

From Teacher Education to Professional Education **Development in Pakistan: A Position Paper**

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Enhance the status, morale and professionalism of teachers: (Dakar FoA)

69. Teachers are essential players in promoting quality education, whether in schools or in more flexible community based programmes; they are advocates for, and catalysts of, change. No education reform is likely to succeed without the active participation and ownership of teachers. Teachers at all levels of the education system should be respected and adequately remunerated; have access to training and ongoing professional development and support, including through open and distance learning; and be able to participate, locally and nationally, in decisions affecting their professional lives and teaching environments. Teachers must also accept their professional responsibilities and be accountable to both learners and communities.

70. Clearly defined and more imaginative strategies to identify, attract, train and retain good teachers must be put into place. These strategies should address the new role of teachers in preparing students for an emerging knowledge-based and technology-driven economy. Teachers must be able to understand diversity in learning styles and in the physical and the intellectual development of students, and to create stimulating, participatory learning environments. (Dakar Framework of Action 2000)

Baela Raza Jamil
Institutional Reforms and Public Policy Specialist: Education

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- Annex 6: Teacher Supply, Training and Professional Development: Teacher Development: Making an Impact: Helen Craig

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Baela Raza Jamil

² Improving Quality in Education Systems: June 12 – July 2, 2004 Harvard Graduate School of Education (HGSE) Pakistan Presentation : Low Teacher Performance – Scaffolding Multi-level Issues, July 2004

³ Strengthening Decentralized Local Government In Punjab Faisalabad District Project 2004-8, Strategic Operational Plan of the Department of Education, (Strategic Policy Unit and Department of Education); Directorate of Staff Development (DSD) and DPI-EE, Government of Punjab.

Acronyms and Abbreviations

ADB	Asian Development Bank
AEO	Assistant Education Officer
AEM	Alternate Exposure Module
AIOU	Allama Iqbal Open University
AKU-IED	Aga Khan University-Institute of Education Development
BISE	Boards of Intermediate and Secondary Education
CE	Colleges of Education
CIDA	Canadian International Development Authority
DEO	District Education Officer
DfID	Department for International Development
DPI-OEE	Directorate of Public Instruction – Elementary Education
DSD	Directorate Staff Development
ESDP	Education Sector Development Program
EFA	Education for All
ELM	Educational Leadership and Management
ESRA	Education Sector Reforms Assistance
FCE	Federal College of Education
FDE	Federal Directorate of Education, Islamabad
GECE	Government Elementary College of Education
GECT	Govt. College of Elementary Training
GTZ	German Technical Agency for Cooperation
HEAL	Health Education & Adult Literacy
HEC	Higher Education Commission
HGSE	Harvard Graduate School of Education
ICT	Islamabad Capital Territory
ICT	Information and Communication Technology
iEARN	International Education and Resource Network
IER	Institutes of Education Research
INSET	In-Service training
IT	Information Technology
ICTs	Information Communication Technologies
ITA	Idara-e-Taleem-o-Aagahi, Lahore
MA ECE	Masters in Early Childhood Education
MBE	Masters in Business Education
M.ELTS	Masters in English Language Teaching and Linguistics
MTE	Masters in Technology Education

MMBMT	Malik Maula Buksh Memorial Trust
MoE	Ministry of Education
MTT	Mobile Teachers Training
NGO	Non-Government Organization
NEF	National Education Foundation
NISTE	National Institute of Science and Technical Education
LC	Learning Coordinator
LEAP	Language Enhancement and Achievement Program
NTEF	National Teacher Education Forum
NEP	National Education Policy 1998-2010
NRSP	National Rural Support Programs
PDC	Professional Development Centre
PDF	Pakistan Development Forum
PDT	Professional Development Training
PESRP	Punjab Education Sector Reform Program
PIL	Partners in Learning Programme
PITE	Provincial Institute for Teacher Education
PSC	Provincial Service Commission
PSU	Plymouth State University, USA
M&E,	Monitoring and Evaluation
RITE	Regional Institute of Teacher Education
RSPs	Rural Support Programs
SAHE	Society for Advancement of Higher Education
SEF	Sindh Education Foundation
SGA	Sindh Graduates Association
SINP	School Improvement Network-Pakistan
SCSPEB	Society for Community Support for Primary Education in Balochistan
SPEDP	Sindh Primary Education Development Program
SPU	Strategic Policy Unit
TARCs	Training and Resource Centers
TB	Taleemi -Bastta
TEVTA	Technical Education Technical Education and Vocational Training Authority
TPTE	Technical Panel on Teacher Education
TOs	Training Outposts
TRCs	Tehsil/Teachers Resource Centers
TRC	Teachers Resource Center, Karachi
UE	University of Education, Lahore

UMT	University of Management and Technology (previously ILM)
UPE	Universal Primary Education
US AID	United States Agency for International Development
VT	Visiting Teachers Program
WB	World Bank
WSIP	Whole School Improvement Program

Teacher Education in Pakistan: A Position Paper

Introduction

This position paper on teacher education in Pakistan documents the sector, highlights important problems of quantity and quality, adds critical analyses and proposes potential areas of systemic interventions for further discussion and action. The paper follows on from an earlier one prepared by the Ministry of Education, (P&D Wing) in 2004⁴. It also draws upon the questionnaire which was developed by the Technical Panel on Teachers Education (TPTE) of the Curriculum Wing (see Annex 1) and sent to all provinces in February 2004. Three provinces responded with valuable information which has been incorporated in the current paper.

Sections 1-5 of the paper provide the overall picture of teacher education in Pakistan. This includes the policy context, the quantitative and qualitative dimensions of the problem, the general institutional provisions and practices, as well as the public and private sector provisions for pre-service and in-service teachers' education. Sections 6 and 7 discuss the content of pre-service and in-service teacher education offered today, while section 8 details the new initiatives made in communications technology and teacher education. Sections 9 and 10 document the problems relating to physical infrastructure and sustainable financial support to teachers' education. Finally sections 11 and 12 set out the necessary conditions to improve on the sector today, and present a series of policy, institutional and curriculum-related recommendations around which a new framework can be built. The paper does not, however, cover gender issues in teacher education, which have been covered in earlier studies conducted by UNESCO and NORAD.

1. The Policy Context

1.1 National Education Policy (NEP) 1998-2010

The NEP provides a sound critique of teacher education issues and proposes corrective steps (see Annex 2). Many of those issues remain valid as teachers are considered the lynchpin for quality and implementation of reforms in the classrooms, where the business of learning actually takes place. NEP is comprised of six objectives and sixteen strategic actions. The objectives include matching demand with supply, effective institutionalization, providing incentives to attract the best talent, improving pre-service and in-service training as well as management training opportunities for administrators. To take some of the recommendations of the NEP forward, the Education Sector Reforms Action Plan was designed through a consultative process in 2001.

1.2 Education Sector Reforms Action Plan 2001-2005/6

In the ESR Action Plan, the issue of teacher education is considered implicitly within the cross-cutting area of quality assurance. However, the action plan does not mention any specific measurable milestones and/or indicator for this area. Under the quality assurance section of ESR

⁴ Ministry of Education, 2004. Position Paper: Thematic Group on Teacher Education, Preparatory Technical Meeting.

there are specific sets of actions for upgrading the basic qualification of a teacher to 12+1 and 13+1; the implementation of the National Education Assessment System (NEAS) for standardized assessments in classes IV and VIII as measures of credible and replicable testing and curriculum revision; and the setting up of Tehsil/Teachers Resource Centers (TRCs) as an innovative program.

