaders in mind. We hope you find the guide useful and that future polished editions will be in Urdu to make it more widely available.

We have tried to take a balanced approach between helping the participants understand the process of developing ATs and creating a specific product in the workshop. Learning about a process is discovering how something works while creating a product gives the participants an idea of what the end result of a process looks like.

It is possible to put undue stress on achieving a product so that the process is overlooked. Participants lack sufficient understanding of how to make a slightly different product. Memorization is a narrow "product" orientation to learning while being able to apply knowledge in novel situations is understanding "process". But if all that is taught is process, there is a lack of making theory practical and knowing the difficulties of creating an end result.

PURPOSE OF MANUAL

The purpose of this manual is to give the leaders of AT-related workshops sufficient background content to organize "tailormade" workshops for the specific needs of a given audience. This manual itself is not developed to the stage of detail found in ATs. That would require a team effort and more time than was available to the compiler. But with more experience, such a manual could evolve.

The content in the manual is arranged as "modules" (explained below). Each module can take a few hours to use or may take several days, depending upon the purpose of your workshop, the depth of coverage you

feel is required, and the background of the participants.

MODULAR APPROACH

Modules are individual topics which can be arranged in different ways to serve a workshop's objectives. The modules are like bricks which can be arranged in different ways in different numbers to create simple or elaborate structures.

The modules included in this manual are generally in a sequence which follows the logical flow of a typical AT page or unit. But if you are organizing a seminar on creating workbooks and you simply want the participants to have general knowledge about ATs, then only several of these AT modules might be used in your seminar.

No two workshops are the same. Subject matter, objectives, and nature of the participants will always be different. For example, a workshop for primary school teachers on how to use an AT for teaching Class 1 will require some of the modules included in this manual, but not all.

Modules for AT users require specific reference to a given pupil textbook plus the annotated teacher's edition of that textbook. Similarly, several of the modules here specifically refer to science, mathematics, languages, or social studies. Each subject matter is best served by having the modules specifically dealing with that content.

Other additional modules to be developed by the workshop organizers for teachers might include one dealing with very large groups. Thus, leaders should be prepared to carefully pick and choose from this basic resource manual and modify or create their own modules when necessary.

Two modules of interest to specialized AT developers ("Evaluation of annotated textbooks" and "The ISD Model") are included at the end.

OVERVIEW OF A 12 DAY WORKSHOP

A 12 day workshop is outlined below as Module 1. We emphasize "12 day" rather than a "two week" workshop. Evaluation of the pilot two week workshops demonstrated that it is desirable to separate the two weeks with a one to three week break. That is for the full scope of creating a sample AT unit. Other purposes may require less--or more--time. But we recommend no more than one week at a time to avoid workshop fatigue.

A spiralling or iterative approach can be taken by repeating some of the same general concepts in Week 2 as were presented in Week 1 but with greater depth and complexity since the prerequisite background knowledge was already provided. Another way is to have Workshop 1 as general introduction and Workshop 2 as a specific product development.

Workshop 1 might be introducing the AT using daily group exercises but without the goal of an actual product. Workshop 2 with the same group a week later (no longer than three weeks, if possible, to avoid loss of

learning) could go into greater depth--perhaps in how best to use the AT for teaching a given subject or class level. Similarly, the one week introductory workshop could introduce a later workshop on creating a test item bank for ATs.

TIMETABLE AND OBJECTIVES

Module 1 contains a sample daily timetable followed by a list of topics which might be included in a general AT workshop of 12 days. This is followed by sample objectives and explanatory material for the participants. They will like to know what is planned for them and this provides some of the answers beyond the usual joining instructions which they may have received in advance of the workshop.

You may wish to develop a pre-test to determine the level of previous knowledge of the participants and then give a post test at the close of the workshop to see how well you have guided them into new learning. This is in addition to their opinions expressed in a workshop evaluation.

The objectives of your workshop should clearly be at the higher end of the classic Taxonomy of Educational Objectives ("Bloom's Taxonomy") as you have learned them. Analysis, synthesis, and evaluation are what these workshops hope to achieve. To successfully meet these higher level objectives requires hard work by you and the participants and your skillful leadership.

PRESENTATIONS AND TEACHING STEPS

In each module, there is a brief presentation of new information. Emphasis should be on how this new information relates back to previous modules and also the terminology which may be new to the participants.

Our experience is that the AT presents many new concepts to even experienced educators and therefore we suggest that the overall teaching strategy be one of small steps, which is also what the research on effective teaching has shown to be most effective. Just how small, or large, the steps you will use can be helped by the pre-test which looks at prior knowledge of the workshop content, much of which is basic educational knowledge such as objectives, testing, etc.

The presentations should have a good mixture of interaction between the presenter and the participants. Question and answer with brief discussion will indicate to the leader the participants' level of understanding.

Also the leader can detect from the discussion how participants feel about the new concepts (or old concepts put into a different framework) they are learning about. Remember that some of your participants will have considerable experience while others may seem to now the right words but lack depth of understanding. They may be sceptical or even hostile to these new approaches.

It is best if you can have other participants who recognize the value

of the AT and its underlying concepts do the arguing for you in cases where there is genuine disagreement. Another vehicle for changing attitudes is in actually working on a task in small groups.

SMALL GROUPS

We recommend that small groups of up to five participants each work together on specific tasks. The resource persons can circulate among the groups to make sure they are understand the task or daily group assignment as well as how to achieve it. One purpose of small groups is to involve all of the participants in analysis, synthesis, and evaluation activities by active learning. It is a way of translating abstract ideas found in the presentations into practical results.

For example, we can listen to how test items are classified according to various categories of objective and subjective, multiple choice, etc. But to have to write five test items which will be scrutinized by the group and the resource persons requires analysis of objectives and synthesizing knowledge. That is when the learning takes place.

In the language of ATs, these small groups can be seen as guided exercises where there is the capacity to monitor, clarify, modify, and re-teach concepts not grasped in the presentation portion of the workshop.

INDIVIDUAL WORK

The dynamics of small groups do not always ensure that everyone participates and learns equally from the experience of tackling a task. More senior and experienced people will naturally gravitate to leading the group. Shy participants may simply be carried along by the group and not get directly involved as much as we might stress the need to do so.

Individual work can take place in the middle of a presentation to check on what is being learned. Or, most often, it takes the form of independent exercises done after the formal workshop sessions are over the day--sometimes called homework.

While these again may be done by one or two members and the others copy the leaders' work when participants are staying in the same hostel or hotel, the hope is that there will be truly independent work which helps focus the mind of the participant on solving some sort of problem.

PERFORMANCE CHECKS

It is important to know if the participants are achieving the twin goals of learning about the process of developing or using ATs as well as the more visible creation of a product. "Performance checks" refers to all of the formal and informal methods we can use to determine if understanding exists and how well this is translated into specific practice as in the small group and individual work assignments.

Remember that performance checks are as much a measure of your leadership performance as they are a gauge of the participants' achievement levels. If they are performing poorly in the course of the workshop, it is our responsibility as leaders and resource persons to make sure they are able to meet the standards we have set for them. Our traditional educational systems from primary to post graduate do not make this assumption.

Modern training theory--indeed many modern educators--changes the responsibility for learning to include obligations of the instructor/teacher/workshop leader to ensure that learning takes place where there are serious efforts by the students/participants to meet objectives. Indeed, this is part of the reason for ATs--to accept that learning can take place when teachers are given the tools to help pupils learn.

During the presentations where abstract information and knowledge are discussed, the nature of responses to questions is a performance check. Other performance checks include observing the small groups in action, the individual exercises, and any formal written quizzes which may be given during the workshop. These are sometimes called "formative tests" since they test at the stage where new knowledge is being formed in the minds of the participants.

When groups have completed a task and they present their results to the larger group or it is reviewed by a resource person, there is feedback about the quality of their work. This is a key part of the performance checks, since the feedback provides corrective action and more precise learning.

ADDITIONAL TEACHER CONTENT

In workshops where ATs are being developed, one part of the ATs which should be considered carefully is a section of the AT which is sometimes called "For the Teacher". It is simply additional content than what is in the pupils' textbooks and in a few lines helps the teacher to learn a little more about the subject matter of the lesson. This content may or may not be used by the teacher, but it is provided to stimulate more thinking by the teacher while upgrading his or her knowledge a little beyond that of their pupils.

LAYOUT

Layout refers to how the two open pages of the AT appear to the reader. The arrangement on the page of the various AT components has to be carefully designed so that the teacher does not have to search or is not confused about the logical sequence of teaching the subject matter.

While only a few specialised workshops deal with this issue in depth, others must realize that what they develop must fit within the boundaries of a page, the type must be large enough to read when resting on the teacher's table, and any drawings or exercises must also be legible. This means that writers and editors must choose their words carefully and be concise in writing all of the components.

EVALUATION OF WORKSHOP

Learning how better to conduct the next workshop is the practical reason for evaluation. While traditionally evaluation is conducted at the end ("summative evaluation"), it is good strategy to either formally or informally get the comments and opinions of the participants as the workshop unfolds. Asking direct and indirect questions during tea breaks and off hours is a good way to get a qualitative feel for what some of the participants think of the workshop. Where there is a break of a week in a 12 day or longer workshop, it may be useful to have a formal evaluation after the first week so that adjustments can be planned into the second week.

APPLICATION OF WORKSHOP LESSONS AND EXPERIENCE

Followup after the workshop is often a luxury which is not always possible. However on visits to schools and later meetings, it may be possible to meet former workshop participants and find out whether the workshop lessons are being applied or otherwise used. Suggestions on how to improve subsequent workshops will often be readily forthcoming. Trying to build these latter feedback results into new workshops may be a challenge but will keep the workshops relevant and practical.

OUTLINE OF INDIVIDUAL MODULES (INCL. PARTICIPANT HANDOUT)

The final part of this leader's manual consists of modules and appendices in various degrees of completeness and scope. It is this section which needs to be refined, substituted, and expanded as more AT activities take place.

MODULE NO.: 1

TITLE: Timetable and objectives of workshop

PURPOSE AND OBJECTIVES. The purpose of this module is to provide participants with the organization, timetable, and expectations of the workshop. The main objective is that they will be able to anticipate what each day will bring and be prepared for activities. They will also understand from your objectives what the workshop hopes to accomplish.

REVIEW AND INTRODUCTION. You should review the reasons and background for the workshop and introduce them to the resource persons, to each other, and to the setting where they will be meeting.

TEACHING STEPS. Hand out copies of the daily schedule and objectives as per sample handout in this module. This is not so much a teaching module as it is orienting the participants to the topic and how it will be presented.

Make sure they feel comfortable about asking questions, but defer substantive content to latter sessions. >>EXAMPLE: Answering the question "What do you mean by annotated textbook?" is easy: "Thank you for asking. The second session of the morning will address that very question."<<

At conclusion of this orientation module, administer pre-test (See Appendix 1 for a sample using short answer questions.

MEDIA SUGGESTIONS. With an overhead projector (OHP), have the schedule shown to the group and discuss the typical daily hour by hour. They can follow with handout. An alternative is to use chalkboard. In both cases, emphasis the various learning activities designed to actively involve all participants.

INSTRUCTIONAL ACTIVITIES. None required.

GUIDED PRACTICE (SMALL GROUPS).

INDEPENDENT WORK (HOMEWORK ASSIGNMENT).

PERFORMANCE CHECK. Question and answer throughout to make sure participants understand logistics, procedures, and overall running of workshop. Pre-test is given to provide baseline information on participant knowledge of AT for comparison with post test at end of workshop.

RELATED MODULES. The next module is likely to be Module 2 answering the question, "What is an annotated textbook?"

Annotated Textbook Workshop

DAILY TIMETABLE AND WORKSHOP OBJECTIVES

The formal content presentations and the daily tasks for the small groups will shift from day to day. The specific daily topics are listed after this general schedule.

STANDARD DAILY TIMETABLE

Time	Topic	Type of activity	Objective	Participant task
8:00- 9:00	Presentation I	Lecture/ discussion	Information, analysis application	Listen, learn, discuss/take notes
9:00- 10:00	Presentation II	-do-	-do-	-do-
10:00- 10:30	Discuss activity task	Assignment/ discussion	Define task	Understand assignment, take notes
10:30- 11:00	Break			
11:00- 12:30	Activity: Develop annotated unit	Teamwork/ creative	Analyse/ synthesize	Design/develop unit
12:30- 12:40	Break			
12:40- 13:30	Summarize today and introduce next day	Review/ preview	Assess progress/ clarify/advance organize	Summarize results/ listen for new concepts

DATE	TOPIC FOR THE DAY	SMALL GROUP TASK
	Opening, Introduction, Curriculum	---
	What is language arts? Writing manageable objectives I	Analyse chapter, write objectives
	What is social studies? Writing manageable objectives II	Complete writing objectives
	Pupil and teacher characteristics Review: prerequisite knowledge	Develop review

Effective instructional methods, Specify step-by-step
including recent research from teaching activities
Pakistan on effective teaching for teaching lesson

Using simple media for language Design media use
arts and social studies

(Day or week off)

Exercises and homework Produce exercises &
Pupil assessment I: types of tests homework assignment

Pupil assessment II: types of questions Write items

Re-teaching and enrichment Develop two sections
for slow/fast pupils

Annotated textbook writing in Pakistan:
Experiences from ongoing efforts

Layout/completion of draft chapter for presentation

Presentations of small group products. Evaluation and
post test. Official closing.

