

National Curriculum Framework for Teacher Education

*Towards Preparing Professional
and Humane Teacher*



National Council for Teacher Education
New Delhi

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Preface

“People in this country have been slow to recognize that education is a profession for which intensive preparation is necessary as it is in any other profession”. This concern expressed in the University Education Commission (1948-49) Report is alive in its relevance even today. The Education Commission (1964-66) professed, “the destiny of India is now being shaped in her classrooms”. So did the National Policy on Education 1986 emphasize: “The status of the teacher reflects the socio-cultural ethos of the society; it is said that no people can rise above the level of its teachers”. Such exhortations are indeed an expression of the important role played by the teachers as transmitters, inspirers and promoters of man’s eternal quest for knowledge. Should this role expectation be not taken as a rhetoric but as a goal to be constantly striven for, the urgency is to address ourselves seriously to examining the issues related to the preparation of teachers as well as to prune the theory and practice of teacher education. Though verily a professional, the teacher’s personality, in being humane to the learners, is the core foundational issue on which this Framework is based, in order that it has a bearing on transforming the very dynamics of teacher education *per se*. Two significant developments particularly, the National Curriculum Framework 2005 and the Right of Children to Free and Compulsory Education Act 2009 as well as the fundamental tenets enshrined in the Constitution of India have guided the development of this Framework.

This National Curriculum Framework for Teacher Education (NCFTE, 2009) elaborates the context, concerns and vision underscoring that teacher education and school education have a symbiotic relationship and developments in both these sectors mutually reinforce the concerns necessary for qualitative improvements of the entire spectrum of education including teacher education as well. The new concerns of school curriculum and the expected transactional modalities have been emphasized in designing this Framework for all stages of school education. Issues related to inclusive education, perspectives for equitable and sustainable development, gender perspectives, role of community knowledge in education and ICT in schooling as well as e-learning become the centre-stage in the Framework.

A new approach to curricular areas of teacher education has been highlighted. The curriculum of teacher education is broadly dealt with under foundations of education, curriculum and pedagogy and school internship. The foundations of education include learner studies, contemporary studies, and educational studies. Curriculum and pedagogy deal with curriculum studies, pedagogic studies and assessment and evaluation studies. The school internship is visualized by situating the practice of teaching in the broader context of vision and the role of teacher and sustained engagement with learners and schools. In a departure from the existing approaches, the rationale of each major area alongwith curricular provisions, both in theory and practicum, have been indicated, leaving scope for individual reflection on the part of the institutions offering teacher education and the academics associated with them.

Transaction of the curriculum and evaluating the developing teacher determine the extent to which the ideas conceptualized are put into practice. The focus on process-based teacher education has been attempted as models for practicing teachers to adopt/adapt. The suggestion to establish Teaching Learning Centres to act as laboratories for the theory and practice of teacher training has been emphasized. An appropriate focus on continuous and comprehensive evaluation of developing teachers has been drawn up through an evaluation protocol and suggestions given for designing instruments for assessment and evaluation.

The conventional models of teacher education may continue though the Framework does provide directions towards change in the structural aspects of teacher education at elementary, secondary and post-graduate levels. One reform that could achieve a breakthrough to vitalize teacher education and through it the process of learning and teaching is to break the isolation of teacher education institutions from the university life, from the schools and from one another. The Framework reiterates in unequivocal terms the need for this reform.

Pre-service and in-service components of teacher education being inseparable, considerable focus has been given in this Framework on continuing professional development strategies. Since a major area of weakness in the existing teacher preparation programmes is the quality and experience of those who have the responsibility of training young entrants to the profession of teaching, a fresh perspective of preparation of teacher educators is dealt with in detail.

This Framework is visualized to act as a catalyst to change the profile of teacher education so that the teacher education institutions become active

centres not only of research but also of practical experiments directed to the improvement of educational methods and curricula. It is a matter of conviction that if teacher education institutions could be organized on right lines and become dynamic centres of progressive educational movements, the whole task of educational reconstruction would be greatly facilitated.