Under the ESR an estimated Rs. 2500 million was set aside to establish 500 TRCs for the period 2001-2004/5. These TRCs were to provide an opportunity for decentralized in-service training and information facilities for local teachers. TRCs were seen to be especially critical in districts where there were no Government Colleges of Elementary Training (GCETs) or Government Elementary Colleges of Education (GECES). 380 TRCs were established in high schools at the district and tehsil level; however, they have not become fully functional due to a lack of financial and human resource support, as well as clearly articulated responsibilities. **The TRCs can provide an opportunity for decentralized in-service training and cluster based professional support sites, but their operationalization and optimization remains a challenge today and for the future.**

1.3 Education for All Plan 2015

The EFA National Plan of Action (NPA)2015 highlights the problems of quality inputs under the Universal Primary Education (UPE) component. Several issues have been highlighted with respect to Teacher Supply, Training and Supervision. The EFA NPA pinpoints the additional need for 118,000 (p.38) teachers up to 2015 to meet UPE targets for girls and boys. This projection is an under-estimate as it does not take into account the current shortage of teachers which is largely a result of the poor norm of 2 teachers per primary school, a slow replacement of retiring teachers, a ban on the recruitment of permanent teachers, and the lack of a substitute teachers' pool available to cover for 3-4 months of teacher shortages and/or absences (pregnancy, study, casual and widowhood leaves). With respect to teacher education, the EFA NPA recommends the following:

- a relaxation of qualifications for teachers in inaccessible areas together with special incentives;
- a revamping of in-service training to allow for its provision every three years rather than every five years;
- a scaling up of best practices through the replication of mobile teachers training, Professional Development Centers (PDCs) and TRCs;
- reforms of pre-service teacher training; and
- revision of curricula and textbooks. The EFA Plan 2015 has recommended new methodologies of teaching, which include distance learning, information communications technology (ICT)-based system of teaching, as well as training strategies to engage head teachers and supervisors through site based as well as cluster based teacher training options.
- improvement of teacher training institutions and their facilities (EFA Plan 2015; pp.28-30).

1.4 Policies on Teacher Education and Quality

All discourse in various policies on quality is directly linked to teacher competence, the relevance of curricula, assessment systems, pedagogical methods, teaching environment, and materials. A major criticism of teacher education particularly in the public sector is that it has not resulted in

improvement in student learning outcomes commensurate to the volume of inputs which have been allocated to in-service trainings.⁵ Teacher education, however, cannot be seen as the sole explanatory variable for student outcomes. Student outcomes depend upon competence (what the teacher is able to do) motivation (what does the teacher want to do) and opportunity (what could the teacher do) as well as the context (support, culture and environment) in which teaching takes place.⁶ **Although there are provisions in various policy documents on teacher education and training, there is lack of a comprehensive vision and policy on teacher education to elevate teaching into a full fledged professional status. There is a complete absence of a social dialogue that would systematically involve teachers, experts and teachers organizations in policy making. ‘Social dialogues are increasingly recommended as the glue for successful reform’ (ILO2005)⁷.**

2. Magnitude of the Challenge: some quantitative and qualitative considerations

2.1 The Numbers

There are almost one **million teachers** in the public and private sectors up to higher secondary level as illustrated in Table 1 below. The total number of public and private teachers up to grade XII is 988,000. This is thought to be an under-estimate as it does not include many state and non-state providers. The former comprise schools set up by the ministries of defence, labour, manpower & overseas Pakistanis, women and social welfare, industries, water and power, and the latter consist of madaris, non-formal education, etc.

Table: 1 Number of Teachers in Pakistan by Level& Sector(in 000s)

Level of Institution	Male	Female	Rural	Urban	Private	Public
Primary	242	191	305	128	86	347
Middle	90	146	136	100	121	115
High	146	132	124	154	107	171
Higher Secondary	23	18	19	22	16	25
Total	501	487	584	404	330	658

Pakistan School Education Statistics 2002-03 (NEMIS)

Total Number of Public and Private Teachers 988,000

2.2 Policy Implications on the Education Sector

Recognizing these challenges, the government is committed to the finalized Poverty Reduction Strategy Paper (PRSP), EFA goals and Millennium Development Goals. It has adopted a sector-wide approach with a two pronged strategy to optimize outputs:

- Improving existing public sector facilities for maximum utilization and performance and
- Providing an enabling environment to non-state providers to assist the government in its new role as facilitator, financier and efficient provider.

⁵ PEP and Bridges studies 80s and post EFA /Jomtien studies in 90s.

⁶ Poston, 2004 and Reimers 2004.

⁷ ILO/UNESCO 2003

This strategy is applicable equally to service delivery in schools as well as in teacher education institutions. There is, however very little stated in any policy document regarding operational procedures for the two pronged strategy to enable its widespread systematic implementation.

The challenge remains for public policy to bridge the gap between those education systems with quality support options and those without, in both state and non-state provision⁸. This effort is critical to minimize the dualistic patterns of education systems which exacerbate social and economic inequities. Public policy in a critical area, such as professional development in general and teacher education in particular must be holistic and non-discriminating in standard setting, creating minimum benchmarks for quality in all sub-sectors, which are equally applicable to public and non-state provision.

2.4 Transition Bottlenecks in Education – Implications for Teacher Supply and Education

For every 10 primary schools, there is currently 1 middle school; and for every 15 primary schools, there is just one secondary school. The current gap between public sector primary and middle and primary and secondary schools is therefore 10:1 and 15: 1 respectively (Ministry of Education, 2004). The lack of transition opportunities between primary and middle and primary to secondary is becoming the main obstacle for Pakistan in its attempt to attain EFA Goals by 2015. Primary school graduates have limited access to middle and secondary schools in both state and non-state options. The government is aware of this problem as highlighted in the last Pakistan Development Forum (PDF) meeting in 2004. It seeks to address this issue boldly and innovatively through afternoon (second) shifts in schools, as well as public-private partnerships and enhanced resource allocations for middle level education. Such an approach requires a major infusion of human and financial resources and consistent evidence-based medium to long term policies. For every primary school to be upgraded to middle school (K6-8) it would require at least 6 professionals and 4 support staff, whilst from middle to secondary (K9-10) the requirement would be 4 professionals and 5 support staff. The basic pay scale would be BPS 14 + . Currently there is a severe shortage of science, mathematics and English teachers in government schools across the country, with major implications for teacher education policies, strategies and financing options. **There is currently no initiative to form active linkages between higher and basic education, between schools and universities not only to meet the shortage of teachers from disciplines such as maths, science and languages for secondary and higher secondary education, but also some organic links within education. Such an initiative would require a flexible integrated pedagogical professional module to meet teacher shortage in high schools and also for research and other areas of enquiry in education(Chanana, 2004).**

⁸ There is a continuum of quality in both government and non-state schools with more crises of quality in the former than the latter. The Divisional Public Schools, Armed Forces schools and urban Federal Directorate Schools are certainly far better models of quality in public sector and similarly private sector presents choice, but choice for quality education is limited to some elite schools.

2.5 Teachers Trained: Quality and Management Issues

The number of teachers trained (pre-service) in the public sector is 97 % with traditional certification as required by the government such as PTC (for primary), CT (post primary/middle), B.Ed/M.Ed (secondary/post-secondary.) The comparable percentage of teachers trained in the private sector is 66% (EFA, 2015). However, this gap in teacher training between the public and private sector cannot immediately be presumed to reflect quality in public sector. On the contrary, it is in fact the private sector which compensates for lower percentage of teacher training with better student outcomes compared to those in the public sector on account of better management and monitoring. The public sector is largely suffering from an acute management and supervision crisis. In the 19 studies conducted on student assessments since the 1980s, the private sector has performed better than the state sector although there is little comparability in these to ‘understand changes in achievement over time’ (Andrabi, 2002).

3. Institutional Provisions and Practices

3.1 Certification Options

The current certification options available for pre-service teacher training together with entry qualifications, duration of courses, and levels of teaching allowed have been covered in Table 2.

Table 2: Pre-Service Courses; Pre-Requisites; Duration and Eligible Classes for Teaching

Training Program	Qualification Requirements for Admission	Duration of Training in Academic Years	Levels/classes that can be taught
P.T.C	Matriculation	1	I-V
C.T	Intermediate	1	I-VIII
Diploma Ed	Matric Intermediate	3 years after matric 1 year after intermediate	1-VIII
B.S.Ed. (12 + 3)	Intermediate	3	VI-X
B.Ed	B.A/B.Sc.	1½ years after BA, B.Sc or 3 years after Intermediate	VI-X
B.A in Education	Intermediate FA /FSC, A Levels	4 years	1-VIII in Private Sector
M.A Education MA in School Administration	BA, BSC, B.Ed.	M.Ed. 1½ years after B.Ed, MA in Education 2 years after BA/BSC	VI - XII + Students Teachers of PTC, CT and B.Ed + Supervision Professional Institutions Universities Management Positions
MPhil & PhD in Education	M.A. M.S.C, M.Ed	2 Years and 3 Years	Professional Institutions Universities Management Positions