The following sections summarize the program components of the workshop. There are two major parts, presentations and small group activities. Each has certain objectives for you: formal presentations provide information and new ways of looking at familiar concepts, and the small group activities allow you to put into practice new concepts and ideas into a single goal: creation of a draft annotated textbook chapter.

PRESENTATIONS: OBJECTIVES FOR PARTICIPANTS

There will be one or two presentations each day which will provide the background and introduction to one element of the typical annotated textbook. The general objective of these presentations is to help you understand the process of developing annotated textbooks.

There are eight major parts of an annotated textbook as outlined in this workshop: objectives, review, teaching activities, use of simple media, exercises and homework, various tests, re-teaching and enrichment. To enable you to intelligently design and develop these important components, presentations will also be made on curriculum principles, basic definitions of language arts and social studies, characteristics of learners and teachers in Pakistan, and an example and explanation of how others have been making teacher-oriented materials--including annotated textbooks--and how they evaluate and use the materials.

Thus the general objectives for the presentation part of the workshop are that you should be able to:

- >> Describe the characteristics of an annotated textbook;
- >> Correctly use the terminology associated with annotated textbook design and development;
- >> Analyse the functions and purposes of the various components when given examples of annotated textbooks;
- >> Explain the importance of understanding learner and teacher characteristics, role of curriculum, and pilot testing (evaluation) when designing and developing an annotated textbook.

SMALL GROUPS BY SUBJECT MATTER: OBJECTIVES FOR PARTICIPANTS

Workshop participants will be broken up into subject-oriented teams (language arts, social studies) which will create and assemble a draft chapter for an annotated textbook. The purpose of the small groups is to provide the experience of working together in developing an annotated textbook in your own subject matter. Specifically, by the end of the workshop, each participant should be able to:

- >> Analyse a given textbook chapter on the basis of how best to teach the chapter in a typical NWFP primary school.
- >> Specify and design what should go into a draft annotated textbook chapter in order to properly teach that chapter,
- >> Develop a sample chapter by writing the content and providing a layout which will be presented and discussed by the whole group.
- >> Work cooperatively with others in completing a complex learning materials activity,

Each day will have a different activity which reflects the morning's formal presentation. This presentation will give you information to build your team's final version of the annotated textbook chapter.

The groups will select a chairman and a secretary. You will have an opportunity to examine examples of commercially published annotated textbooks and will be assigned a NWFP Textbook Board-published pupil's textbook with a designated chapter to annotate. Homework may be necessary as you try to complete your draft chapter. You may want to assign certain tasks to individuals who then present their ideas to the small group. This is especially true for creating exercises and test items.

DISCUSSION OF DAILY TASK FOR SMALL GROUPS

The Workshop is structured so that each day builds your understanding of annotated textbooks and also builds toward a specific product: a draft annotated textbook unit/chapter based on existing NWFP Textbook Board primary school textbooks.

To prepare you for the daily, specific task, approximately one half an hour will be given over to providing you with instructions on a daily task which brings you one step closer to the finished product.

SMALL GROUP SUMMARY OF ACTIVITIES AND PREVIEW

Following a short break (12:30-12:40), the teams will briefly report their progress, identify any problems they are having with the day's task, and be critiqued on how well they understand and interpret the task. Perhaps they need more time. Perhaps they need more assistance in solving a particular problem. The last portion of this session is set aside to give a quick preview of the next day's program.

MODULE NO.: 2

TITLE: What is an Annotated Textbook?

PURPOSE AND OBJECTIVES. The purpose of this module is to answer the question posed by the module title. The objective of the module is to develop a clear understanding of the term and its meaning, and to be able to use it correctly during the workshop.

REVIEW AND INTRODUCTION. Review briefly how a pupil's textbook presents only limited content and sometime a few study questions or exercises. Teachers often have to borrow a pupil's textbook and often is not trained to go beyond the content of that book. Separate teachers' guides have not proven too successful. This is where the annotated textbook comes in to provide both a pupil's textbook on the same page as a teacher's step-by-step guide to teaching the content.

TEACHING STEPS. There are two parts to this presentation: answering the basic question and briefly introducing the components or elements of the typical AT. Both have sample handouts included here.

Part 1. If participants have received the Module 2 handout on answering the question, you can proceed with quickly going over the questions and answers. These are presented as if a journalist was interviewing an expert.

If the participants are getting the handout for the first time, you may wish to go through the questions and answers clearly. You should have examples of annotated textbooks in hand and be able to show them and possibly hand them around for individual inspection.

Part 2. This introduces the various components and is assisted by the second handout, "Checklist...". Go through these points with the participants using a Q&A approach which seeks to point out the logical sequence which is followed by an AT. Emphasize that they will be turning back to this handout throughout the whole workshop. It serves as a map for getting from the beginning to the final product.

By the end of this module, the participants should know the difference between a conventional, stand alone teacher's guide and the typical annotated textbook, at least in broad terms.

MEDIA SUGGESTIONS. Having real examples of ATs is necessary. It is possible to prepare a multi-layer OHP set which starts with the outline of a pupil's text and then builds up the various additions to the pupil text which then results in a truly annotated version.

This can also be built up using the chalkboard and enhanced with colored chalk.

The supportive nature of the AT can be dramatically emphasized by going backwards on either the OHP or chalkboard (careful rubbing out required) to return to the solitary pupil's textbook and what that

means for the inexperienced or untrained teacher: virtually no support and little more than memorization for the pupils.

Other handouts you should prepare yourself include a 2 page example from one or more ATs of appropriate class level and subject matter of the participants' interests.

The last handout which is given below anticipates the workshop's creation of a sample AT unit. It can be used in this session or should be given in advance of a second session of this Module 2.

INSTRUCTIONAL ACTIVITIES. There is no particular group or individual effort involved with the introductory module. An explanation of how the participants will be divided into small groups and that individual, independent work will be key elements of the workshop should be given as the conclusion of the module.

GUIDED PRACTICE (SMALL GROUPS).

INDEPENDENT WORK (HOMEWORK ASSIGNMENT).

PERFORMANCE CHECK. Q&A to determine both understanding and attitude toward this fairly elaborate concept. Emphasize that this may seem impractical but that these are being used in several rural areas of NWFP through the Pak-German Bas-Ed Project in Pakistan schools.

RELATED MODULES. For advanced workshops, the next module might be Module 14 which introduces the ISB Model of instructional development. Another module, not included here, would examine the theory of curriculum and perhaps the curriculum of a given subject matter (math, science, etc.).

Annotated Textbook Workshop

WHAT IS AN ANNOTATED TEXTBOOK?

The following questions and answers are intended to help you understand what is called a "teacher's annotated textbook". They are written as if a pressman was interviewing an expert.

Question: How do you describe a "teacher's annotated textbook"?

Answer: First, it is for teachers and designed to help them teach better, particularly those who are new teachers or who have not had any refresher training. Second, "annotated textbook" means that it has the same textbook pages which the pupils' text has, page for page. By adding information beside the textbook pages on larger pages, we can put the teacher's instructional activities together with the same text which the pupils have in front of them.

Q: Does that mean that an annotated textbook is both a teacher's guide for instructional activities and a pupil's textbook?

A: Yes, but by combining the two, it is more practical for the teacher to use the annotated textbook in the classroom. The annotated textbook can give step-by-step teaching which refers directly to the pupils' textbook pages. That is more convenient than having to open both the pupils' textbook and a teacher's guide.

Q: Is this a new idea?

A: In fact, it is an idea which has been around for a long time--starting by putting notes in the margins of textbooks. The NWFP Textbook Board library has an example of such a book in science published in 1962--almost 30 years ago. It was a logical move to include a systematic and more comprehensive approach which gives the teacher "hands on" materials--suggested activities, questions to ask, even what to put on the chalkboard--laid out in a step-by-step way.

Q: What are the parts of the annotated textbook?

A: There are many kinds of such books, depending upon subject matter and the thinking of the publisher. You will find common components which may have different terms. But they refer to the same topics.

Each lesson will typically include a review of previously learned material, objectives, step-by-step teaching of the lesson, suggested activities, a short quiz, some exercises, and a homework assignment. There is likely a section which deals with teaching slow learners, called "re-teaching", and a section for fast learners, "enrichment". Some publishers provide a section giving additional content ("Just for the teacher") to supplement the pupil's textbook content. After all, most teachers learn their content from the pupil's textbooks plus what they may have learned (or not learned) in school.

Annotated Textbook Workshop

CHECKLIST FOR DEVELOPING AN ANNOTATED TEXTBOOK CHAPTER

1. OBJECTIVES: BUILDING THE ROAD TOWARD LEARNING
Specify chapter and lesson objectives.
Are they measurable, realistic, and reflecting goals?
Do they provide for higher level thinking such as application?
Are they in logical sequence?
2. REVIEW: MAKE SURE EVERYONE IS READY TO MOVE FORWARD
Is there provision for quick review of previous chapter/lesson or warmup or motivation or introduction (depends on subject matter)?
3. INSTRUCTIONAL STRATEGIES AND METHODS: MAKE CONTENT COME ALIVE BY CREATING GOOD TEACHING STEPS
What instructional strategies and methods are appropriate for teaching the content and the objectives?
Is the time allotted for the strategy/method too short? too long?
Will the teacher be able to use your suggested methods?
Are they written in small steps with questions and answers?
4. INSTRUCTIONAL MEDIA: MORE THAN JUST WORDS
What media will be used? Is it realistic? Is it relevant?
5. GUIDED EXERCISES AND INDEPENDENT PRACTICE FOR ACTIVE LEARNING
Have you included classroom exercises as well as independent practice (or homework) to provide for active learning and independent work?
6. PUPIL ASSESSMENT: TESTING & CHECKING FOR UNDERSTANDING
Are you using "criterion-referenced" testing?
Are you including "diagnostic tests" to determine level of understanding? Are you including assessments other than written kinds to fit the chapter/lesson objectives?
Is your end-of-chapter test designed to test all objectives?
7. RETEACHING: CATERING TO SLOW LEARNERS
Have you included a re-teaching section? Is there a supplemental test?
8. ENRICHMENT: MAKING SURE FAST STUDENTS GET ATTENTION
Have you considered faster students who can master more content?
9. ENRICHING THE TEACHER'S KNOWLEDGE: ADDITIONAL EXPLANATION
In addition to step-by-step instructional strategies, have you considered the teacher's need for explanation and supplementary information about subject matter?
10. EVALUATION OF ANNOTATED CHAPTER: FORMATIVE AND SUMMATIVE
What are your plans to evaluate your preliminary drafts to correct mistakes and improve your content/strategies/objectives?
What is your plan for evaluating the complete package when it has been used in the schools?

MODULE NO.: 3

TITLE: Effective Teaching: Recent Research From Pakistan Schools

PURPOSE AND OBJECTIVES. The purpose of this module is to describe effective teaching practices based on recent empirical data from Pakistan primary schools. The module's main objective is that the participants will be able to adapt these principles for use with AT materials.

REVIEW AND INTRODUCTION. The leader can remind the participants of the checklist in Module 2 and to compare the similarities of the research results with the components of typical ATs.

TEACHING STEPS. Wait until after the first part of the presentation to give out the handout for Module 3.

Note that this module can precede Module 2 so that the logical flow is then maintained between what is generally good teaching and how the AT considers effective teaching and helps the teacher achieve it.

After a brief description of the research methods (see summary below) used to discover the effective teaching practices, the leader can ask the participants to guess what some of the findings were. These brainstorming points can be written on the OHP or the chalkboard for later analysis. The handout can be provided after this initial effort to guess the results.

Compare the research findings with the group's effort for differences, similarities, and omissions. Stress that this is locally conducted research and not imported ideas for those who may be skeptical about being able to carry out this teaching strategy in Pakistan.

The comparison is then made between the effective teaching and AT checklist to see how much overlap exists between the two. Point out that the AT is effectively translating good teaching practice as observed in Pakistani primary schools into a daily teacher's guide.

This link between "explicit teaching" as represented in the research and at the AT concept has been drawn by the Pak-German Bas-Ed Project which has been developing ATs over the past several years. You may wish to refer to their materials which are in local languages and English as well.