In the process of developing this Framework, we received valuable inputs from educationists and experts in teacher education of long standing and experience; and also had the benefit of reviewing similar exercises attempted in this area before, namely, the Curriculum Framework developed by non-statutory NCTE in 1978, its revised version by the NCERT in 1988, the first Curriculum Framework for Quality Teacher Education by NCTE in 1998 and a Discussion Paper on Curriculum Framework jointly prepared by NCTE and NCERT in 2006.

The initial draft of the NCFTE 2009 was developed by an Expert Committee comprising of Prof. C.L. Anand, Prof. S.V.S. Chaudhary, Prof. V.K. Sabharwal, Prof. C. Seshadri, Prof. R.S. Khan, Prof. Raja Ganesan and Prof. L.C. Singh, based on the ideas generated in a series of intensive deliberations by the members of the committee and eminent scholars, teacher educators, teachers, trainee teachers, representatives of NGOs, faculty of RIEs of NCERT, SCERTs, DIETs, IASEs, CTEs, university departments of education, and state departments of education at the two national consultative meets held at Udaipur and Hyderabad. We sincerely acknowledge their valuable contribution in shaping this document.

We are also grateful for the constructive suggestions made by the General Council of the NCTE while approving it in principle after detailed deliberations. As per direction of the Council, a small group of experts comprising of Prof. C. Seshadri, Prof. A.K. Sharma, Prof. Shyam B. Menon, Prof. Poonam Batra and Ms. Anjali Noronha was entrusted the task to improve the Framework in the light of suggestions made by the members.

The document was subsequently posted on the NCTE's website for feedback. A number of experts, practitioners and institutions including Prof. Krishna Kumar, Director, NCERT; Dr. Chongchong V. Shimray, University of Florida; Dr. Rohit Shetty, University of Michigan; English and Foreign Languages University; DIETs; Azim Premji Foundation; Mr. Bhamy Shinoy and others shared their considered views and perceptive comments which helped us in further improving the Framework. We thankfully acknowledge them all. Some of the state governments like Bihar, Delhi, Uttar Pradesh, Sikkim and West Bengal organized state level consultations with experts and educational functionaries and forwarded their constructive inputs. NCTE

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31 December, 2009

Mohd. Akhtar Siddiqui
Chairperson, NCTE

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Abbreviations and Acronyms used

B.Ed.	Bachelor of Education
B.El.Ed.	Bachelor in Elementary Education
B.P.Ed.	Bachelor in Physical Education
B.Sc.Ed.	Bachelor in Science Education
BRC	Block Resource Centre
C.P.Ed.	Certificate in Physical Education
CPGP	Collaborative Post Graduate Programme
CRC	Cluster Resource Centre
CRP	Cluster Resource Person
CTE	College of Teacher Education
D.Ed.	Diploma in Education
D.El.Ed.	Diploma in Elementary Education
DEC	Distance Education Council
DIET	District Institute of Education and Training
DPEP	District Primary Education Programme
ECCE	Early Childhood Care and Education
ECE	Early Childhood Education
ETE	Elementary Teacher Education
EVS	Environmental Studies
HM	Head Master
IASE	Institute of Advanced Studies in Education
ICT	Information and Communication Technology
IGNOU	Indira Gandhi National Open University
IIM	Indian Institute of Management
IISc	Indian Institute of Science
M.Ed.	Master of Education
M.P.Ed.	Master of Physical Education
M.Sc.Ed.	Master of Science Education
MHRD	Ministry of Human Resource Development
NAAC	National Assessment and Accreditation Council
NCF	National Curriculum Framework
NCFTE	National Curriculum Framework for Teacher Education