There is a wide range of certification options available from Primary Teachers Certificate (PTC) to PhD in education. Public sector employment eligibility conforms to professional qualifications in pre-service programs such as PTC, CT, B.Ed, and M.Ed, whilst the non-state sector is flexible in its

recruitment entry requirements and has few rigorous rules on professional qualifications. Consequently, there is little compulsion to abide by any formal criteria for teacher recruitment. **The lack of an agreed national minimum criteria for teacher education at various levels of education results in both confusion and quality attrition. This in turn undermines not only student learning but also the professional status of teachers.**

3.2 Low Entry Level Requirements and the Lack of Professional Screening

There is a valid concern that the entry level qualification currently fixed for primary/elementary teachers at grade X⁹ and XII respectively is very low. Moreover, subject knowledge is weak and there is no screening for aptitude in this profession as compared to other professions such as medicine, engineering, business management etc. These traditionally low-entry level requirements particularly at the primary level have created the cumulative perception of teaching as a low status option, and at best a safe and often ‘part time’ profession for women and men with average to low academic records, poor self-esteem and indifferent or negative attitudes. **Furthermore, the entry qualifications for teachers vary from province to province, creating variations in the quality of teachers and uneven standards of measurement or assessment.**

3.3 Lower Standards for Non-Formal Education and Literacy Programs

It is also a fact that for Non-Formal and Literacy programs, there are even lower qualification requirements ranging from Middle school to Matric qualifications. This issue is forcefully justified as a practical necessity in remote and disadvantaged areas where there are no local female teachers available for teaching girls and women. **It is also a fact that the pre-service and in-service training of NFE teaching recruits is not standardized in terms of duration, content, institutional arrangements or in relation to any well-defined professional mobility plans. Some NGOs have developed training materials, but these too lack standard quality assurance guidelines.** The MoE in collaboration with ESRA/USAID have prepared national literacy guidelines recently which merit a closer look from a quality perspective for teacher education.

3.4 Areas of Training

Today, a range of options exist in the general and/or specific training of teachers.

1. ECE/Kachi – Early Childhood Education is a new stream which has been committed to in the NEP 1998-2010, ESR & EFA Plans for which initiatives have been recently launched by a some government and private sector providers (Punjab University I.E.R Dept., Home Economics College, Teachers Resource Centre –TRC, AKU, etc.)
2. Primary – pedagogy, content, subject-based focus, assessment systems and approaches for both formal and non-formal primary schools
3. Middle – content, subject based focus, methods, assessment systems and approaches
4. Secondary – content and subject based, approaches and assessment

⁹ In some provinces teachers are taken with grade VIII qualifications where no other option is available and often without any prospects for any up-gradation in qualification.

5. Higher Secondary – content and subject based, approaches and assessment systems
6. Drawing Master
7. Physical Education
8. Agro-tech
9. Special Education and AV aids (minimal support)
10. Management Cadre: Principals, Head masters, Head teachers – roles, responsibilities and skills
11. Technical Education in Middle and Secondary schools
12. Short Literacy Programs to enhance numeracy, literacy and life skills, such as credit linkage and NFE

There is currently inadequate human resource and financial support in teacher training in the technical education sub-sector. This is despite the fact that the government is increasing its focus on vocational technical education at the secondary level. Training is provided by the National Institute of Science and Technical Education (NISTE) at the federal level, Technical Education and Vocational Training Authority (TEVTA) in Punjab and through other master trainers at the provincial level. Linkages with polytechnics are also minimal, but can be improved.

For category 12 or non-formal education/literacy, there is a general under-provision of formal institutional options. Training is often provided by NGOs and Non-formal Education Directorates as a series of events rather than as a systematic professional training program with formal milestones, certification, equivalence or nationally recognized standards.

3.5 Posting and Service Structure in the Public Sector

Posting and service structure is commensurate with the level of education of teachers. As the qualification levels increase, so do the teachers’ scales.

Matric PTC	BPS: 7
FA/FSC / CT	BPS: 9....
B.Ed/M.Ed	BPS: 16

Recently the Federal Directorate of Education (FDE), has elevated the entry level position for primary /elementary schools to Grade 14, a longstanding demand of teachers associations. Driven by qualifications, primary school pay scales are lower than those for middle school, with the latter’s lower than secondary school. **The implication of this is that good teachers with special primary and middle-school level aptitude are forced out of their preferred areas of teaching once they improve their qualifications.**

There are few opportunities and incentives which exist for teachers to continue professional development in a systematic and regular manner within the levels of education at primary/elementary and secondary levels. Promotion of teachers within sub-sectors of primary, secondary etc. is currently linked to number of years served rather than professional capability and performance, undermining motivation for improvement.

3.6 Contract Hiring and Issues

In Punjab the previous policy of traditional government recruitment through Provincial Service Commission (PSC) has been discontinued since 2002 and the current policy for entry is district and school based contract posts. The entry level requirement for these educators has been raised to a graduate degree with B.A/ B.Ed. Many M.A., and M.Phil level applicants have also been selected for entry level posts.

The contract and institution based hiring policy with a minimum qualification of B.A /B.Ed has led to many equity issues in the educational sector. Numerous teachers who have obtained PTC and CT certification feel discriminated against, especially in deprived areas (Rajanpur, DG Khan, Mianwali etc) where female teachers do not have the option to graduate with BA, B.Ed degrees, etc. This criteria of graduate plus is leading to discrimination in the short and medium term whereby outsiders seek to benefit from employment opportunities for educators, whilst locally trained teachers are being disqualified in their own localities. Critics and teacher unions have expressed there opposition to this policy which is seen as violating other preferred policies of continuity, tenure, and preference to local and female teachers for entry positions at the elementary school level.

It has also been noted that teachers who are recruited on merit for school based contract appointments make pragmatic temporary decisions and continuously seek alternatives even after their recruitment. They sometimes do not even join their new post because the school site does not suit them. This leads to a viable teacher shortage where a number of teachers/educators selected either stay away or refuse to join the target school for which the vacancy was announced and filled.

Primary schools, particularly in Punjab are currently undergoing a critical management dilemma of an anomalous human resource mix in primary schools. In a majority of primary schools, the school head who is the senior-most teacher in terms of years has a qualification of Matric/PTC. In the mid-1990s, many primary schools were provided with English language graduate teachers, and since 2002 these have been further supplemented by contract recruitments of educators who may have BA, B.Ed, M.A., M.Ed or even an MPhil degree. This has created major human resource and professional anomalies in primary schools, having a Matric PTC headteacher with 11 years of schooling, working alongside newly recruited educators or ‘juniors’ who have 15 and 17 years of education. This issue is yet to be fully acknowledged and rationalized by the government. In the short to medium term it negatively influences the work atmosphere of primary schools, thus undermining the very remedy that the government devised in order to address quality in primary schools through improved teacher qualifications (ITA, 2004).

4. Public Sector Provisions for Pre-Service and In-Service Teacher Training

4.1 State Institutional Arrangements

There are 9 Institutes of Education Research (IERs) in Pakistan attached to public sector Universities. In addition there are specialized Teacher Training Institutions (TTIs) in Pakistan for preparation of teachers in specialized areas such as the Government College of Physical Education, Government Agro-Tech Teachers Training College, Audio Visual Aid Centers, Government. College of Special Education, National Technical Teachers Training College etc.

Table 3: Teacher Training – State Institutional Arrangements in Pakistan

Areas	Apex Institutions		Affiliate / Attached Colleges in Districts	
	Pre-Service/ Other	In-Service	Colleges (Pre-Service and In-Service)	Support Institutions Training Outposts (TOs) Teachers Resource Centers (TRCs)
Sindh	PITE (2) IER	PITE(1)	GECE (24) Female 11 / Male13 Govt. Colleges of Education (3)	Training Outposts (12) & 123 TRCs
Balochistan	PITE (1) IER	Bureau of Curriculum	GCETs	110 planned & 21 functional TOs
Punjab	University of Education IER	Directorate of Staff Development	GCETs (35) 12 for women Colleges of Education (6)	110 Established 123 Under Process
NWFP	University of Peshawar IER (1)	Directorate of Teachers Education and Curriculum Development (Abbotabad) & and PITE (Peshawar)	Regional Institute for Teachers Education (RITEs) 20 (only in-service) (11 Female & 9 Male)	22 TRCs With NORAD support as many as 300 TRCs are to be set up.
Federal	Technical Panel on Teacher Education (TPTE) ¹⁰ now housed in the Training Wing	Federal College of Education (FCE) drawing students nationally.		20 TRCs : Federal Directorate of Education supervised by a full-fledged Training Directorate
AJK	IER	Govt. College of Education Agro Tech College	9 GCETs (4 male and 5 female)	-
FATA			2 GCETs	-
FANA		Govt. College of Education		12 TRCs

All in all there are 578 capacity building institutions in the public education sector of the country. These have been listed below.