MEDIA SUGGESTIONS. Ideally, is desirable to show videos of traditional teaching in a primary school and similar schools which have effective teaching going on. Barring that, the OHP and/or chalkboard can be used to draw attention to the similarities and differences between the items drawn up in class and those found in the research and then in the ATs. Or if a school is close, and this is a key module, a visit in small groups to the school to actually observe primary school teachers could be a significant "outing" for stimulating discussion about effective and ineffective teaching practice.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). If this module is used before Module 2, small groups can work on the task of translating the effective teaching practice derived from the research into a practical advice for the teacher, i.e. a teacher's guide. The following module then presents them with a polished version of what they have likely described in rough terms.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT). For advanced groups, read original research report: [PROVIDE FULL CITATION; I SEEM TO HAVE LOST THE ISLAMABAD INSTITUTE'S REFERENCE]

PERFORMANCE CHECK. With the brainstorming session, you will be able to identify understanding and acceptance of the research.

RELATED MODULES. Especially Module 2 and Module 6 (Teaching Steps).

>> Summary of research methods. DEOs and SDEOs were asked to name teachers they felt were effective, i.e. their pupils learned better than those of other teachers. This list was compared with a list of teachers of pupils doing well on achievement tests created locally for the World Bank and administered to Class IV and V pupils. The list was seen to give a good correlation. Some 230 classes were then observed by trained observers who noted the teaching practices of these effective teachers. From the collected observations, the profile of an effective teacher was developed and summarized in the handout for this module. These findings agree with worldwide studies and again confirm that sound educational principles in Pakistan are universal. <<

Annotated Textbook Workshop

EFFECTIVE TEACHING: SUMMARY FROM RECENT PAKISTAN RESEARCH

For more effective teaching and thus greater learning by pupils, the teacher is strongly advised to adopt the following overall teaching strategy for a particular lesson:

1. Begin a lesson with a short statement of objectives for the lesson.
2. Provide a short review of previous lesson and key points which should have been learned.
3. Present new material in small steps, with student practice after each step.
4. Give clear, detailed instructions and explanations.
5. Provide active practice for all students.
6. Ask many questions, check for student understanding and obtain responses from all students.
7. Guide students during initial practice.
8. Provide systematic feedback and correction.
9. Provide explicit instruction and practice for seatwork exercises, and where necessary, monitor students during seatwork.
10. Continue practice until students are independent and confident.

MODULE NO.: 4

TITLE: Writing Objectives

PURPOSE AND OBJECTIVES. The purpose of this module is to emphasize the key role of clear objective writing to the success of any AT. The links of objectives with Teaching Steps and Testing are direct and important. The module's major objective is for the participants to be able to write objectives which are measurable, manageable, and promote higher order intellectual skills.

REVIEW AND INTRODUCTION. The leader should review in some detail various levels from "Taxonomy of Educational Objectives: Cognitive Domain", commonly called Bloom's Taxonomy. Depending upon the workshop goals, there may also be reference made to motor skills as in writing and calligraphy, and attitude objectives. This module deals exclusively with cognitive learning: understanding and intellectual skills.

Another phase of the introductory part of this module could be a careful review of learner characteristics. This could, in fact, be developed by the workshop leader as a separate module or presentation, perhaps combined with a discussion of "teacher characteristics" since we aim our ATs at the teacher. Both of these can be taught in a brainstorming session in which many characteristics are listed and the more useful ones sorted out and discussed in greater depth.

You may receive the classic question: "What is the difference between a goal and an objective?". A goal represents a general statement of what is intended to happen. Educational policy includes broadly stated goals such as being able to read, write, and do sums by the end of Class V. More specific goals may give greater details but it is when we take a broad goal and translate that into specifically measurable objectives that we can actually implement educational goals.

TEACHING STEPS. Having laid the groundwork for discussion with a review of the six levels of Bloom's Taxonomy, the task of the leader is to go from that general framework to specific applications.

This can be done by developing various key words which correspond to the several levels and which are also specific enough to meet the primary test of any objective used in an AT. These are:

1. Is it measurable? That is, can achievement of the objective be demonstrated by the pupil or otherwise tested? More abstract words such as "appreciate", "know", and "understand" are difficult to measure on a test or in asking questions of the pupil. Words such as "describe", "classify", "locate on a map" are measurable and demonstrate different levels of achieving an objective.
2. Is it manageable? This question tests if the objective can be readily taught and also readily understood by the learners at a given level of intellectual growth. We cannot expect a great

deal of original writing from those in the early classes but we could expect them to fill in single words in sentences where the key word has been left blank ("fill in the blank" exercises and test items).

3. Is it expecting higher order thinking? While many objectives in primary education require lower level thinking such as recall (memorization), it is necessary for the advancement of Pakistan that pupils be able to use their minds beyond the "tape recorder" mode. Problem solving, application of information, and analyzing a novel situation can be taught at all stages, but the teacher is not apt to try unless given sufficient assistance as found in the AT.

The participants will have to be trained to write objectives in a series of stages, starting with lower order objectives and working upwards, depending upon their progress. The handout which gives sample key words for each level is the basis for moving up through the levels of intellectual skills.

This training can be done either as individual or small group work. First present an overview of the level to be examined, starting with "Knowledge". Give a specific lesson related to the workshop subject matter (math, language, Class II, etc.) which requires writing lower level objectives and then ask participants to write three objectives meeting the two criteria of "measureable" and "manageable" ("higher level" comes later).

- >> The lesson is how the name "Punjab" comes from five rivers which flow through the province. The task is to write objectives which the pupils will be able to perform after the lesson is finished. Examples of "knowledge" level objectives:

1. To tell the number of rivers flowing through the Punjab.
2. To name the five rivers which flow through the province.
3. To recognize the five Punjab rivers from a list of Pakistan's rivers.

These are written, discussed, and corrected as necessary. Then the process is repeated working with the next higher level (comprehension) or the next two levels (comprehension and application) if there is good understanding of the first exercise. For practical purposes in lower primary classes, the final two levels are "analysis" and "synthesis". If the last level (evaluation) is required, careful construction of the lesson examples must be made so that the objectives can be truly "evaluation".

MEDIA SUGGESTIONS. For small groups, the objectives can be written on OHP material and the shown to the larger group. This saves time and also allows the leader and resource persons to retain copies for future examples of good and bad objectives. It is also possible to have the model lessons projected before the group as a compromise between reading the lesson and giving handouts. This allows easier analysis of the lesson to give your own interpretation of the lesson.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). For a large workshop, it may be more practical to have the exercise of writing objectives at different levels take place in either groups, or pairs. Feedback is essential for all of the work done on objectives as the tendency is to not fully understand the process of writing measureable, manageable, and higher level objectives.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT). It is highly recommended that independent practice of writing objectives continue past the normal hours of the workshop and that work at home, hotel, or hostel be given as exercises. These will have to be individually marked and returned with corrections so there is meaningful feedback to the participants.

PERFORMANCE CHECK. The discussion and written work will be good indicators of performance. The danger in the small groups is that some will not get the stimulation or feel the need to work on their own and would therefore escape having to write objectives--one of the most difficult tasks of the workshop and education generally.

RELATED MODULES. This is a central module from which many are directly related. In the ISD model, test writing comes right after this objective to graphically and intellectually demonstrate the close relationship between objectives and testing of various kinds.

MODULE NO.: 5

TITLE: Review and Introduction

PURPOSE AND OBJECTIVES. The purpose of this module is to provide the reasons and methods for reviewing previous related content and introducing new subject matter. The objective is to enable the participants to choose appropriate strategies and content at the beginning of a teaching unit.

REVIEW AND INTRODUCTION. Remind the participants that this was part of the effective teaching research findings. It makes good sense to make sure pupils recall past knowledge of a subject, which may not have been taught since the previous year.

TEACHING STEPS. The type of review and introduction is determined by the subject matter and the dependence of understanding new subject matter upon previously learned concepts. The sample handout is based, for example, on mathematics.

Most critical are the linear-type subjects such as languages and mathematics where success relies on the accumulation of skills and vocabulary. Reviewing the prerequisite skills for numerical operations is critical to making sure the largest number of pupils are served by new subject matter. This can be achieved by warm-up quizzes

In other subjects where cumulative skills are not so essential, review gives way to some form of introduction. This might be reading a complete passage to students to let them listen to a story to encourage reading, or asking questions about the geographic location of various places to introduce a geographic lesson in social studies.

One important reason for conducting a review is to determine how well past information is recalled. In some cases, a review test is provided to the teacher through the AT so that the pupils' background knowledge is more systematically measured.

If the workshop is specifically oriented toward creating AT units, they should be given, or select themselves, a chapter for creating the appropriate review strategy and work on this in the small group, have their strategy and content scrutinized by the whole group before moving to the next module.

MEDIA SUGGESTIONS. Draw a chart on the blackboard or OHP transparency which has three horizontal headings for "review with quiz", "introduction", "motivation reading". Vertically on the left hand side, put down different subject matter headings. These might include: "multiplication", "story from literature", "Moghul period", "sound waves", and "healthy bodies". Then have the participants decide upon the appropriate type of review, introductory, or motivational approach for the various subject matter headings.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). The target chapter in a textbook

should be identified and the group decides on a strategy to fit the subject matter. It then proceeds to create a review/introduction section as above.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT). If the workshop is oriented to individual work rather than group work, than the above exercise is carried out by each of the participants.

PERFORMANCE CHECK. Discussion of the results of the instructional activity by the resource persons, and the whole group if time permits. The problem of defining a review or introduction may require the use of examples from completed ATs and further clarification. Caution about too elaborate reviews for ATs since the actual content is still to be taught.

RELATED MODULES. Modules on objectives, teaching steps, and testing.

Annotated Textbook Workshop

REVIEW OF PREVIOUS CONTENT

Definition. "Review" refers to a section in the annotated textbook which directs the teacher to briefly go over content learned earlier by the pupils, especially materials learned the previous year. The teacher may also wish to refresh the memories of students coming back from long holidays or other breaks in the school calendar when memories can get fuzzy.

Review activities can take the form of simple oral questions. Less often, a written exercise or quiz (pre-test) may be given to check on pupil understanding of the prerequisite knowledge before moving on.

Examples. All subjects require review unless a topic is being introduced for the first time. In languages, we review relevant grammar terminology before moving to the next level. ("Who can tell me what a verb does?"). In history, we review an historical setting before moving to the next period of history: ("Why was 1947 an important year for Pakistan?")

Learner objectives. For review activities, the pupil will be able.. "To recall the key parts of a sentence and their meanings." "To successfully locate all of the world's oceans on a map of the world".

Background. "Review" is a section in the annotated textbook which is determined by previous content and the extent to which pupils need to recall past content. Note that slower learners are more likely to have forgotten what they learned in the past than the faster learners. Thus review is essential for the progress of slower learners.

In languages, is essential. Since it is basically a cumulative, linear subject in schools, language skills must be maintained over time. In other subjects such as social studies, review may consist of going over key words, geographic locations, important historical people, dates, and places.

Presentation. Presenting the review section in the annotated textbook should not require much space: rarely more than a paragraph. It is a summary of the content which must be known before introducing new concepts and ends as questions for the teacher to ask pupils. Answers are provided.

Small group task. The task for the small group is to look at examples of previous textbooks and determine what should be included as background knowledge before proceeding with the current lesson. Having looked at examples, the written task is to draft a short, concise review section of one paragraph. Based on the need to have mastered previous knowledge, you can decide whether the teacher should give any exercises or a homework assignment to the pupils, or simply conduct a few oral questions. In any case--exercise, homework, quiz, oral questions--you provide them for the teacher. (H03/2)

MODULE NO.: 6

TITLE: Teaching Steps

PURPOSE AND OBJECTIVES. The purpose of this module is to demonstrate a step-by-step approach to teaching the objectives of a given unit in an AT. The objective is enable the participants to analyze their several unit objectives and create a number of small, logical steps which help the teacher to teach the subject matter in an effective manner.

REVIEW AND INTRODUCTION. Review the effective teaching research summary form Module 3 and draw attention to the objectives they have already written as per Module 4. Stress that this module is the heart of the AT and it is the "teaching steps" which are of greatest value to the teacher.

TEACHING STEPS. Each of these modules can cause some confusion for participants who adopt a narrow view of teaching. If that view is simply dictation or teaching as reading the textbook aloud, this module will give problems. And those whose expectation of learning is memorization and no more will not be able to understand the rationale for this module.

It is essential that the workshop leader establish the need for the participants to constantly refer back to their objectives and the research summary when creating the AT section on "Teaching Steps".