NCPCR	National Commission for Protection of Child Rights
NCTE	National Council for Teacher Education
NGO	Non Governmental Organisation
NKC	National Knowledge Commission
NPE	National Policy on Education
NUEPA	National University for Educational Planning and Administration
OB	Operation Blackboard
ODL	Open and Distance Learning
PWD	Persons with Disabilities
RCFCE	Right of Children to Free and Compulsory Education
RIE	Regional Institute of Education
RTE	Right to Education
SC	Scheduled Caste
SCERT	State Council for Educational Research and Training
SSA	Sarva Shiksha Abhiyan
ST	Scheduled Tribe
TEI	Teacher Education Institution
TIFR	Tata Institute of Fundamental Research
TLC	Teacher Learning Centre
TTTI	Technical Teacher Training Institute
UEE	Universal Elementary Education
UGC	University Grants Commission
WG	Working Group

Chapter 1

Context, Concerns and Vision of Teacher Education

1.1 Introduction

India has made considerable progress in school education since independence with reference to overall literacy, infrastructure and universal access and enrolment in schools. Two major developments in the recent years form the background to the present reform in teacher education – the political recognition of Universalization of Elementary Education (UEE) as a legitimate demand and the state commitment towards UEE in the form of the Right of Children to Free and Compulsory Education Act, 2009. This would increase the demand manifold for qualified elementary school teachers. The country has to address the need of supplying well qualified and professionally trained teachers in larger numbers in the coming years. At the same time, the demand for quality secondary education is steadily increasing. It is recommended that the aim should be to reach universal secondary education within a maximum of ten years. Given the problems of inadequate quality in most secondary schools due to poor infrastructure and insufficient and poorly equipped teachers, the need for addressing the professional education of secondary teachers acquires great importance.

The National Curriculum Framework (NCF) 2005 places different demands and expectations on the teacher, which need to be addressed both by initial and continuing teacher education. The importance of competent teachers to the nation's school system can in no way be overemphasized. It is well known that the quality and extent of learner achievement are determined primarily by teacher competence, sensitivity and teacher motivation. It is common knowledge too that the academic and professional standards of teachers constitute a critical component of the essential learning conditions for achieving the educational goals. The length of academic preparation, the level and quality of subject matter knowledge, the repertoire of pedagogical skills the teachers possess to meet the needs of diverse learning situations, the degree of commitment to the profession, sensitivity to contemporary issues and problems as also to learners and the level of

motivation critically influence the quality of curriculum transaction in the classrooms and thereby pupil learning and the larger processes of social transformation.

Teacher quality is a function of several factors: teachers' status, remuneration, conditions of work and their academic and professional education. The teacher education system through its initial and continuing professional development programmes is expected to ensure an adequate supply of professionally competent teachers to run the nation's schools. Initial teacher education especially, has a major part to play in the making of a teacher. It marks the initiation of the novice entrant to the calling and as such has tremendous potential to imbue the would-be teacher with the aspirations, knowledge-base, repertoire of pedagogic capacities and humane attitudes.

1.2 The Changing School Context and its Demands

A teacher functions within the broad framework of the school education system – its goals, curricula, materials, methods and expectations from the teacher. A teacher education curriculum framework needs to be in consonance with the curriculum framework for school education. A teacher needs to be prepared in relation to the needs and demands arising in the school context, to engage with questions of school knowledge, the learner and the learning process. The expectations of the school system from a teacher change from time to time, responding to the broader social, economic and political changes taking place in the society.

School education has seen significant development over the decades since independence. According to the Government of India estimates while 82 per cent of the 20 crore children of the 5-14 age group were in school as per enrolment figures¹, nearly 50 per cent of these children drop out before completing class VIII². One finds the situation on the ground ridden with difficulties. Regional, social, and gender disparities continue to pose new challenges. This reality increases the challenge of implementing the Right of Children to Free and Compulsory Education Act and, in particular, the role and place of the school teacher.

The teacher must be equipped not only to teach but also to understand the students and the community of parents so that children are regular in schools and learn. The Act mandates that the teacher should refrain from inflicting corporal punishment, complete the entire curriculum within the

given time, assess students, hold parent's meetings and apprise them and as part of the school management committee, organise the overall running of the school³.