¹⁰ TPTE was established under the Curriculum Wing as an institutional output of the Asian Development Bank's Teacher Training Project (TTP) in 1994. TPTE has been transferred to GOP's regular recurrent budget in FY 2001-2002. The four PITEs are also an outcome of TTP.

Table 4: Teacher Training Facilities in Pakistan- Public Sector

Category of Capacity Building Institutions	Numbers
Provincial Institute of Teacher Education (PITE),	4
Education Universities	1
Teachers Training Departments attached with Universities	9
Government Colleges of Education in Pakistan	17
Training in Physical Education	03
Training in Home Economics	01
Agro Tech Training	04
Training in AV Aids and Special Education	04
Government Colleges for Elementary Teachers	89
Teachers Training Outposts (TOs)	66
Teachers Resource Centers. Initiative under ESR for decentralized capacity building & information sharing	380
Total	578

4.2 Teaching Practice: Hands on Experience for Pre-Service

It is a standard practice for PITEs, Bureaus of Curriculum and Training, Directorate Staff Development (DSD), IERs and GCETs/GECEs/RITES to have schools attached as labs for teacher practice, sometimes on campus and/or off campus. However, this linkage is not always so well-established, the duration is not sufficient thus limiting the extent of practical work undertaken by the trainees.

4.3 Training Outposts (TOs)

Training Outposts were set up in Government secondary schools under an Asian Development Bank (ADB) assisted program. Many of the TOs have since been converted into Teachers/Tehsil Resource Centres (TRCs) under the ESR Action Plan (Annex 3). There are 380 TRCs in Pakistan with many more being planned to make in-service training accessible at the local level. Several initiatives on TRCs have preceded the current one such as the School Development Centers (under SPEDP) and TARCs (Teachers and Resource Centers) which continue to be undertaken through public private partnership by the Ali Institute of Education, a non-state provider working with public and private sector institutions and teachers.

4.4 Institutional Diversity or Institutional Confusion

1. Apex institutions for teacher education vary from province to province and the institutional organization of teacher education also varies accordingly. Whilst in one province PITE is the apex body (Sindh) in the other provinces this may be an adjunct body (NWFP), or simply an attached unit (Punjab/Balochistan).

2. In Punjab there are two Apex institutions for pre-service and in-service separately, the University of Education and Directorate Staff Development. The DSD in its current state is evolving a more holistic plan for inservice training (INSET), such that it addresses issues of incentives and accountability, M&E, support and follow-up. DSD intends to work with district and

tehsil based training and support centers, as well as cluster schools. DSD in its new formulation intends to work with partnerships across government, civil society and donors in a more accountable market oriented service provider and client relationship (DSD, 2004). The GCETs /CE are the affiliate colleges of the University but they are also supposed to undertake in-service and must be in concurrent jurisdictions of UE and DSD.

3. The affiliate institutions of the apex organizations are also called by different nomenclatures etc. Government College of Elementary Training (GCETs) in Punjab and Government Elementary College of Education (GECE) in Sindh, College of Education and the Regional Institute of Teacher Education (RITEs) in NWFP.

4. TRCs and TOs are located in high schools which lie under the jurisdiction of the District Government in general and with the EDO- Education in particular. In Punjab & Balochistan the TRCs have been selected and equipped through the UE and PITE respectively. In other provinces this has been undertaken by the District Government itself through its EDO- Education. The link between TRCs/TOs and GCETs/GECEs /RITEs is not clear and there is an institutional disconnection between the line management of TRCs and GCETs with the provincial apex body for GCETs and the district education department for TRCs.

The use of district in-service training facilities in support institutions such as TRCs and TOs in high schools has to be clearly specified as they fall under different line management at the district level compared to apex/affiliate institutions.

5. Under devolution and the Local Government Ordinance 2001, training has been identified as a provincial subject, whilst professional development needs, support and follow up are core service delivery issues at the district level. A key criticism of the existing institutional arrangements for teacher education is that of centrally managed, weak and disparate policies and practices across provinces and at the national level.

Institutional arrangements require clarity in the stated functions of Apex bodies and their affiliate institutions in what ought to be concurrent spheres of work or jurisdictions at the provincial and district level.

5 Non-State Provisions for Teacher Education

5.1 Private Sector

Non-state or private sector providers have mushroomed in teacher training as a response to the growing need for differentiated types of requirements which the public sector may not have been able to provide.

Teacher training institutions in Pakistan also include autonomous bodies, private universities, and degree awarding and chartered institutions. These include premier institutions such as IED-AKU, Ali Institute of Education, Notre Dame Institute of Education (NDIE), Beacon House National University (BNU), City School, University of Management Training UMT/ILM, Hamdard University, IQRA University etc. Many of these institutions have foreign university links in the UK, Canada, Australia, and Sweden. There are also other providers such as Tamir-e-Nau TTC, Dawn Elementary College of Education, Ghazali Teacher Training Institute, Sindh Elementary TTI in Jamshoro, Larkana, and Jacobabad

5.2 Allama Iqbal Open University (AIOU)

AIOU is an autonomous distance learning university which also offers courses in education for managers, planners and teachers. Its courses include pre-service and in-service programs for teacher certification and other graduate and post graduate professional qualifications in education. It enrolls 10,000 students annually for various certifications and diplomas.

5.3 Education Foundations and the National Commission for Human Development (NCHD)

Both AIOU and Education Foundations are seen as quasi state providers of pre-service and in-service teacher education for formal and non-formal education. Sindh Education Foundation has developed its own in-house capacity for teacher training and quality assurance, while the National Education Foundation out sources teacher education to other non-state providers. The NCHD similarly offers a mix of training through out-sourcing as well as in-house capabilities.

5.4 Civil Society Organizations and NGOs

These include civil society organizations offering largely in-service programs of teacher education, as well as pre-service for the non-formal education sector but also for the formal programs. Amongst the notable NGOs running pre-service and in-service programs are TRC, SPELT, ABES, NRSP and all the Rural Support Programs, Sultana Foundation, Bunyaad, Kashmir Education Foundation, Kwendo Kor, SAHE, Idara-e-Taleem-o-Aagahi (ITA), Society for Community Support for Primary Education in Balochistan (SCSPEB), Sudhaar, Rozan, Indus Resource Centre and many more. These will continue to grow in response to in-house teacher training needs for their regular basic education programs.

5.5 Regulation in a Rapidly Growing Sector

The demand and supply for teacher education has mushroomed with the expansion of public and private sector provision of pre-service, in-service and non-formal primary education programs. This trend will continue in the near future. Unfortunately, there is little evidence of any systematic effort to classify and/or make an inventory of these programs. Quality control therefore remains largely elusive.

One of the major criticisms of teacher education is that there are both state and non-state institutions which ought to be responsible for regulating standards in a sector where there are multiple providers and multiple options operating in a weakly defined policy and service delivery environment. Some have suggested that this represents the 'myth of choice in education' for Pakistanis, where quality is being consistently undermined in both the public and private sectors.¹¹

¹¹ Irvine, 2004.

5.6 Tensions between state and non-state providers.

There also exists, tension between state and non-state providers on account of the weak regulatory environment. The adversarial relations are reflected in strongly held government institution views that the quality of teacher education is being undermined by the private sector. Stringent controls are therefore needed including barriers to the recruitment of teachers who have been trained by non-state providers. This tension can only be removed by increasing adherence to rigorous comparative research and transparent standards, which are applicable equally to public and private sectors.

There is little evidence of any serious dialogue, formal or informal, which would facilitate an understanding between the different providers of teacher education, and encourage greater public-private partnerships.