Teaching steps should give the teacher through the AT almost a minute by minute walk through the teaching period. The steps will include:

- The questions to ask pupils (with the kinds of expected answers)
- The things to write on the chalk board
- The references are made to the textbook--words, sentences, pictures, exercises
- The activities the pupils should carry out ("write on your slates", "Stand up and read...", "Show me what a tree looks like using your hands and arms...")
- The simple media and realia which can be used to make the lessons concrete, graphic, and specific (See Module 7, Using Simple Media)
- The point where guided exercises will begin and the directions for the exercises
- The point where formative and summative tests are given and their instructions
- Reminding the teacher to give feedback and discussion of earlier tests and exercises given in by the pupils

--Any independent work which the pupils should carry out

--A review of the lesson and a reminder to make sure that slower students have been included in the lesson along with the faster ones

The leader may wish to take a very simple activity from daily life (one is found in Module 10, examples of test items, "How to make a cup of English tea") to demonstrate the idea of breaking an activity into small, logical steps which lead to a conclusion.

In all likelihood, the participants will find that present textbooks are so compressed that to teach a concept adequately will require virtually a page per paragraph or less of pupil textbook content.

The important point to be stressed is that an untrained teacher should be able to use the "Teaching Steps" created in the workshop and with little more than common sense follow the instructions for teaching the unit.

You may suggest that one of the small group members play the part of the untrained, rural primary school teacher and try to use the draft "teaching steps" created by the group to teach the content. The flaws and omissions should come forward when the teacher/member tries to use the material.

MEDIA SUGGESTIONS. It may be useful to develop a flow chart--major points connected by arrows to show the flow of content from the beginning of a lesson to the end. The tea-making example lets you ask what the small steps are and what the sequence is. From that chalkboard/OHP example--or acting it out in pantomine--the participants should begin to get the idea of small steps, in logical order.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). Taking the given chapter or unit with the already completed objectives, the task is to create teaching steps which are practical and would fit the time constraints and resources of daily school life.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT).

PERFORMANCE CHECK. There must be careful checking by the resource persons that the draft teaching steps do not take large jumps or make assumptions.

RELATED MODULES. Modules 3 (effective teaching), 4 (objectives), 7 (using simple media), 8 (guided and independent exercises), 11 (re-teaching and enrichment)

Annotated Textbook Workshop
GUIDELINES FOR DEVELOPING TEACHING STEPS

(TO BE CREATED)

MODULE NO.: 7

TITLE: Using Simple Media

PURPOSE AND OBJECTIVES. This module is intended to encourage the use of simple media, especially locally available realia--real things--in the teaching-learning process. The objective of this module is not cognitive but attitudinal/affective: to persuade the workshop participants that teaching and learning is improved by adding simple media to enhance the teaching process.

REVIEW AND INTRODUCTION. The leader may want to begin the module by verbally describing a common object or simple concept: one example is sharpening a pencil with a knife. When doing the verbal description, use only words, no gestures or motions. This can then be repeated by using a simple sketch on the chalk board and finally doing it before the group and handing around the pencil and blade afterward. The question is raised: how best was the description presented? What was the most efficient use of the teaching time available? Which was the most attention getting? (Don't forget to retrieve the pencil and blade.) Other simple acts which use words, a picture, and a real object can be substituted.

TEACHING STEPS. Remind the participants that the use of media is based on the principle that words are the most abstract way of communication, and that this is also the most difficult way to learn, especially for younger pupils whose use of language is very limited.

Another situation is to ask participants: What happens when we watch TV news compared with listening to the radio news? >> Even though the message is verbal in most cases (film clips often take up less than half of the TV news and usually convey little meaning), we still focus our attention on the picture. It focuses our attention compared to radio where we can go about eating, talking with a friend, etc. and not look at where the sound is coming from.<<

Draw the conclusion that action, pictures, activity of the teacher is both attention getting and motivating for the pupils: they want to know what is going to happen with the object.

Ask how individual participants use media in their teaching and have a discussion on the pros and cons of using simple media and how to incorporate its use in the AT. Remember the objective of this module is mostly attitude changing and convincing participants that they should seriously try to use media for more effective teaching.

Use examples from the groups' objectives to suggest how specific things from everyday life might be used in teaching some of the objectives. In science, there is continuing study of the properties of matter--size, shape, surfaces, materials, changes with heat, cold, light, etc. These can be used to make the lessons real and with higher level learning such as application level learning.

Ask if it is practical to ask pupils to bring in objects related to a lesson. >> A lesson on simple friction might include pupils bringing

in a smooth object and a rough object so they can demonstrate the effect of friction between the several surfaces.<<

Complete the formal discussion with a tour through the Teaching Kit which each school has (generally locked up with the head teacher to avoid loss of any thing in the box). Assign the task of incorporating simple media usage into the teaching steps of Module 6 if they did not include any media use.

MEDIA SUGGESTIONS. As noted, try to incorporate simple media as demonstration and discussion focus for this module's presentation. It may require some time to locate and get permission to use one of the Teaching Kits which is made up in Lahore.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). The groups should discuss how they can make effective use of media to teach their unit objectives. This may include things from the Teaching Kit, simple things found around the home or school, or specially made materials such as flash cards, or handmade maps.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT).

PERFORMANCE CHECK. Review their small group outcomes and determine if their use of media is realistic in terms of a teacher being able to acquire things, time is sufficient to use it, and there is not undue distraction from its use.

RELATED MODULES. Module 4 (objectives), 6 (teaching steps) and possibly independent assignments (Module 8) where pupils are encouraged to bring in objects.

Annotated Textbook Workshop

USE OF SIMPLE MEDIA IN SCIENCE

Definition. Simple media refer to common and inexpensive materials used to explain and illustrate scientific principles, promote observation, and motivate students to study science subjects. Examples include pictures, common objects such as empty bottles and tins, and natural objects such as birds' nests, leaves, cross sections of trees, etc.

Objective. The teacher's objective for using simple media is to provide effective teaching through more diverse use of the pupils' senses and active learning.

Background. The normal classroom media are three:

1. the teacher's voice
2. the pupils' textbook
3. the chalkboard

There may be a poster, map, or other wall hanging. But the usual media are verbal: voice and text with some pictorial

For some objectives, particularly in the sciences, it is desirable to have teaching materials which can demonstrate principles rather than merely be talked about. Observation and measurement, in particular, are best done with objects and the pupils' rulers.

Basic items like a tin can can be used to illustrate a variety of scientific concepts, starting with measurement and ending with showing how it can more readily be crushed on the side than upright.

A piece of paper can illustrate certain principles of light, sound, structure, aerodynamics, and friction.

For studies of natural science, local objects can be provided which illustrate basic principles in classification, adaptation to different environments, and characteristics of living vs. nonliving matter.

The pupils can provide many simple things themselves and work in small groups on assigned activities in the classroom.

Small group task. The task for the small group is to suggest several activities which can be carried out using simple media and which advance the objectives of the chapter/unit.

The format for such a section can be:

Describe activity.

List materials.

Indicate how this should be carried out and the results.

MODULE NO.: 8

TITLE: Guided and Independent Exercises

PURPOSE AND OBJECTIVES. This module is intended to provide information about the value, use, and development of two types of exercises: teacher-guided and independent (including homework assignments). The objective is to enable the participants to create useful learning exercises related to the objectives of the lesson as part of an overall active learning strategy.

REVIEW AND INTRODUCTION. Remind participants of the effective teaching research (Module 3) which included explicit reference to guided and independent exercises.

TEACHING STEPS. You may to begin the module by asking for various types of exercises found in the existing textbooks and what their purposes might be. >> This will vary between subject matter and class level. The most common exercises are found in mathematics which amount to practicing new concepts and acquiring new skills through active learning. Emphasize the "active learning" by doing aspect of exercises. There are many kinds of exercises ranging from simple questions needing only recall level skill to elaborate writing assignments. <<

After discussing the relevant kinds of activities found in exercises for the subject matter and class level, move on to making the distinction between "guided" and "independent" exercises. It could include pupils working at the chalkboard or with their slates. Ask for the major distinctions between the the two. >> Guided provides more immediate feedback and is supervised by the teacher. Answers may be found to, say, even-numbered exercises in the back of the textbook or workbook. Independent exercises may be done while the teacher is dealing with another class or at home or in a way in which there is not immediate feedback--but there should be some checking eventually to correct errors and clarify concepts.<<

Note that guided exercises are often less complex and more numerous than independent exercises which require more time and higher level thinking.

While independent exercises are often referred to as homework, it is appreciated that not all homes, especially in rural areas, will be conducive to pupils studying and working on their own. Thus provision should be made in the AT teacher's notes to build in time during the day or in the class for independent work to be done. This is typically the case in mathematics but not necessarily science. Independent work does not necessarily mean just one pupil working on an exercise. It may mean small groups working on a given task.

Preview the next module by pointing out the close relationship between exercises and testing, and how test items should reflect the skills developed from the exercises.

MEDIA SUGGESTIONS. The OHP can be used to good advantage by having examples of different types of exercises on transparencies and having the participants classify the exercises as to their appropriateness as guided or independent, their relationship with the unit objectives, etc.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). Develop exercises which support the objectives and promote active learning at higher levels than simple recall. Return to the handout on objectives and the words used to try to develop exercises which stretch the pupils' minds.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT). Individuals should be assigned to write a number of exercises for both guided and independent work so the group will have a good selection of items and the individuals will have gained experience in having to write them.

PERFORMANCE CHECK. Returning yet again to the objectives, the exercise items for both categories are compared with the objectives. Do the items measure the learning expected in the the objectives?

RELATED MODULES. Modules 4 (objectives), 10 (test item writing), 11 (re-teaching and enrichment).

Annotated Textbook Workshop
GUIDED AND INDEPENDENT EXERCISES

(TO BE CREATED)

TITLE: Testing I. Types of Tests

PURPOSE AND OBJECTIVES. The purpose of this module is to describe the several types of tests used in ATs (review, formative, summative). The objective is to enable the participants to select appropriate items to match the type of test under development. Because of the close ties with objectives ("measurable"), this module can be used directly after objectives, especially if one is following the ISD approach to instructional materials development.

REVIEW AND INTRODUCTION. Introduce the topic of testing by distinguishing this module from Module 10, Writing Test Items. These are often confused so that a type of test is not "true-false". That is a type of test item or kind of question. In this module, types of tests are those tests which have different purposes. That is, we are measuring learning for different reasons.

TEACHING STEPS. Ask why we, in fact, give tests. Write the various answers on the chalkboard or OHP. Discuss each one as to what it is intended to do. >> Responses will range from determining entrance into another level of education (ranking), finding out what students know or don't know, and, perhaps, finding out how well they were taught. <<

Refer to the handout and work through it, paying particular attention to the vocabulary of testing. If the participants are not likely to get involved with testing in any depth, this can go fairly quickly.

The focus of this module is on the three main types of testing procedures used in ATs: the review testing process, formative, and summative tests. Discuss each of these tests with emphasis on their different purposes. Some points to consider:

The review test is most often required in mathematics and is often simply recall of prerequisite behavior from previous lessons or the previous year. There can be formal written questions or simply oral problems to check on recall and to introduce the related topic. Ask the participants how to check on previous knowledge in other subject matters and decide whether or not their units require formal or informal review tests, or whether they can dispense with the procedure without harming learning the unit.

The formative test has two functions: it tests learning of the unit to that point, and it tests the quality of the teaching. From the results of a formative test, the teacher may decide that he/she has to teach portions of the lesson to all of the pupils again. Or the decision is that only the slower students require re-teaching (see Module 11, Re-Teaching and Enrichment) while the brighter pupils can benefit from enrichment activities.

The summative test (often an end of chapter test) provides a closing measurement of the unit. It is a learning device to integrate the various lessons and bring a close to the chapter. For those who do poorly, additional exercises and additional re-teaching may be

necessary as they go forward to the next chapter and a new lesson.

When you are satisfied that the participants know the different functions of the three types of tests in this module, discuss the small group task: deciding on the kinds of testing required for the group's unit and the general content to be covered (the writing of the items will be in the next module).

MEDIA SUGGESTIONS. Refer the participants to the examples of ATs and how these are handled by some publishers. Use the chalkboard or OHP liberally to write down some of the differences between the three test types discussed in the module.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). Review objectives and decide on the nature of the testing process for their unit and specifically how to conduct any review test, formative test, and summative test. That is, what content and approach will be used.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT).

PERFORMANCE CHECK. The review of the groups' activities will give some indication of the success of the module. This is not an easy subject for many because they have usually had very limited exposure to good testing procedures.

RELATED MODULES. Module 2 for reviewing the various parts of an AT ("Checklist..."), 3 for objectives, 5 to decide on testing (if any), 10 for item writing, and 11 for re-teaching and enrichment.

Annotated Textbook Workshop

TESTING I. TYPES OF TESTS

Testing is an important part of teaching and learning. Normally we only test pupils as a way of ranking them from high to low as in examinations. But there are several other purposes for using tests.

This first presentation on testing covers these purposes and several categories of tests found in annotated textbooks. The second presentation is more practical and deals with writing test items

Objectives. Following this session, the workshop participants should be able to:

1. Correctly use the more common terms found in testing, specifically: testing, test items, examinations, validity and reliability;
2. Describe the three types of tests commonly found in annotated textbooks;
3. Explain the purpose for each of the three types of tests;
4. Explain the relationship between objectives and testing.