6. Pre-Service Training

6.1 Types of Courses Offered

Table 5: Pre-Service Training Provisions

Types of Courses/Degrees	Offered By	Duration
Pre-Service for Untrained Staff	GCETs (Balochistan) /EFA Wing – NFE-literacy Cell NGOs	One-week to 12 weeks
Primary Teachers Orientation Course (PTOC),	AIOU	19 weeks Distance Learning with some face to face
Primary Teaching Certificate (PTC)	GCETs, GECEs, AIOU	1 year
Certificate of Teaching (CT)	GCETs, GECEs, AIOU	1 year
Diploma in Teacher Education Variations in Specialization	Non-State providers eg IED-AKU, ILM, Hamdard, AKDN PDCs	9 months to 1 year
12+1½ and 13+1 year programs, Dip Ed	GCETs, GECE, Federal College of Education (FCE)	18 months – 1 year respectively
B. Ed	Public Sector Universities' I.E.Rs, UE, AIOU, Private Sector	1 Year
M.Ed, Specialised	Public Sector Universities' I.E.Rs, UE, AIOU, Private Sector eg. IED-AKU	2 Years
M.Phil; PhD	Public Sector Universities IERs, UE, Non-State Providers ¹²	2 Years – 4 Years

¹² Non-state providers include AKU-IED, AIE, TRC, NDIE, BNU, School of Education UMT, Hamdard University, IQRA, etc. Education Foundations and NGOs also run pre-service for Non-formal and in-service programs for formal and non-formal sectors eg. SEF, NEF, TRC, SCSCEP, ITA, SAHE, Bunyaad, MMBMT, Sultana Foundation, Sudhaar etc.

6.2 Alternative Approaches in Pre-Service Training – the Global Experience

It has been seen that globally there is a move towards partnerships between institutions undertaking research and practice, where one reinforces the other. These trends further build the case for linkage between basic and tertiary education. The university school links, the school industry university links, cross country and university links and school networks are a case in point as are other initiatives mentioned below:

1. Professional Partnership models of TTI with University and Schools require institutional support for both pre-service and in-service teachers in school setting. School-university partnerships tend to encourage research based teaching and learning solutions. Benefits from a layering of experienced student teachers, mentors and faculty members. e-Professional Development Schools with core IT based outreach program of professional development has been tried in China, Sri Lanka and other countries of the developed world. University–school based partnerships, crossing institutional boundaries for optimum professional outreach, fostering linkage with two cultures, viz., school and university, creating new venues for educator development, and inclusive decision making as in South Africa, UK, Canada etc.
2. Learning Consortium teacher development partnership formed between four school boards, with faculty of education at the University of Toronto, the Ontario Institute of Studies in Education (1988), also in USA. An evolving entity with vision, work responding to emergent issues and concerns, partnerships, conversations, activities and projects to contribute to professional knowledge, share practice and insights, assessment.
3. Teacher Apprenticeship model Program (TAP) University of Toronto with a few public schools mentors and apprentices and trans-national models USA /Chile Universities and Schools
4. Pre-service programs, schools links to professional organizations and industry
5. School networks (Australia) 400 Schools and Teachers Networks linked to research initiatives; forming new communities of practice, reflection, skills build up and practice.
(Reimers, 2004 pp.71-118)¹³

Pakistan is experimenting with some of the following approaches, but these efforts are still at nascent stages requiring strategies for scaling up with proper financial/resource support.

The inter-institutional linkage is difficult to establish albeit once established works smoothly such as the experience of Early Childhood Education and Home Economics College in Punjab or IED-AKU in Sindh and Balochistan. The public sector is still new at initiating such innovative alternatives. It is clear however that the challenge to raise quality in teacher education requires new learning communities as well as collective action in order to achieve improved student learning outcomes and teacher self-actualization.

¹³ For an elaborate enumeration of models in pre-service embedded in school based improvements read Reimers study on Teachers Professional Development for IIEP, UNESCO 2004.

6.3 Curriculum for Pre-Service Teacher Education

Curriculum variations exist between state and non-state providers (PTC, CT, Dip.Ed., B.Ed., M.Ed). The coursework is perceived to be embedded in generalized theoretical approaches, with low practical hands-on exposure.¹⁴ The examining body for PTC/CT and Dip Ed are the Boards of Intermediate and Secondary Education (BISE). The examining body for B.Ed, M.Ed. M.Phil and PhD programs is the conventional universities with which the pre-service institution is affiliated.

Curriculum for Primary Teachers Certificate Programme

1. Principles of education and methods of teaching
2. Child development and counseling
3. School organization and classroom management
4. Language and methods of teaching
5. Mathematics and methods of teaching
6. Science and methods of teaching
7. Social studies and methods of teaching
8. Islamiyat/Islamic history and methods of teaching
9. Arts/Practical arts and methods of teaching
10. Health and physical education
11. Practice teaching

Curriculum for CT Programme

1. Theory and history of education
2. Child development
3. School and community
4. Development
5. General methodology and preparation of teaching aids
6. Organization of elementary education and school management
7. Special school subjects and methods of teaching.
8. Practice teaching

Curriculum for Secondary Teacher Education

While different curricula are followed in different training institutions, the following courses are generally taught at the B.Ed level in most institutions.

1. Perspectives of education
2. Educational psychology and guidance
3. School organization and management
4. Evaluation and measurement
5. Islamiat and Pakistan studies
6. Curriculum and instruction
7. Practice teaching

¹⁴ Chaudhary, 1995

6.4 Critique

The curricula contents of pre-service certification programs particularly in the public sector, are outdated. The course work does not fully reflect the emerging global trends in pedagogical methods: the shifts from Bloom's taxonomies to constructivism, critical thinking and multiple intelligences, use of ICTs, life skills/environment, citizen rights based approaches and exposure to inclusive education and early detection of impairments. The assessment systems for teacher education also need to be revisited giving adequate weightage to theory process and practice.

Some private sector providers, on the other hand do provide diversity in terms of choices and experience. Some detractors of private sector provision strongly argue against a heavy reliance on part time faculty who cannot give quality time to their students. Teacher training like other professional degrees is seen as exercise in degree chasing rather than an experience to enhance the quality of pedagogy and learning.

The link between theory and practice of teaching is missing in teacher preparation programs with little weightage on practicum in target schools. Teaching practice in PTC/CT and all professional courses needs to be planned more effectively

There has been no evaluation of the Diploma in Education program introduced across Pakistan by TPTE to replace and upgrade PTC and CT. Lack of proactive planning and resource constraints have been cited as the official reasons for this oversight.

There is insufficient focus on research in teacher education in terms of preparation and delivery areas. This results in lack of information to track learning achievements, teacher preparation programs which can in turn inform policy on teacher education

The low standards in a majority of existing teacher education programs are compounded by increasing instances of plagiarism and non-authentic research practices. The awarding of undeserved higher degrees both in the government sector and in some of the new private sector institutions add to the deteriorating situation.

Absence of National Accreditation and Equivalence Systems : There is no system for accreditation or for the regulation of teacher standards within and across provinces especially as provinces have started to adopt variations in criteria for teacher recruitment. Inter-provincial transfers are difficult and intra-sectoral (public and private) employment criteria non-existent. This lack of equivalence is identified as a major bottleneck to the standardization within teacher education. The gap between private and public delivery systems at the local and national levels is therefore much harder to bridge

7. In-Service Training

In-service teachers training or professional development is often seen as a window of opportunity for continuous renewal of professional skills and integration of emerging knowledge and technologies in the education system. In Pakistan there has been a great deal of focus on in-service training built into every education project and initiative at the government level and also those offered by private and civil society sectors.

7.1 Frequency of In-Service Training

Despite policy recommendations that a teacher must have the opportunity for in-service training (INSET) once every five years, currently, a primary teacher can only access INSET after 13 years, a middle school teacher after 7-8 years and high school teacher after 16 years.¹⁵

In recent years the in-service training offered by state and non-state providers has been proliferating with many variations in the type of training and its duration. Some examples of in-service provision are illustrated in Table 6 below:

Table 6: In-Service Training

Types of Courses/Degrees	Which Type of Institutions	Duration
In-service training of untrained staff in new areas through full-time crash / cascade programs UE – Punjab 150,000 New Assessment Systems Subject based Mobile Teachers Training for serving teachers (Balochistan)	University of Education, DSD, GCETs, GECEs GCETs and Partner NGOs	One week, one month to three months duration
Short term refresher courses for those already teaching Visiting Teachers Program (VT) Educational Leadership and Management Advanced Diploma in ELM Advanced Diploma in Education Language Enhancement and Achievement Program (LEAP)	In regular govt. institutions Non-State Providers VT: AKU-IED ELM : AKU –IED, ILM Ad. Dip in ED- AKU –IED AKES	One week to three weeks VT: two month certification ELM : 10 months to one year Ad Dip.ed : 1 year

¹⁵ PEF Evaluation Study, 1998

<p>Donor-funded projects directed towards in-service training of government teachers.</p> <ul style="list-style-type: none"> - Teachers –subject Based - Head Teachers, - Supervisors & LCs as Master Trainers - 4 tier Cascade district based model - Primary Teachers as Mentors - Professional Development Centre (PDC)/ Whole School Improvement Programme(WSIP) clusters, mentors, certification etc (PMSP, SPEDP, NAEP, ESDP, BPEP, AKES Programs) 	<ul style="list-style-type: none"> - DSD, GCETs/GECES, - Designate School Development Centers (SPEDP in 90s) - Dist. Education Officers: LCs/ Supervisors as master trainers in a district (SPEDP-ESDP) - Mentors selected from Primary School Clusters and trained by IED-AKU (Balochistan) - PDC –AKES established for multi-purpose strengthening of teachers /managers (Northern Areas) 	<ul style="list-style-type: none"> - One week, - One month, - Cohort repetition over one year to 18 months cycle (PMSP-HT) - 18 days
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7.2 In-Service Training Models

A sample of models of INSET are described below.

1. Cascade or Generational Model: This is the most popular model in use. A first generation of teachers is trained or educated in a particular topic or aspect of teaching to pass on to a second and third generation/tiers of teacher trainers and go up to three or four generations/tiers. The outreach of the model is extensive but the transmission of content and methodology by the time it reaches the teachers and actual classrooms may be considerable diluted and altered.

2. Mentor model: This is a process by which a colleague who is a critical listener/ observer asks questions, makes observations and offers suggestions that help to produce different decisions. Coaching is a learned skill and mentors themselves need training. The mentor model is derived from the apprentice model where the mentor is a master teacher to be emulated.

3. Reflective Model: This model builds on teachers personal classroom experiences. Teachers show commitment to serve the interest of students by reflecting on their well being. When teachers become reflective practitioners they move beyond a knowledge base of discrete skills to a stage where they integrate and modify skills to fit specific contexts. They eventually move to a stage where skills are internalized, enabling them to invent new strategies. They therefore develop the necessary sense of self-sufficiency to create personal solutions to problems.¹⁶

4. Whole School Improvement or School Based Model: This “whole school dimension” includes staff development, school infrastructure, emphasis on high expectations, careful attention to consistency of teaching and discussion of pedagogy. It pervades the “culture of school” and mobilizes the local community as support.(Hopkins). WSIP as a school-based management paradigm under the school improvement and school effectiveness discourse is driven by eclectic approaches to processes, outputs and outcomes considered as the primary focus to which inputs serve as a critical but secondary focus.

¹⁶ Larivee, 2000

5. **Cluster Based Professional Development Model:** This model works with a cluster of schools in a specific geographical location served by a group of or a professional development or resource centre. There are several examples of these are in Pakistan especially in the northern areas, and emergent ones in NWFP, Balochistan, Sindh, Punjab, Northern Areas supported by GTZ, US AID/ESRA, UNICEF, DfID as well as more established ones in India, Sri Lanka, China, South Africa, Uganda etc.

6. **In-service training placements outside Pakistan:** Whilst this is not a specific model per se, it is a modality of training which is on the increase within projects such those supported by ADB, DfID, US AID (ESRA, AED), US Government (Congressional Grants/Plymouth State University [PSU]). Placements in institutions abroad, focuses on subject based exposure training as well as training for administrators and other specialized courses. In the past two years almost 400 teachers and trainers have been sent abroad for courses ranging in duration from 4 weeks to 4 months. A predominant number of teachers/trainers have been from the elementary school level and some from the secondary level (PSU). This trend of placements abroad is expected to increase in Pakistan and can be seen as an opportunity to tailor make such capacity building initiatives to the specific requirements of pedagogy, leadership, assessment systems, leadership and management at the elementary and secondary levels in Pakistan. There is a concern that the returned trainees may not be able to form a critical mass or an active network due to low interaction and culture of low cooperation between different partners, thus undermining the opportunity to enhance dissemination of quality teacher education and practice.

7.3 Curriculum

The in-service curriculum offers diversity and space for innovations. There is a range of options, from very traditional cascade oriented theoretical trainings to well designed tailor made courses for specific target audiences. In the innovative programs such as Mentoring, MTT, WSIP, Clustering, PDT and also some of the government's recent commitments to emerging challenges of health, population, environment, HIV Aids, rights, IT, and gender, the in-service curriculum can sometimes be more diverse, focused, and balanced in terms of content and methodology. There is an effort to increase attention when designing the course contents to the following areas:

- Subject based content knowledge
- Quality of teaching and learning – pedagogical methods, joyful learning
- Low cost aides for supporting interactive student-centred learning
- Community involvement
- Learning assessment systems
- IT literacy skills
- Multi-grade teaching
- Leadership and management (including capacity building for admin and accounts)

Specialised trainings in Data MIS management, Laboratory management, financial training, IT are also provided as per emerging needs and resource availability.

In-service trainings in a GCET can be varied for diverse participants. Table 7 shows the case of a GCET in Punjab.

Table 7: In-Service training program in 2002-2003. A profile of GCET in Punjab

S. No	Training Course & Duration	Category of Participants	Number of Participants	
			Male	Female
1.	Repair & Maintenance of Laboratory Equipment (2 weeks)	Secondary School Teachers (Science)	50	50
2.	Teaching of General Science (2 weeks)	Elementary School Teachers	100	100
3.	Teaching of Science to 9th & 10th Classes (4 weeks)	Secondary School Teachers	275	150
4.	Teaching of Maths. To Secondary Classes (2 weeks)	Secondary School Teachers	150	100
5.	Administrative/Financial Training (2 weeks)	Heads of High/ Higher Secondary Schools	200	100
6.	Master trainers in Computer Education (20 days)	Science Teachers	50	40
7.	Basic training in Computer Applications (20 days)	Officials	30	1
8.	Teaching of English at Primary level (2 weeks)	PTC teachers at 40 centres in 2 phases	2520	2000

Source: Zafar, 2004, GCET Faisalabad District

7.4 In-Service Training Options and Patterns: Emerging Issues

In-service training reveals varied patterns of what is possible in Pakistan. It represents a continuum of standards, from poorly executed cascade models to innovative practices such as 4 tier district based cascade training (Education Sector Development Program –ESDP), mobile teachers training –MTT (Balochistan), cohort models (PMSP/ESDP), district based and cluster-based mentoring, and Professional Development Centres (AKES).

Both non-state providers and government initiatives with or without donor funding, represent innovations which need to be owned and scaled up. The innovations undertaken through project pragmatism to demonstrate short term outputs often have low alignment and practical interface with government budgetary and planning systems to be integrated in the medium term planning documents and recurrent budgets.

Government initiatives, although undertaken within mainstream public sector and partner civil society institutions, always run the risk of being unsustainable due to an imbalance of provision between personnel and activities. There is a caveat to the ‘unsustainable’ critique of donor funded programs, as in the case of PITEs and TPTE and even MTT. Although, these programs have been institutionalized with a great deal of effort, demonstrating that mainstreaming of innovations is indeed possible, but even in these mainstreamed institutionalized programs, resource use is not always adequately thought through. There is a heavy emphasis on recurrent staffing/salary costs. The programs are short on : vision; planning targets over time; institutional leaders as champions and resources from non-salary recurrent and development activities.

Non-state providers, on the other hand, offer several innovative options for upgrading skills through short and long duration courses. These are not always assured of equivalence and accreditation in public sector institutions. The public sector is selective about recruitment of teachers from the private sector training institutions. Whilst public sector will admit teachers qualified from AIOU, IERs, specialised TTIs and IED-AKU, it will not always be consistent in entertaining teachers trained by other private sector universities, degree awarding colleges or NGOs. However, under ESR Action Plan, the public sector is seeking support for in-service training through private sector and NGOs with a track record particularly in Balochistan, Sindh and also in the Punjab. The recent initiative under Punjab Education Sector Reforms (PESRP) with IED-AKU, AIE and other NGOs is a case in point as is that of Balochistan with SCSPEB.

The critique of low or no follow-up support to teachers after training remains valid for INSET as it is for pre-service.