Definitions. There are many terms used in classroom testing of pupils. Several of these terms are defined below:

Testing is measuring how much pupils have learned. This can be through written, oral, or other performance methods. Note that "testing" does not always have to be a formal process but can be done without recording individual scores and elaborate questions.

Test items are the individual questions which make up a test.

Examinations are major tests which usually are given at the end of a long period of study such as end-of-year or Class V. They are designed to rank students for selection purposes. We are not concerned with selection examinations in this workshop.

Accuracy. We want our tests to be accurate in two ways:

1. Validity. Do our test questions match our objectives and what we have taught? Do they measure what we want them to measure? If so, they are valid tests.
2. Reliability. Are our test items and scoring procedures clear and not confusing or inconsistent? If they are clear and understandable by the pupils, they are reliable items.

Thus validity concerns matching our objectives with our test items while reliability refers to how clear our test items are to the pupil.

Examples: Validity. We have taught a chapter in geography about the growth of cities. It is not valid to ask about how cities affect climate unless we had earlier taught how climates are changed as part of our objectives for the lesson.

Testing I: Types of tests

Reliability. We ask the question "Why do cities grow larger?" A pupil writes, "Cities grow larger because more children are born there". This is not the answer you wanted because you had taught about more jobs in cities than in rural areas, more and better health services, less difficult living conditions, etc. which attract people from the rural areas. But as we have written the question, the pupil's answer is correct. We cannot, in all justice, give lower marks even if the pupil fails to give what we wanted as an answer since we have not written the question leading to answers we want.

A better question would have been: "Cities often grow faster than rural areas. Name four reasons for faster urban growth." You now expect something more than a simple reply and have the basis for assigning 1 mark for each reasonable answer.

In TESTING II: WRITING TEST ITEMS, we will go into more detail about validity and reliability.

Purposes for testing. There are three reasons for testing pupils:

1. Determining what pupils know--or don't know--in order to plan further instructional activities;
2. Identifying where teaching has or has not been successful;
3. Ranking pupils or assigning them grades as in examinations.

The annotated textbook is especially concerned with 1. and 2. since these are tests which determine the effectiveness of teaching and learning.

Types of tests. For the annotated textbook, we believe three different tests are helpful for improving learning:

1. Review test (sometimes called a "pre-test");
2. Formative tests given during lesson ("quiz");
3. Summative tests at end of lesson or chapter ("end of chapter" tests).

Let us look at each of these to find out why we use them and when they are used in the annotated textbook.

REVIEW TEST. A review test is given before a lesson to determine how well the students recall previous work on the same subject. The purpose of this short test is to help the teacher know how well prepared the pupils are before going on to a new lesson. The test can be written or, more often, conducted through oral questioning in an informal manner. The questions are relatively simple, on the level of recalling information.

Examples. In language classes, this review test may take the form of oral "warmup" exercises in which pupils give examples of sentences using selected words or tense or whatever is an appropriate prerequisite skill. In social studies, the exercise may be in identifying locations

Testing I: Types of tests

on a map or globe, recalling the key events leading up to an important historical moment, or giving reasons for the cultural behavior of a group of people.

FORMATIVE TEST. Sometimes called a "check-up" quiz, this test is used at the end of a teaching sequence such as a lesson or chapter. Its purpose is to determine the degree of success of the teaching activities, and the questions should directly reflect the objectives of the unit. Those pupils who do very well should receive enrichment activities while those who have not done well should receive re-teaching in an attempt to make sure that all in the class advance to the next unit with at least the minimum knowledge necessary. This is particularly necessary for such linear subjects as mathematics and languages. In classes where "mastery learning" is the approach, there would be individual re-tests to assure us that the materials in the re-teaching group were properly learned.

Examples. A unit is taught on map-reading which teaches the objective: "To correctly identify and use the symbols found in map-making". The pupils are given a map outline which has on the names, but not the symbols, of various geographical features: towns, rivers, mountains, railroads. The test for the pupils is to put in the symbols which match the names on the map (open circle for "Peshawar", short lines at right angle for railroad, double line for Grand Trunk Road, etc.). We would want a good number of students to get 90-100% on this test since it is so basic to future education. Any pupil getting under 75% would be subject to re-teaching by a pupil who got 100%, the teaching being the enrichment for the faster student.

A unit on using correct tense of a verb is based on the objective: "To classify the tenses of a number of verbs as past, present, future". The formative test at the end of the unit is composed of a number of sentences with verbs in the different forms. The pupil must circle the verb and indicate past, present, future tense. Again, the test is one of how well it was taught and we would want a high number of 100% papers. Any pupils under 80% would receive re-teaching of selected verbs to make sure they understood the differences between the three verb forms.

SUMMATIVE TEST. As suggested by the term "summary", this test is given at the end of a chapter or major unit. Its purpose is to bring together several lessons and thus in the pupils' minds to put the pieces together in one last look at a topic. This is often a longer test than the others since more objectives are being tested and more teaching has gone on. Results from this test will be compiled and studied to analyse what areas are still deficient and what may need to be re-taught to the whole group.

Testing and objectives. The content of the tests is based upon the objectives which were written as guidelines for the teaching and learning of the unit. This means that both the content and the nature of the test items reflects the objectives. For example, if an objective is intended to teach application, the test items should reflect this level of objective. This will be discussed in TESTING II.

MODULE NO.: 10

TITLE: Testing II. Writing Test Items

PURPOSE AND OBJECTIVES. This module is intended to introduce the two categories of test items (forced choice and open ended or sometimes called objective and subjective) and the various kinds of items which are associated with each category. The major objective is to enable the participants to choose appropriate items for their objectives and write reasonable questions for their AT tests.

REVIEW AND INTRODUCTION. Using a brief question and answer session, discuss the types of tests covered in Module 9 and once again refer participants to their objectives so that it is clear that this module will deal directly with writing test items which measure the learning of the objectives.

TEACHING STEPS. Give a learning situation from everyday life--learning to ride a bicycle, for example--and ask for some simple objectives and how they would be measured. >>For the bicycle example, we are mainly dealing with motor skills and coordination but remind participants that there are vocabulary items ("valve", "spoke", "saddle", "carrier", "handle bars", "brakes", etc.) and also rules of the road. Pick out some of these cognitive items and ask for suggestions on testing and test items.<<

Make the distinction between the forced and open choice category. This is fairly obvious and then move into item types according to the choice categories.

From there, you may wish to have the participants look at the second handout, examples of test items. This will provide a point by point discussion of the merits and demerits of each category of test item.

Finally, give the small group: the creation of a "test item bank" to which each member of the group would make a "deposit" of five items. The item bank is simply a large number of items of various kinds and various levels which reflect all of the unit objectives. These items can be assigned to the various types of tests (review, formative, summative) plus can be used in exercises, guided and independent.

This is one module where all participants should have the opportunity to work equally hard.

MEDIA SUGGESTIONS. If possible, make an overhead transparency of test item examples so that you can discuss each part of the several types of test items in detail. Otherwise, put a few on the chalkboard and work with them. Matching and fill in the blank are particularly interesting as you can change the key word, give different words in one column for the matching, etc. Using various colors is another way of highlighting the key words and points of test items.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). As indicated above, the task of the group is to create an item back centered around their objectives. Emphasize as you go from group to group that this is an individual task and that each person should try to generate five different kinds of items (multiple choice, matching, short answer, etc.). If time permits, have some of these read by the group and have them relate these back to specific objectives. Recall the validity and reliability criteria and ask for comments.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT). Individuals are engaged fully on this module and should enjoy trying to create test items. Note for everyone's benefit that objective/forced choice items are hard to write, easy to mark. Open ended, subjective type questions on the other hand are relatively easy to write but require much more time to do a good job of marking.

PERFORMANCE CHECK. As noted, samples of the test bank items are read and discussed in open group. Try to have the group establish the criteria for what is a "good" item and what is a "bad" item.

RELATED MODULES. Modules on objectives (4), review (5), exercises (8), and types of tests (9)

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TESTING II: WRITING TEST ITEMS

In TESTING I: TYPES OF TESTS, we discussed three types of tests which are included in annotated textbooks: review test, formative test, and summative test. The review test is often an informal oral test to determine how much is remembered from previous work on the subject. The formative test is given part way through a unit to determine how much has been successfully taught and is used to assign enrichment and re-teaching activities to faster and slower students, respectively. The summative test is given at the end of the unit to also measure how much has been learned and also is a form of motivation and focus for their learning the lesson.

One thing which each of these tests has in common is that they are created from test items--questions--which reflect and are guided by the unit's objectives. Once again, we see how objectives are used to provide the framework for review, introduction, the lesson steps, activities, exercises and homework, and now the testing process. This is why we stressed the need for measureable, manageable objectives which also provide for higher level intellectual skills.

The purpose of this presentation is to provide information and examples of the various types of test items which you will want to include in your annotated textbook unit.

Objectives of TESTING II. After the presentation, the participants should be able to:

1. Distinguish between forced and open choice answer categories of test items;
2. Select an appropriate type of test item to measure the learning of a given objective;
3. Create test items of different types including the various kinds of objective items (forced choice) and essay questions (open choice);
4. Estimate the quality of a test item's validity and likely reliability, and then improve upon it if necessary;

Two categories of test items. There are two major categories of test items which are based on the kinds of answers expected by the test makers: forced choice questions which are more commonly called "objective" items and open choice items, also called "essay" questions.

There are a variety of forced choice/objective type of items. The more common ones are:

- True/false
- Matching
- Sequencing/ordering
- Classifying/categorising

Testing II: Item writing

- Fill in the blank with one word
- Multiple choice

The open choice types of items are called:

- Short answer
- Free hand drawing
- Essay

Forced vs. open choice. There are advantages and disadvantages to both categories of how the student answers a given question.

With forced choice items, more time is taken up with creating the questions compared with open-ended questions, but marking and accuracy of marking are very high. The unit's objectives can be tested several times within a test because forced choice items do not take long to answer--circling a number, writing "T" or "F", writing a word, drawing lines connecting two things. Forced choice items tend to be higher in validity and reliability compared to open choice items since they are often narrower in content and can be checked statistically for errors in reliability.

Necessary instructions. As you well know, tests made up of forced choice questions such as multiple choice, matching, true/false types of items may require specific instructions and even practice questions or examples before pupils are ready to take the test. Always include with your questions the kind of response you want in the form of complete instructions.

TYPES OF TEST ITEMS: DESCRIPTION, INSTRUCTIONS, EXAMPLE

In the following sections, there is a brief description of test item types followed by typical instructions on how to answer the question and then an example of the item using content from the Workshop.

True/false. This is the simplest item type because it simply requires writing a statement. But it is least discriminating since there is a 50% chance when guessing. It is useful for quick review, using oral techniques when it is possible to followup and have a pupil defend his or her answer. This can also be done in writing on when "Explain your answer" becomes a more open ended short answer question.

TRUE/FALSE INSTRUCTIONS: Read the following sentences carefully. Circle the "T" if you find the following statements true/correct, or "F" if you believe the statement to be false/incorrect.

- I E 1. Validity of a test item refers to how clearly it is written.

MATCHING INSTRUCTIONS: Below are two columns of words. On the left are terms which are described by the words in the right hand column. Match each term on the left side with the words most related to it on the right side. Connect the left hand word to the right hand word using a line."

1. Objectives

a. Test at end of unit

Testing II: Item writing

- | | |
|-----------------------------|----------------------------------|
| 2. Review | b. Strategy and methods |
| 3. Teaching Steps | c. Work without help |
| 4. Media | d. Added subject matter |
| 5. Guided Exercises | e. The road to the destination |
| 6. Independent Exercises | f. Fast and slow learners |
| 7. Formative Test | g. Past learning brought forward |
| 8. Enrichment/Re-Teaching | h. More than talking |
| 9. Summative Test | i. Work with help |
| 10. Content for the Teacher | j. Test part way |

SEQUENCING/ORDERING. The following words apply to levels of behavioural objectives based on intellectual skills. But they are listed out of their normal order. With "1" for the simplest intellectual level of objectives and "6" for the highest level, write numbers in the blanks next to the word which rank the objectives in order from 1 (simplest) to 6 (highest intellectual skill level).

- ___ Applying knowledge
- ___ Evaluating and judging
- ___ Recalling information
- ___ Synthesizing knowledge
- ___ Comprehending knowledge
- ___ Analysing a situation

[NB: Note how much less time it takes you to give the number of these objective categories compared to how long it would have taken for you to write out the objectives in proper order. While we did not test your recall of the names of these behaviour objectives' categories, we quickly tested your knowledge of order. This would allow time for several other questions to be asked, an advantage of forced choice test items. However, some time is lost in having long instructions which assume you were not familiar with the technique. For experienced "test takers", it would have been possible to simply say "Using 1 for lowest and 6 for highest, put the items below in order of their level of intellectual skill."]