7.5 Limitations of Various Training Models

Cascade:

- There is consistent loss of quality/content during the transfer process/ training loops from the experts to the teachers/Trainers. The duration of ToT for master trainers is also thinned out.
- Non-availability of local teaching supervisors especially in rural and remote areas
- Minimal classroom teaching practice and support

Mentor:

- Low or no administration support to ensure quality of the program
- Bureaucratic rules obstruct incentives and honorarium to mentors seen as ‘irregular’
- Teachers’ Associations construe this as an additional duty, raising expectations without adequate compensation
- AKU-IED dependent program for expert pedagogical support.
- Lapses in professional refreshers for mentors resulting in lack of continuity in the learning process

Whole School Improvement Program (WSIP)

- WSIP as led by NGOs and the Aga Khan Education Services. There is an inherent dependency on the professional intermediaries and the Professional Development Centres (PDC)
- Issues hindering progress include, poor school infrastructure, entrenched routines, culture of dependency, poor content knowledge of teachers, motivation, mobility.

NGO In-service models for government/NFE teachers

- The ‘one of’ workshop model is of little value without follow up and feedback
- There may be limited focus on quality assurance in content, or delivery
- Often, these models are unrecognized by the government and lack legitimacy for scaling up
- Stop and go programs which are dependent upon donor projects or unreliable resources

8. Information Communication Technologies (ICTs)

Bridging the digital divide for learning and promotion of knowledge based societies is a key concern in Pakistan. The country has endorsed its commitment towards ICT promotion to meet EFA goals in national and international forums (Dakar, Beijing, Islamabad, Delhi etc). This commitment is being vigorously addressed at the secondary, college and university level, albeit without a formal public policy and national strategy for ICT in education¹⁷.

8.1 Recent Initiatives

Initiatives to set up IT infrastructure and learning programs have been supported by the Ministries of IT, Science and Technology and Education. They have focused on secondary schools, colleges as well as teacher education institutions in the public sector. Some well known initiatives supported by donors include INTEL, International Education and Resource Network - iEARN¹⁸, Microsoft's Partners in Learning Programme (PIL), the Asian Development Bank (ADB) Programme and USAID's ESRA. IT facilities are being provided to teacher education institutions in the public sector. Microsoft intends to provide IT support to a large number of teacher training institutions and has already equipped some PITEs with IT facilities. Intel has trained almost 70,000 teachers, of whom 80% are in the public sector. Faculty training in teacher training institutions is being held for ICTs so that they can incorporate these skills into their routine teaching and learning. A major concern is the consistent availability of resources in recurrent budgets for consumables, maintenance and repair of IT labs which often gets ignored in budget planning.

8.2 Lead Actors in Information Communication Technologies:

In the non-state sector IED-AKU has already taken the lead in developing ICT based on-line course ware for its pre and in-service training programs which can be emulated by the public sector institutions through a partnership program. Other organizations such as Alif Laila Book Bus Society, Idara-e-Taleem-o-Aagahi (ITA), TRC, B.I.T.S, are also pursuing an active outreach to support whole school improvement through ICT based teacher and student applications. These in turn are being actively supported by iEARN, INTEL, the corporate sector such as PSO (Pakistan State Oil), ICI, and others.

¹⁷ The National ICT strategy for education was to be finalized in 2003 with support from US AID. A great deal of thinking has already been undertaken towards this end.

¹⁸ iEARN (International Education and Resource Network) is non-profit organization made up of over 15,000 schools in 100 countries, iEARN empowers teachers and young people to work together online using internet and other new communication technologies. Approximately 750000 – 1000000 students each day are engaged in collaborative project work worldwide. Since 1988, iEARN has pioneered in on-line school linkages to enable students to engage in meaningful educational projects with peers in their countries and around the world. Its programs include : Community Voices Collaborative Solutions, Friendship through education, youth exchange program etc.

8.3 Allama Iqbal Open University (AIOU)

AIOU has state of the art facilities for distance learning through IT support (funded by JICA) which is severely under-utilized. A French language on-line programme is in place. AIOU can easily expand its teacher education and professional development courses on similar lines. Several developing countries such as China, Egypt, South Africa, and Sri Lanka have started to expand outreach for teacher education through the active use of ICTs and this needs to be actively emulated in Pakistan through AIOU, Virtual University and also the TTIs.

9. Physical Infrastructure

The public sector teacher training institutions suffer from the same malaise as all government education institutions: missing facilities, lack of maintenance, repair, support and upgradation costs. These are either non-existent or minimal. The facilities are often housed in huge buildings and over sized grounds, often with hostels, are quickly run down and not conducive to quality learning. Moreover, laboratories and libraries are either non-existent or have also fallen into disrepair with outdated equipment and materials. There is no mechanism of ensuring financing which is part of the recurrent budget or a domestic driven development programme. Invariably these facilities are improved through donor driven programs and rarely through the government's own regular budgetary resources. The recent proposal prepared by CIDA for the Canadian Debt Swap for Pakistan is designed to address the physical functionality of the teacher education institutions across Pakistan for their optimization as well as for capacity building programs. Other donors such as US AID, GTZ, ADB, WB, DfID are also keen to invest in institutional refurbishment and upgradation to improve the functioning of training institutions.

10. Financial Issues- Low understanding of financing and budgeting for teacher education

A core area in teacher education relates to its financing for improved resource allocations. However, in the earlier meeting organized by MoE in 2004 this was identified as a weak area where skills for planning and budgeting, costing and financial reporting are severely lacking. The questionnaire which went out to the Apex Teacher Training institutions (February 2004) met with only one substantial response from Sindh in which some estimates of unit costs have been given for pre- and in-service training programs

Pre-Service

B.Ed =	Rs. 10,500 per student
M.Ed =	Rs. 10,500 per student

In-Service

Primary =	Rs. 6570 for six weeks
Supervisors/RPs . =	Rs. 3160 for one week
Headteachers /LCOs =	Rs. 2,800 for one week

(PITE : Nawabshah 2004)

Note: As the inputs for the unit costs are not given, these estimates may well be operational running costs only and not comprehensive institutional costs inclusive of utilities, wear and tear etc. They thus appear to be under-estimated. It is clear that regular annual planning in public sector institutions lack effective costing skills. Financing of teacher education is generally project driven and not part of the recurrent mainstream budgets.

- There is lack of institutionalized approach to financing of teacher education (human resources and financial resources) as a part of an embedded costing approach of institution based costs to meet the needs of upgrading of human resources and quality assurance.
- Budgetary constraints and conventions of low or adhoc budgetary provision for teacher education have constrained provincial and district governments in planning for regular in-service training of teachers as part of non-salary recurrent budgets which can be costed on a per-student or even per school/institution basis.
- Financial short falls also impact availability of learning aids/technology, supplementary teaching material, reference materials, maintenance and monitoring ability in the training institutes

11. Core Conditions and Principles for an Improved Teacher Education framework

1. Many of the issues highlighted above have been raised in the ILO/UNESCO report on ‘teaching personnel and solutions’, with reference to policy and institutional arrangements. These require linkage to international norms (2003, p.10).
2. The fundamental premise of teacher education and student achievement linkage cannot be over-emphasized . However, this in turn is linked to years of training in both pre-and in-service, content mastery, use of teaching and supplementary aides, contact time with students in classrooms, conducive environment, lesson preparation, monitoring of students progress, motivation and attitudes.
3. Teachers need to be fully engaged in the change process. This must be understood and the change managed by themselves with suitable leadership and not as an external imposition.
4. Ongoing professional support cannot be a one of event, but such that it leads to professional development for career progression, mastery over subjects, ability to adjust and update skills according to changing times, access to learning/teaching materials, access to professional linkages and support structures.
5. Alternative paradigms of teacher education need to be put in place with an integral research component to track the ‘what’ and ‘how’ of learning achievements. This entails experiments with the whole school approaches, local communities such as those experimented in Bangladesh, Pakistan, through school based models of training, Professional Development Support Centers, mentoring, short monthly in-service at a cluster resource centre or designate school with a mentor to support follow up, Distance Education including ICT based learning, must be engaged with fully to alter teacher attitudes and classroom practices.

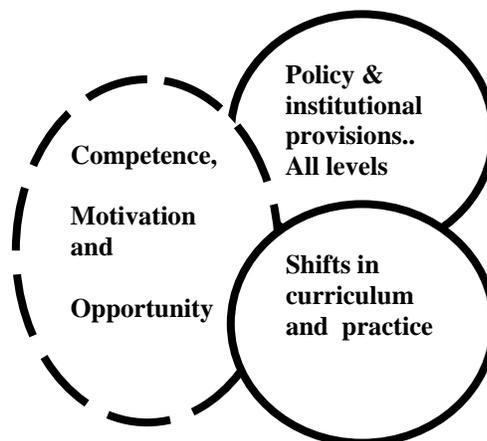
6. Innovations in teacher education must be embraced in public and private sectors, schools and universities, and tracked for outputs and outcomes independently, and/or through a public and private partnership approach where state and non-state providers collaborate systematically for optimization.