CLASSIFYING/CATEGORISING. The following list of types of test items can be classified as to whether they have forced choice (FC) or open choice (OC) answers. In the space provided, place "FC" or "OC" next to the item to classify it by forced or open choice.

- ___ Classifying/categorising
- ___ Essay
- ___ Multiple choice
- ___ Draw sketch

Testing II: Item writing

- True/False
- Fill the blank
- Short answer

FILL IN THE BLANK WITH ONE WORD. Each of the following sentences has a key word missing as indicated by a line (_____). Read each of the sentences and write the correct word which best fills the space left by the missing key word.

1. The annotated textbook combines the pupils' _____ with a detailed teacher's guide.
2. A test item which accurately measures the behavior expected by a unit's objective is said to be _____.

[NB. While "fill in the blank" qualifies as a forced choice type of question, it is less objective than those where there is no doubt about the choice made by the pupil. Thus in no. 1 above, the teacher has to decide whether or not to give equal credit to both "textbook" and "book" since the two words are very close in meaning. If you are very particular, 2 marks could be given to the specific term "textbook" and 1 mark to the more general term "book". This conforms to the instruction's use of "...word which best fills the space...".]

MULTIPLE CHOICE: Read the question and then circle what you think is the best answer from the five choices given.

Which of the following best describes the intended audience for the annotated textbook? (Circle a letter)

- a. Untrained teachers
- b. Mistrained teachers
- c. Newly trained teachers
- d. Effective/good teachers
- e. All of the above

Open choice questions are easier to write but harder and more time consuming to mark. Marking is done with less accuracy due to varying penmanship, writing skills, marker fatigue, and other "subjective" factors not found with "objective" questions. However, techniques to provide more uniformity of marking and therefore improve test reliability are available and are briefly discussed below. Much more could be said, but this presentation is not about examinations where this precise marking is necessary.

Both categories can be used to measure a variety of measurable objectives. Open choice questions allow for greater scope individual response and requires more than recognition of correct answers. But objective questions can be used for discriminating between very small differences between the correct answer and distractors.

Testing II: Item writing

Annotated Textbook Workshop

TESTING II: EXAMPLES/EXERCISES

The following are a combination of examples/exercises designed to help you understand and select types of test items which might be used in both tests and guided/independent exercises for the annotated textbook. They represent the following types of items:

FORCED CHOICE/OBJECTIVE SCORING

- True/False
- Matching
- Sequencing/Ordering
- Classifying/Categorising
- Fill In The Blank
- Multiple choice

OPEN CHOICE/SUBJECTIVE SCORING

- Short Answer
- Free Hand Drawing
- Essay

TRUE/FALSE (and with variation)

Read the statements below. Circle "T" if you think the statement is true or circle "F" if you think it is false.

T F Pakistan is a member of the Commonwealth.

There can be a little more complexity added to true/false questions by asking students who answer "false" to correct the statement to make it correct. The instructions then read: "If you circle "F", cross out the word which you think is wrong and give the correct word in the space provided so that the statement reads correctly."

T F Pakistan is a member of NATO. _____

This then requires more knowledge and in this case a variety of answers would be acceptable once NATO is crossed out: Commonwealth, United Nations, UNESCO, World Hockey Association, etc.

MATCHING

Your task is to look at items in Column I and draw a line to the word/term in Column II which is best related to those in Column I. But the items in Column II are not in any order so you must read each possible combination carefully before marking the connecting line. There is only one connection per term.

Column I	Column II
Arabian	Ocean
Persian	Bay
Indian	Gulf
Hudson	Sea

SEQUENCING/ORDERING

Put the following sentences in the correct order from beginning to end

Testing II: Item writing

by placing a 1 for the first event, 2 for the next, and so on.

MAKING A GOOD CUP OF ENGLISH TEA

- Serve the tea into cups through a strainer.
- Heat the pot by pouring in a little boiling water.
- Heat the milk but do not let it boil over.
- Put the water on to boil or use an automatic kettle.
- Pour the boiling water over the tea leaves.
- Add sugar and milk and enjoy
- Add one teaspoon of tea per cup plus one for the pot.
- Let the tea steep in the pot for five minutes.

CLASSIFYING/CATEGORISING

The following are kinds of objects which can be classified as being rough or smooth. Put "R" in the space in front of objects you would say are rough. Put "S" in the space in front of objects you think are smooth.

- | | |
|---|---|
| <input type="checkbox"/> Brick | <input type="checkbox"/> Textbook cover |
| <input type="checkbox"/> Window glass | <input type="checkbox"/> Dirt road |
| <input type="checkbox"/> Mettalled road | <input type="checkbox"/> Table top |

FILL IN THE BLANK WITH ONE WORD

Read the following sentences. A key word has been left out. To answer the question, write the key word in the space provided (_____).

Pakistan's highest mountain is called _____.

MULTIPLE CHOICE

Read the question below and then select the best choice from the five answers provided. Circle the letter next to your choice.

Forests and trees provide many products to us. In the list below, which product does not come from forests and trees? (circle one)

- | | |
|-------------------|-----------|
| A. Some medicines | C. Paper |
| B. Furniture | D. Cloth |
| | E. Lumber |

SHORT ANSWER

In the space provided, define "the annotated textbook".

FREE HAND DRAWING

Draw a map of Pakistan and shade those areas which have large forest areas.

ESSAY

Write a paragraph describing what it would be like for a 10 year old boy or girl growing up in the Hunza Valley.

MODULE NO.: 11

TITLE: Re-Teaching and Enrichment

PURPOSE AND OBJECTIVES. The purpose of this module is to provide guidelines for addressing the special learning needs of slow and fast learners. The objective is to enable the participants to develop special sections for slow learners ("re-teaching") and fast learners ("enrichment").

REVIEW AND INTRODUCTION. Review with the participants' participation the several ways we have of measuring how well any one pupil is learning. Teacher observation is the most continuous but we have also had feedback from exercises (guided and independent) and the formative test. From these observations, it is possible to determine, for this unit, who are the slow learners and who are the fast learners--roughly 10-20% at each end of the achievement spectrum with some 60-80% in the middle.

TEACHING STEPS. Brainstorm with the participants all of the reasons which might contribute to slow learning. Write them on the chalkboard or OHP on one side. >> Physical handicaps (hearing, sight, hands), poor home life, unhealthy, lack of interest from parents, no aptitude for the subject, etc. may be offered into addition to "low intelligence". << Similarly, brainstorm the reasons for students being "faster" than others. You should find the one is virtually a mirror image of the other: good health, support from parents, quiet home life, aptitude for the subject, etc.

This forms the basis for creating special learning conditions for both groups. Note that some of the conditions are temporary and that it is a loss of good students when we do not have some means to help the slower students and also don't stimulate the fast students, who can become disciplinary problems as they remain bored.

The task of the small groups is to come up with extra work for both the slow learner and the fast learner. In the former case, re-teaching is the term used while enrichment is used when we provide stimulating work for the brighter students.

One way is for faster pupils to tutor the slower ones in things such as mathematics and language. In either case, the teacher can use the time when he/she is teaching a second class that this activity can go on.

MEDIA SUGGESTIONS. We noted the use of the chalkboard. It is also possible to use the OHP for this activity. Most of presentation time, however, should be devoted to determining within the group the dimensions of the problem as a discovery process.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). The groups devise exercises, projects, and other special activities that the AT can hold for the

5-1
teacher who wishes to put emphasis on these two groups.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT).

PERFORMANCE CHECK. Reviewing and having peer critique of the plans should be sufficient as long as the basic rules remain: tied to objectives and are manageable.

RELATED MODULES. Testing (9,10), exercises (8)

Annotated Textbook Workshop

RE-TEACHING

Definition. Re-teaching is providing an additional opportunity for pupils who failed to adequately learn one or more objectives the first time these were presented. Usually these pupils are identified by a short test or by teacher's observation/questioning.

Objective. The objective of re-teaching is to ensure that slower pupils are able to progress satisfactorily through the curriculum and thus reduce dropout and absence rates.

Background. Often, pupils who perform poorly in school can learn the material but require more time and encouragement than the average and brighter groups. In annotated textbooks, it is common to include a section which guides the teacher in using additional exercises and guided practice for those who did poorly on a formative-type test or other marked activities such as a homework assignment.

Re-teaching should not take a great deal of the teacher's time. Indeed, the annotated textbook can provide the necessary direction and exercises which are targeted at slow learners and assist them to maintain a reasonable pace of learning to keep up with the average students. In the teacher's notes on re-teaching, the textbook annotation can include the length of time suggested for the re-teaching activity.

In science, the exercises will likely focus on correct use of terms and understanding cause and effect relationships. Examples include extended matching, fill in the blanks, and circling the associated pairs of items which have similar--or opposite--characteristics.

In math, the task is made easier by the normal extension of the basic guided exercises but emphasis on simpler problems and the most likely errors slower learners will make.

Small group task. The components of the re-teaching section of the annotated textbook chapter include:

Directions and encouragement to the teacher to make sure the slower learners are getting an opportunity to move along with the rest of the pupils through special exercises and additional attention.

Specific exercises designed to encourage and move the slower learners along. These exercises should, once again, reflect the original objectives.

Directions to repeat the testing process with the slower pupils following additional time to study what had been earlier tested.

Annotated Textbook Workshop

ENRICHMENT

Definition. The enrichment section of the annotated textbook chapter provides the teacher with information, suggestions, and independent exercises to cater to the faster students' capacity and need to learn above and beyond the average pupils. It is similar to the concept of re-teaching for slower students.

Objective. The objective of the enrichment section is to assist and encourage the teacher to provide supplementary independent exercises so their brighter, faster pupils can work to their capacity. Faster pupils are those whose test scores are obviously much better than their average or slower classmates.

Background. Brighter pupils are often penalized by being forced to work at the speed of the average pupil. This results in boredom, occasionally discipline problems and always a waste of talent. The good teacher will find ways of keeping their brighter pupils occupied after it is clear they have mastered new content. But those are rare teachers who have a capacity for innovation.

The annotated textbook is the logical place for the teacher to find supplementary work, and suggestions on how to keep the brighter pupils busy (teaching the slower ones, for example). Once again, the task is relatively easy for the maths teacher since advanced exercises, brain teasers, and word problems are possible solutions.

For the sciences, the exercises can focus on additional vocabulary building, higher order exercises than those given the rest of the class, and even working on demonstrations which can be given to the rest of the class. "Quiz programs" can be devised which pit teams against one another in answering science-related questions.

The enrichment supplement in the teacher's annotated textbook should be practical and not too time consuming. It should also be within the grasp of the teacher to implement since many teachers' knowledge of the subject matter is barely more than their pupils' knowledge. This is why the annotated textbook can be of great value to the teacher through expanding, step-by-step, what the teacher understands and how to teach it.

Small group task. The task of the small group is to create a section in the annotated textbook which provides advice to the teacher in how to give extra content to the brighter, faster pupils. This will usually take the form of additional independent exercises which provide greater content than is put into the pupils' textbook. Added vocabulary, higher order problem solving, activities such as observation and measurement are examples which can be added, depending upon the objectives and the subject matter.

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MODULE NO.: 12

TITLE: Additional Teacher's Content

PURPOSE AND OBJECTIVES. The purpose of this module is to focus on the need very often for the teacher to have access to more subject matter than the pupils. The objective is to enable the participants to develop a short section of their AT unit which provides additional subject matter for the teacher.

REVIEW AND INTRODUCTION. By way of introduction, ask the participants how much of any of the subjects the typical primary school teacher might know about the subjects he/she teaches. How do they get any additional knowledge? The answers may be quite negative. Turn at that point to the main theme of this module: Adding content to the AT above and beyond what is found in the pupils' textbook.

TEACHING STEPS. This module is subject matter-based so that not all AT workshops might include it. The main point is that the participants must write something which is:

- Interesting for the teacher to read;
- May or may not be used to teach the lesson;
- Advances the teacher's understanding of the particular unit by enriching the subject matter under the AT development.

The groups should identify what would be the next stage of learning beyond the present lesson. This will ensure that the supplementary subject matter is not too advanced, while still giving the teacher something new.

MEDIA SUGGESTIONS. No special media involved.

INSTRUCTIONAL ACTIVITIES.

GUIDED PRACTICE (SMALL GROUPS). Develop a four to five line summary of related subject matter. This should be succinct and well written to encourage the teacher to read it.

INDEPENDENT WORK (HOMEWORK ASSIGNMENT). One person could be assigned to do this if the group felt this was more efficient.

PERFORMANCE CHECK. Review and critique the content of "For the Teacher" before the others.

RELATED MODULES. No special relationship with other modules except 6 (Teaching steps).

Annotated Textbook Workshop
ADDITIONAL TEACHER'S CONTENT

(HANDOUT TO BE CREATED)

APPENDICES

APPENDIX A. SAMPLE: PRE-TEST / POST TEST

APPENDIX B. SAMPLE: WORKSHOP EVALUATION FORM

APPENDIX C. EVALUATION OF EDUCATIONAL MATERIALS:
ANNOTATED TEXTBOOK

APPENDIX D. OVERVIEW OF A GENERIC ISD MODEL FOR INSTRUCTIONAL
DESIGN AND DEVELOPMENT

APPENDIX A.

NO NAMES, PLEASE

Annotated Textbook Workshop

PRE-TEST / POST TEST

Instructions: The following are questions which reflect some content of the workshop. Please do not take a great deal of time answering the questions. Thank you.

[NB: Answer in the space provided or on the back side of this page]

1. Which statement best describes the annotated textbook? (ring one)
 - a. A textbook with a few notes written in the margin.
 - b. A type of teacher's guide which includes a student textbook.
 - c. A textbook which is also a large exercise book.
 - d. A textbook which contains more than one content or subject matter area.

2. What is the main purpose for creating annotated textbooks?

3. There are many categories of tests which are found in annotated textbooks. [NOTE: This is asking about types of tests, not "test items" such as multiple choice, true/false.]
Can you name three (3) categories of tests?

5. There are about ten characteristics of effective instruction revealed by research in Pakistan. Can you name two of these?

6. Why are annotated textbooks particularly useful in multi-class schools?

7. Objectives are considered important in developing an annotated textbook. What is one reason for this importance?

8. Annotated textbooks often include reteaching and enrichment information. Why are these activities designed into the books?

9. What is the meaning of test "item bank"?

APPENDIX B.

(PLEASE, NO NAME)

Annotated Textbook Workshop

WORKSHOP EVALUATION

After criticizing your work, this is a chance to evaluate the Annotated Textbook Workshop itself. We are using two forms of evaluation: a rating scale and your own comments. For each of the items below, give a rating number based on the following:

1 = Very Good 2 = Good 3 = Poor 4 = Very Poor

There is also space for your additional comments and suggestions. Feel free to use the back of the page as well.

1. AMENITIES. Meeting room. How would you rate the comfort and facilities of the meeting room? RATING NO. ___

Hotel/hostel (for hotel/hostel residents) RATING NO. ____

2. PRESENTATIONS. Content. How would you rate the content of the various lecture/discussions--did you feel you learned from them? RATING NO. ____

Language. Were you able to understand the language and pacing of the presenters? RATING NO. ____ Would you have preferred more summaries and discussion in Urdu or Pashto? (tick one) YES ___ NO ___

Handouts. Were the handouts useful to you? RATING NO. ____
Were you able to understand the level of English? YES ___ NO ___

3. SMALL GROUPS. How would you rate the small group work in meeting the objectives of the workshop? RATING NO. ____ Did you have any difficulties in learning through the small group activities? YES ___ NO ___ If you ticked "YES", please comment on the difficulties:

4. PRACTICAL USES FOR ANNOTATED TEXTBOOKS. How would you rate the value of annotated teacher's textbooks in helping improve teaching in NWFP in the future? RATING NO. ____ What other comments would you give to plan for future workshops on annotated textbooks? (Specific topics? More individual work? Longer/shorter workshops? Scheduling during year--best time?, etc.)

5. OVERALL. How would you rate the overall quality of the workshop? RATING NO. ____ Additional comments would be helpful. Thank you.

APPENDIX C.

EVALUATION OF EDUCATIONAL MATERIALS: ANNOTATED TEXTBOOK

Definition. "Evaluation" has several meanings including evaluation of pupils' achievement, evaluation of teachers' performance, and evaluation of educational materials. Some educators have tried to make the terms more specific by making the following distinctions:

Pupils: Pupil assessment or pupil testing = measuring pupil achievement

Teachers: Staff performance evaluation = measuring teacher performance

Educational materials: Materials evaluation = product testing procedures

Purpose. The purpose of evaluating educational materials is to ensure that those textbooks, teachers guides, annotated textbooks, charts, kits, films, videotapes, audiotapes, and other things used in education are:

1. Free of errors, and
2. Satisfactorily meet their stated objectives.

Background. Production of educational materials is an expensive and complex task. Therefore it is important that they be free of errors in content and language, and that the materials meet their stated objectives as measured by various methods.

To evaluate an annotated textbook, it is a good procedure to create an evaluation plan at the same time the annotated textbook is started. This is because we try to have "quality control" at each stage of the annotated textbook development process,

You can picture this quality control process taking place in stages by thinking what would happen if a factory producing cars only checked for mistakes at the end of the assembly line. It would be very difficult and expensive to correct errors which took place at the beginning or middle of the process of building a car. And it is likely that many would go uncorrected and simply sold that way to people. So the technique is to conduct small tests in different stages, correct any mistakes then, and have a final test at the end to see that it is properly running. If not, corrections are made again before it is finally put in the hands of the car buyer.

The annotated textbook evaluation procedure consists of a series of testing phases which use the same terms we have used earlier for pupil assessment: formative and summative evaluation.

Formative evaluation is the evaluation process used during the various phases of creating the draft annotated textbook.

--overall, chapter, and lesson objectives

- review procedures
- all test items
- lesson teaching strategies and methods
- exercises and homework assignments
- any supplementary materials and information to the teacher
- overall layout, design, illustrations

We use various methods during the formative evaluation stage:

1. Knowledgeable people outside the production group read and comment on all critical parts. These might include an editor who would look at the clarity and accuracy of the language, a subject specialist to comment on quality of content presentation, a teacher who looks at the practicality, and a curriculum specialist to see if the material fits within the curriculum framework. This reading, comment, and discussion stage is done on chapter-by-chapter basis.
2. The necessary corrections would be made and this preliminary version of each chapter would then be used by a small group of 10-20 teachers in different categories of schools. Ideally, observers would also be in the classroom when they are tried out. The teacher and observer reactions would then be used to make the second draft version. If the changes are major, this version would be tried out again. If the changes are minor, the various corrected chapters would be assembled into a preliminary edition for use by a wider number of schools: perhaps 100. Having used the full version, the results reported by the teachers would be the basis for the first published edition.

This completes the ideal formative evaluation procedure.

Summative evaluation. Following full publication and usage throughout the province, the annotated textbook is subjected to the final evaluation by a wider range of teachers and observation in the classroom. This summative stage is designed to assist the publishers in producing subsequent editions of the annotated textbook. Note that any changes in the pupil's textbooks would also have to be reflected in later editions of the teachers' annotated textbooks.

Summary. The above is an ideal description of how instructional materials are evaluated to make sure they meet the requirements expected of them in an accurate and practical way. Great stress has been placed on the formative evaluation stages because it is in those various stages that changes can be made with less cost and less disruption to the educational process than after the book is finally published. As you can see, making the first draft as you are for one chapter during this workshop is only the beginning of the process before it reaches the target audience: the classroom teacher.

APPENDIX D.

ISD MODEL

Over the past 25 years, a great deal of attention has been paid to creating a systematic approach to the teaching-learning process. The goal of such work is to develop a logical, complete system of instruction. This system is based on both scientific evidence in areas such as learning and evaluation, as well as common sense strategies of clearly defining objectives which are then tested to see if students have learned and at what level.

One result of these efforts around the world has been the "Instructional Systems Design" or ISD model for designing educational efforts. This model is based on a logical series of phases of solving educational, instructional, and training problems. These phases can be summarized by the activities which educators go through to develop a complete system:

ANALYSE
 DESIGN
 DEVELOP
 IMPLEMENT
 EVALUATE

You can think of these by the acronym: ADDIE. Let us discuss these phases before we turn to the typical ISD model.

ANALYSE

This is problem identification phase:

"How best to teach multiplication?"

"What can be done to make comprehension of various properties of matter more meaningful?"

"Why are pupils' scores so low on end of year examinations?"

"How can we make sense of vague curriculum goals?"

A procedure known as NEEDS ASSESSMENT or NEEDS ANALYSIS is often used at this first stage to make sure that later planning is based on content which is considered important by those who will benefit from the educational changes.

For example, a needs analysis conducted as part of curriculum changes could reveal the need felt by parents for greater emphasis on practical issues in health and narcotics use. This participation by parents could have the positive benefit of encouraging higher enrollment, lower absenteeism, and more cooperation by parents in improving school buildings, better teacher quarters, etc.

By systematically identifying and defining more closely the problems you face, the better are chances for finding a way of moving to next

phase: design.

DESIGN

The design phase is when we develop measurable objectives, describe what pupils must know before they tackle new material, determine the sequence and structure of the content, and develop the testing phase of a chapter or unit. We also can develop several ways of solving the design solution and choose the best one based on a team effort.

DEVELOP

In this phase, we provide specifications for the teacher: activities, strategies, methods, instructional plan with timetable. We develop a plan to implement the teaching of the given content, including specific things to do in the classroom, materials to be used, and building in effective teaching steps related directly to the students' abilities and previous knowledge plus consideration for learning characteristics.

IMPLEMENT

In the general ISD model, this is of course the actual teaching event--what the teachers do in the classroom and the expected behaviours of students. Like writing a drama, the written script has been converted into the live performance. What happens is mostly out of control of the instructional developer's hands. But the final phase does provide us the chance to measure our work, that of the teacher and pupils, and take corrective action. This is the use of evaluation as a part of the feedback loop to make corrections.

EVALUATE

We have been working at a distance from the classroom until the Implement phase when we can only watch to see how our planning is used by the teacher. A central idea of instructional development is in fact developing tests which measure many things, including:

- Teacher knowledge of content and teaching techniques
- Pupil characteristics and knowledge before teaching event
- Pupil knowledge following teaching event (various kinds of tests)
- Pre-testing of materials on small groups
- Formative testing of unit to adjust final version
- Sumative evaluation which helps adjust second editions of materials

The purpose for evaluation--of materials, teacher and pupil performance--is to provide quality control and to ensure that our design and development efforts are correct. During the development stage of annotated textbooks,

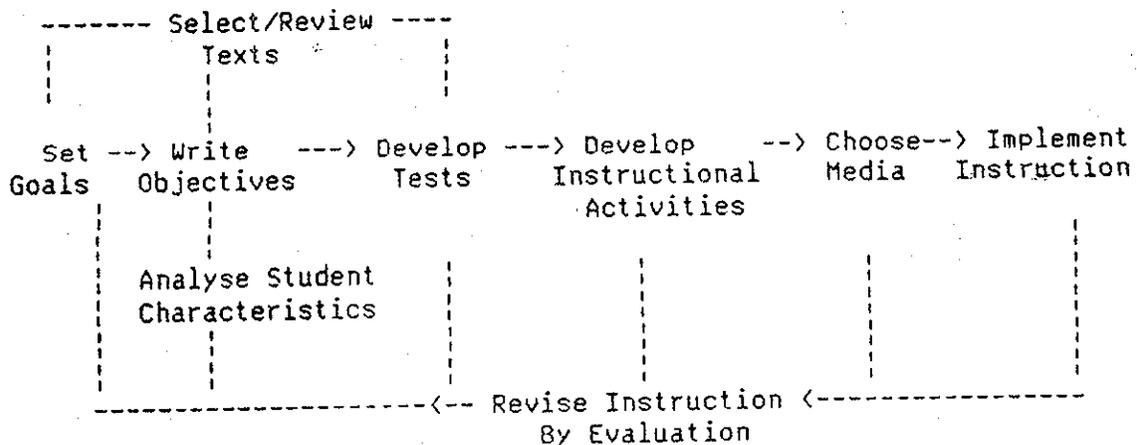
any errors or mistakes are not the fault of the teacher or the learner: we must accept responsibility by concluding that we have made errors or not provided adequate materials for the teacher to use under those circumstances,

NEXT STAGE: RELATIONSHIP OF PHASES

The term "model" in this workshop is not be confused with an attractive lady wearing the latest fashion in frocks or whatever. I'm afraid it is more dreary than that use of the word model. Rather, we use the term to describe an ideal process or situation which is composed of various parts which should work together. Just as some of you as children might have made model airplanes or cars or boats, we as adults seem to have to have our model plans, abstract descriptions of how to solve the the nation's economic problems, etc. In fact when it comes to model building, the economists are quite addicted to building large, complex models of how a nation's economy should operate.

As more modest and humble educators, we have the ISD model. The one outlined below is taken from a book written for teachers by Walter Dick and Robert Reiser who are at Florida State University which is a participant institution in the Primary Education Development (PED) Program. Their book is called Planning Effective Instruction.