12. A Proposed Framework for Teacher Education

A systemic response is needed to address teacher education and teacher practice in Pakistan. The framework for addressing issues of teacher education comprehensively must have three concurrent dimensions:

1. Measures which address teachers competence, motivation and opportunity (Poston 2004 – Annex 4)¹⁹
2. Policy and institutional provisions across schools, district, provincial and national levels.
3. Supporting shifts in curriculum and practice (both pre and in-service)

Competence, motivation and opportunity must be iteratively addressed and integrated with the policy and institutional as well as in curriculum and practice dimensions



12.1 Policy

1. The policy on teacher education both pre and in-service needs to be long term, embedded in a vision, set of criteria, strategies and operational procedures which are inclusive, provide scope for elevating teachers status and provision of authority for local level flexibility in decision making.
2. A systematic institutional provision must be made to include ‘Voices of teachers’ in the policy making processes through a regular and formal social dialogue forum at the provincial and national levels, providing space to professional associations and experts. In the MoE position paper on teacher education (2004), a suggestion was made to set up a National Teacher Education Forum

¹⁹ This is a thought provoking note which merits review to elaborate the discourse on teacher education policy and practices.

(NTEF) for policy inputs to be managed by the Curriculum and Training Wings of the Ministry of Education. This proposal needs immediate implementation with proper representation of stakeholders. This demand has been reiterated by teachers in a recent initiative to capture teachers' voices of courage and concern at the World Teachers Day 2004 (ITA, 2004)

3. A robust and credible database on teachers needs to be established within EMIS at national and sub-national levels for information on pre-service and in-service profiles, disaggregated by level, subject, gender and location. This database must reflect both government and non-state providers. Such a database will help in evidence based policy making, planning and financing. It would also help to monitor PRSP indicators.

4. Research on teacher education programs (pre-and in-service), practice in the classrooms and student achievements must regularly feed back into theory to provide regular objective evidence for iterative policy refinement, reflection and upgradation.²⁰ Universities and their Institutes of Education Research (IER) may be contracted for this exercise by the Ministry and Departments of Education.

5. A policy provision for links between basic/school education and higher education must be made along with financing arrangements. This will ensure a steady source of supply of specialist teachers for mathematics, science, social studies, IT and language, particularly for secondary education. Teachers can thus be mobilized through tertiary institutions with some supplementation in pedagogical methods. Current initiatives of indigenous scholarship programs funded by USAID and GoP in universities can be tapped by school education in the true spirit of sector wide approaches of ESR. The Higher Education Commission (HEC) and the Ministry of Education as well as the provincial departments of education can collaborate towards this end.

6. The policy must create space for addressing the status of teachers through their professional standing, certification protocols as well as through benefits and salary packages which illustrate the critical importance of an active frontline change agent to implement education reforms and transform education practices.

7. Incentive programs need to be instituted for teachers which are monetary and non-monetary in order to address the crisis of teacher placement in rural and distant areas. This can be overcome through attractive packages of support including transport and residential options, particularly in rural areas.

8. Resource allocations for teacher education need to be revisited through a systematic trend exercise to capture evidence on allocation patterns and inform policy. The work should focus on designing new resource templates for teacher education (pre and in-service) and to revise the financing requirements for this critical area of human resource development. Such an exercise should be undertaken jointly with interested development partners who would be willing to support the Government of Pakistan for future initiatives in financial realignments for teacher education.

²⁰ IED-AKU 2003 and Andrabi, 2002

12.2 Institutional

1. There is an urgency to clarify the current confusion on apex and support institutions for teacher training in all provinces. It is also important to have in place agreed guidelines on jurisdiction and responsibilities, such that provinces and national institutional arrangements are consistent, fully aligned and transparent. A universal terminology needs to be agreed amicably for institutional benchmarking and accompanying protocols across the country.
2. Institutional /administrative rights and responsibilities need to be clarified at all levels of the system at the national, provincial and district levels in matters of teacher education curricula (pre-service/in-service), delivery, and support with clear guidelines for state and non-state providers as critical partners to address the bottlenecks of quality assurance in teacher education for both pre-service and in-service training. Jurisdiction for learning and quality support must be seen both at the provincial and district levels. A formal agreement must be reached between the district and provincial levels so that districts can plan and finance teacher improvement, and can supplement and support initiatives through provincial in-service training plans.
3. A well articulated system of national standards and accreditation needs to be in place for different levels and categories of teacher education uniformly in public and private sectors for recruitment criteria, acquisition of competencies and eligibility for teaching and management. This will result in standard-setting and a resultant re-profiling of teachers' professional status. It is a critical necessity and must be accompanied by a 'buy in' for provincial and national certification of teachers/professionals. Such a process should include:
 - established pre-requisites (basic qualifications/ competence benchmarks) to attract the best people in the profession;
 - specified competency levels by level and subjects, and
 - options for modular professional development, career mobility and growth through pre-service and in-service training.
4. The TRCs set up under ESR must be made fully functional and ideally should be available at union council and /or markaz level (cluster of Union Councils) to facilitate teacher support. There must be a link between TRCs, GCETs/GECES/RITEs and also the provincial level institutions for coordination, information sharing and performance feedback. An institutional assessment needs to be conducted of the TTIs and TRCs for their strengthening, coordination, relationships and optimal functioning.
5. All teacher training institutions need to be strengthened and made effective and efficient sites for pre-service and in-service training, with ICT infrastructure in place, well established skills in training needs assessment/diagnostics, design, research, monitoring and evaluation to improve teacher education. An optimized budget blue-print must be prepared to take into account the recurrent salary and non-salary budgets of TTIs which include training, follow up and research, as well as development budgets for new initiatives.
6. Provision of programs for school-based or cluster based in-service training programs must be in place which are fully reflected in performance evaluation and career mobility of teachers and head teachers
7. Autonomy must be provided to the school leadership and community for experimenting improved teaching learning options, which can be expert led or community led.

12.3 Curriculum for Teacher Education and Practice

1. A technical group needs to be constituted to revisit teacher education curriculum pre and in-service in formal and non-formal delivery systems, ensuring the necessary updates and guidelines to incorporate the emerging needs of creating knowledge society, lifelong learning skills, critical thinking, and use of ICTs for enhancing teacher skills and bridging the digital divide. Periodically, the technical group can co-opt leading teacher education institutions from anywhere in the world for technical advisory support services.
2. A review of pre-service curriculum at various levels must be undertaken to close the gap between public and private providers through agreed core areas, common approaches and minimum norms for teaching practice as part of the teacher certification process.
3. A comprehensive checklist of skills and guidelines need to be in place for in-service curriculum which should serve as milestones for quality assurance to all providers of in-service training.
4. Changes in curriculum/textbooks must be accompanied through proper sequencing and timely training of teachers prior to introduction in classrooms (ITA: WTD 2004).
5. Urgent attention needs to be paid to emerging disciplines such as technical education, special/inclusive education, and early childhood education so that the institutional and professional capacity can be created to address the current gaps between the targeted thrust areas of ESR and trained personnel. These are currently being adjusted through pragmatic ad-hoc measures in curriculum and also in teacher training.
6. Support must be extended to bolster teacher performance in the classrooms and schools through local sustainable arrangements of mentors, cluster school development coordinators (earlier LCs), school audits. The teachers must also have local school-based finances for preparing teaching aides, and easy access to TRCs for reference materials and skill building.
7. New models and approaches to school based, decentralized teacher education and support must be encouraged prepared as a directory or menu of options to be provided to district and provincial level authorities for making informed choices. The same can be included in leadership and management curricula for education managers and planners.
8. Head teachers must be provided with the capacity and authority to undertake collaborative planning, become catalysts of encouraging and managing change with teachers, local community and other partners in education. An annual head teachers' conference must be organized at district, provincial and national level as an advocacy and professional lobby to influence policy and share practice.
9. Likewise teachers must have opportunities to share their positive practices at local /cluster levels and exchange professional experiences formally and informally. Resources and policy adjustments must be in place for this type of critical reflective activity with peers and mentors.
10. Changing attitudes and practices must be duly rewarded through an annual system of recognition and awards preferably to coincide with the World Teachers Day, EFA Week or Literacy Day.

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