Their model looks like this (after some modifications by Giltrow):



CHECKLIST DERIVED FROM ISD MODEL

Because we want to be quite practical in this workshop, let us jump quickly away from the overall ISD model and to a checklist of the various parts which suggest the step-by-step way of taking an educational problem and carrying out a solution:

- Conduct needs analysis
- Specify/analyse broad goals
- Analyse learner and teacher characteristics
- Develop detailed objectives: content and skills
- Analyse objectives for sequencing, prerequisites, logic
- Develop criterion-referenced tests for assessing objectives
- Review and select textbooks which fit analysis
- Specify instructional strategies and methods based on task and learner characteristics
- Select and choose instructional media appropriate for objectives
- Conduct formative evaluation: pre-test, pilot test
- Implement educational system
- Conduct summative evaluation: final examinations, etc.
- Revise/change/adjust system based on evaluation

ISD MODEL APPLIED TO DEVELOPMENT OF ANNOTATED TEXTBOOK

This overview of a systematic method of developing educational programs is readily applied to creating educational materials such as the annotated textbook. This is because all of the elements for teaching specific content and skills are incorporated into the annotated textbook for teachers.

What is slightly different in the case of NWFP is that you will initially be working with existing textbooks while most annotated textbooks for teachers are based on pupil textbooks which are developed at the same time as the annotated editions for teachers. That is, they are the products of a single design and development effort.

SUMMARY

The ISD model is nothing more than a careful, common sense way of making sure that all elements of an educational system are carefully analysed, designed, developed, implemented, and evaluated. Using data from relevant studies about learners and teachers, conducting needs analysis, and generally being methodical without taking many things for granted, a more effective, higher quality educational system will emerge. In its own modest way, the annotated textbook can play an important part of this desire for higher quality education in NWFP.

POSSIBLE FOLLOWUP ACTIVITIES AFTER PILOT ANNOTATED TEXTBOOK WORKSHOPS

Five categories of followup can be identified:

1. Additional workshops on specialized topics
2. Development of manuals related to item 1
3. Development of a series of single concept videocassettes

These activities would lead to the overall goal of:

4. Design, development, pilot testing, and publishing of annotated textbooks
5. Teacher adoption and usage workshops: pre-service and in-service

With simultaneous:

6. Field research to find out the results of the efforts during the production phases and problems of teacher adoption and usage.

ADDITIONAL WORKSHOPS

A two way matrice can be used to decide on needed workshops:

Class level:	1	2	3	4	5
Subject matter:					
=====					
Language					
Urdu					
Poshto					
English					
Mathematics					
Science					
Social studies					
Others					
=====					

In addition, a number of short specialized workshops (2-4 days) connected with developing annotated textbooks should be considered:

Training of trainers (discussed below)

Objective writing

Test items, exercise, and worksheet writing

Teaching steps

Simple media development and usage

Issues of fast/slow learners

Layout/design of ATs

Illustration of ATs: art and photography

Evaluation of ATs: pre-testing, pilot testing, summative testing

Use of desk top publishing methods for AT production

Developing a teacher inservice training program for dissemination of ATs

Course design and implementation of pre-service training: Using Annotated Textbooks

Use of distance education techniques for introducing ATs to isolated teachers (with residential followup)

Introducing ATs to education officers and administrators

TRAINING OF TRAINERS WORKSHOP

This should be one of the first followup activities to be decided upon. From these initial workshops, a smaller group of about 12 people could be selected to become leaders of subsequent workshops which will deal with the specialized topics which will then lead to the subject matter/class combinations of actual AT production. But the overall leadership will of necessity come from the core training group.

DEVELOPMENT OF WORKSHOP MANUALS

This TOT workshop could take the draft manual found elsewhere in this report, go into greater detail, create additional handouts, and generally improve the quality and depth of this hurried, one person five day effort. The product of this workshop would then be a basic manual based on modules and in the Urdu language. It would form the basis for many of the other workshops and individual author's efforts on annotated textbook production.

A product of each of the specialized workshops would be additional modules so that a series of manuals would be developed to aid those

who become involved with AT development in the years to come. It should be possible to streamline the workshops so that a combination of participant manuals and workshop sessions would reduce the actual workshop duration but through better use of time, including evenings, the productivity would be increased.

VIDEOCASSETTE SERIES

While the focus of this report is on annotated textbooks, wide use could be made of a series of short videotapes which deal with topics covered in the AT workshops. The scope of the tapes might be "Toward More Effective Teaching and Learning" and thus could be used in teacher training, specialized workshops, and also in policy discussions and seminars on educational change.

I am gratified that Dr. Monglori at the NWFP Textbook Board has also recognized the possibilities of video and that I arrived at the same conclusion independent of his earlier vision of video support. It confirms that this is an area for serious exploration.

The need for such tapes arose out of some frustration in two related ways:

- The inability to adequately describe school conditions, and
- The difficulty participants had in visualizing new approaches, especially how the AT would be used in the classroom by ordinary teachers.

We would have liked particularly to contrast traditional teaching methods with those outlined in the Pakistan effective teaching research. We felt that the participants were unable to visualize or imagine different ways of teaching, especially how the AT might be used or how simple realia and media could be brought into the classroom.

If in Pakistan, films and video have the same legitimatizing effect found elsewhere, a series of videotapes could address both the question of how to visualize change as well as convince all but the hard core reactionaries that it is respectable to do things a little differently where results are positive. Clearly there is need for caution but a few trial tapes would quickly determine if they can help, rather than hinder, the aims of the PED Program.

Purpose. In short, the purpose for a series of videtapes dealing with more effective teaching is to vividly provide the contrasts and comparisons between the traditional approaches to education and improved techniques, including the use of ATs. They would help to visualize both present conditions and conditions which prevail in more innovative settings.

Two approaches. The tapes would be organized on a single concept basis, ranging in time from 6 to 12 minutes. There can be two main types in the series:

--Less didactic and

--More didactic.

In the first type, a more open-ended, carefully crafted "slice of life" approach is taken and learning is based on observation and guided discussion. There is great flexibility in using the tapes and they can be tools for many purposes, from trying to persuade policy makers to abandon stereotypes to training researchers in observation techniques. In between are a host of uses in workshops and training courses.

In the latter, more guided tapes, an onscreen narrator can take the viewers through some of the more complex issues which are not suited for the non-didactic approach. For example, we could explore the fundamental role of clear objectives in defining the general curriculum guidelines and the ultimate effects from better textbooks to teachers working from an AT in the classroom. These can be discussed by an onscreen narrator who treats the topic as if he/she was explaining a how we get milk--a process/product model.

Workshop applications. Since it is projected to have a number of workshops leading to publication of annotated textbooks, the initial videotapes could relate directly to helping workshop leaders to explain various components and related issues of annotated textbooks. As these AT supporting topics (esp. review, teaching steps, use of media, use of exercises and worksheets) duplicate the effective teaching research, there is dual usage in training courses in improved teaching methods.

Sample topics and titles. Examples of the topics (didactic and nondidactic) which would be covered in the series include:

- Learner characteristics: at school, in the home, at play
- Teacher characteristics: in training, at school, at home
- Learner behavior in the classroom: different teaching styles
- Teacher behavior in class: different teaching styles
- Teacher made realia, media in use
- Uses for the School Teaching Kit
- All components of the AT: matching modules from basic manual
- Using the AT in actual settings: urban, rural, multi-class
- The Pakistan research on effective teaching: key points shown by effective teachers in their classrooms.
- How layout affects utility of the AT
- Training observers of classroom and school phenomena

- Teaching _____ (subject matter)
- Teaching _____ (various Class levels)
- The stages in AT evaluation
- Art and photography for textbooks and ATs
- Teacher inservice training: Catching up
- Girls and women in education: some of the issues
- Special issues in teaching slower pupils
- Parents and learning by their children
- A problem-solving approach: the use of the ISD model in course development

Microteaching. Another, quite different category of video usage is for live recording and immediate replay for analysis in training of trainers workshops, steacher training and especially the training in the use of annotated textbooks. The equipment required would be ordinary consumer level cameras, recorders, lighting, microphones, tripods, editing equipment, but classroom-sized monitors. This equipment could be used for other purposes such as in research, progress reporting, and for visual baseline data gathering.

Production considerations. A two-level production strategy should be considered:

1. Trial tapes produced with ordinary VHS taping equipment and basic editing. These would include simpler single concept, didactic tapes which could be produced using project-purchased equipment using local technicians. This level would be suitable for pilot productions, low audience specialized topics, and providing records of workshops for later scrutiny and revision.
2. Tapes designed for long and/or wider usage than in level 1 which require higher production standards. The technical personnel and equipment would be of higher standard, generally U-Matic high band which allows more extensive editing, better quality duplicates, and possibly used on the new educational TV channel forecast to begin transmission in 1991. Technicians and equipment could be arranged from the educational wing of PTV, in Islamabad, I have been told. There may be some support available from the Peshawar PTV facilities.

Need for scripting and consultant producer. In either case, it is suggested that all producing activities originate from scripts developed by PED Program-related staff with the assistance of a consultant educational television producer familiar with short single concept, natural sound productions. They appear simple but in fact are

some of the most sophisticated of videotapes and films. There is need for extensive taping requiring extensive editing to bring forward a smooth fitting, visually logical film. To do this with no or very spare narration in order to bring forward key points during discussion following viewing requires special skills.

In the event that video production becomes a part of the PED Program support activities, this writer cannot stress enough the need to emphasize with the technicians high quality sound recording during the productions, even casual micro-teaching. A general purpose microphone atop a VHS camera is useless except for gathering some background sounds, especially those coming from the camera person. Because it is relatively simple to get a sound recording, this is often a neglected aspect by even reasonably good technicians.

For educational purposes, so much of the key information is actually audio-related. The effect of the picture is helpful, of course, but its real function is to focus the attention of the viewers, make the tape more interesting than a simple audiocassette and visually reinforce the sound track.

Summary. There is great scope for sustained use of carefully planned and crafted videotapes. I would suggest that either an international or local consultant with extensive experience in documentary filmmaking provide detailed advice to the PED Program on this topic, its logistical and production implications and the long term benefits which will accrue for the viewers.

CREATION OF ANNOTATED TEXTBOOKS

The NORAD support of certain NWFP Textbook Board activities includes actual AT production and, as I understand it, a plan has been devised toward these ends.

I would only emphasize to the Textbook Board officials that a key part of making the AT usable and accepted--especially as the use of ATS implies major shifts in teacher and pupil behavior--is in careful formative evaluation using extensive pre-test, pilot test, and limited distribution (if possible) with trained teachers before going to general publication. As the Textbook Board is all too aware, even small errors seem to promote controversy and unfortunate negative discussion. Testing helps reduce the possible negative effects of inevitable errors.

TEACHER ADOPTION AND USAGE WORKSHOPS: PRE-SERVICE AND INSERVICE

Once ATs are being published, it is necessary to provide some orientation to teachers on how they can best use the ATs. Thus during the AT production process, parallel planning should go on to set up a systematic way to teach how to use the AT.

Three different approaches are available: the extension approach, the usual school holiday workshop at regional centers, and a distance education activity plus brief residential or extension followup.

The extension approach borrows from the Training and Visit System which keeps agricultural extension assistants up to date. This means a small cadre of trained teachers going to the schools to provide instruction and followup with their colleagues. Or small groups of teachers would gather at a school or nearby TTC for updating by the team. This system relies on the teams moving around the district or sub-district and often requires some sort of transport. But it is effective for providing small doses of training throughout the year.

The conventional system of school holiday workshops could prevail. These would be for about three days and provide teachers a chance to review the contents and methods of the AT before having returning to their schools. I understand that the locations are typically the TTCs and other residential facilities.

A less labor intensive method than either of these is to develop a self-study, distance education-oriented manual which would be sent to teachers. There would then be followup as outlined for the T&V system or an abbreviated one day workshop on a sub-district level. But the use of distance education only works if incentives to improve performance are present.

Developing mobile training teams which would visit schools and provide small doses of inservice training throughout the year combined with the use of distance education techniques would address the question of isolation from professional growth. It would also give the trainers a basis for determining which teachers should receive residential upgrading courses, which ones would benefit from shorter school holiday workshops, and which should be reviewed for dismissal. Thus, the prospect of promotion through merit is increased at the same time the possibility of dismissal is also increased. Whether either of these alternatives is possible as educational changes take place in NWFP, I cannot judge from my short stay in NWFP.

ASSOCIATED FIELD RESEARCH AND EVALUATION

Parallel to all the above workshopping, videoing, and extending should be carefully crafted continuing field research and evaluation efforts which let the PED Program leadership know whether or not the various developments are indeed having the desired effect and if not, why not.

As an outsider parachuting in amidst the start of the work, I did not get into what sorts of research and evaluation is anticipated. But I am sure that it will be both basic--word frequency, etc.--and useful as per the effective teaching study. I would hope that there would be enough staffing so that evaluation activities can go on as well as the research. It is dubious data which comes from workshop organizers creating last minute USA-type English language questionnaires to evaluate their own work. Perhaps the only worse thing would be not having any such data at all. In the light of the expenses to be borne by both Pakistan and USA in this long term effort, I would say that some sort of ongoing evaluation and monitoring of all activities should be created soonest.