The Act, vide section 29 (2), emphasises the following areas while laying down the curriculum and evaluation procedures:

- Conformity with the values enshrined in the Constitution.
- All round development of the child.
- Building up child's knowledge, potentiality and talent.
- Development of physical and mental abilities to the fullest extent.
- Learning through activities, discovery and exploration in a child-friendly and child-centred manner.
- Medium of instruction shall, as far as practicable, be in child's mother tongue.
- Making the child free of fear, trauma and anxiety and helping the child to express views freely.
- Comprehensive and continuous evaluation of child's understanding of knowledge and his or her ability to apply the same.

These areas are particularly significant to the professional development of teachers at all stages, both in their initial and in-service training.

In addition, the NCF requires a teacher to be a facilitator of children's learning in a manner that helps children to construct knowledge and meaning. The teacher in this process is a co-constructor of knowledge. It also opens out possibilities for the teacher to participate in the construction of syllabi, textbooks and teaching-learning materials. Such roles demand that teachers be equipped with an adequate understanding of curriculum, subject-content and pedagogy, on the one hand, and the community and school structures and management, on the other.

The launch of the massive Sarva Shiksha Abhiyan (SSA) in 2002 and the financial commitment and education cess to augment the UEE mission have underscored the need to prepare the teachers adequately to address the growing demand for quality education. A similar demand may arise in the context of the impending universalization of secondary education in the coming years.

The continued decline in quality of the state school system and the proliferation of sub-standard unregulated private schools pose several challenges to the national declaration of catering to the basic learning needs

of all children in the 6-14 age group through the elementary education system. Increasing privatisation and differentiation of the school system have vitiated drastically the right to quality education for all children. In addition, the pressures of globalisation leading to commercialisation in all sectors including education and increasing competition are forcing children into unprecedented situations that they have to cope with. It is expected that the Right of Children to Free and Compulsory Education Act will play a major role in arresting some of these trends dictated by the market forces.

There is now a public acknowledgement that the current system of schooling imposes tremendous burden on our children. This burden arises from an incoherent curriculum structure that is often dissociated from the personal and social milieu of children as also from the inadequate preparation of teachers who are unable to make connections with children and respond to their needs in imaginative ways. Teachers need to be creators of knowledge and thinking professionals. They need to be empowered to recognize and value what children learn from their home, social and cultural environment and to create opportunities for children to discover, learn and develop. The recommendations of the NCF on school curriculum are built on this plank. Educationists are also of the view that the burden arises from treating knowledge as a 'given', as an external reality existing outside the learner and embedded in textbooks.

This view of education points to the need to take a fresh look at teacher preparation. Education is not a mechanical activity of information transmission and teachers are not information dispensers. Teachers need to be looked at as crucial mediating agents through whom curriculum is transacted and knowledge is co-constructed along with learners. Textbooks by themselves do not help in developing knowledge and understanding. Learning is not confined to the four walls of the classroom. For this to happen, there is a need to connect knowledge to life outside the school and enrich the curriculum by making it less textbook-centered.

1.3 Present Teacher Education Scenario

The unprecedented expansion of teacher education institutions and programmes during the past few years characterizes the teacher education scenario of today. With increasing school enrolments and the launch of pan-Indian primary education development programmes such as the SSA (2002) to achieve UEE, the Operation Blackboard (OB) 1986, and the District

Primary Education Programme (DPEP) 1995, there was an increase in the demand for teachers. Added to this, the backlog of untrained teachers in the system and the essential requirement of pre-service teacher certification for appointment as a teacher led to mounting pressure on existing institutional capacity. With the demand far exceeding supply, market forces have taken over causing unprecedented rise in the number of teacher education institutions in most parts of the country. The escalating demand for trained teachers and the belief that a training certificate acts as collateral against future unemployment has made teacher education a lucrative business proposition. It has also led to a large scale mushrooming of teacher education institutions.

The number of courses offered at different stages – pre-primary, elementary and secondary – face-to-face and distance modes of teacher education; programmes of M.Ed, face-to-face and distance modes, C.P.Ed., B.P.Ed. and M.P. Ed. have increased from 3,489 courses in 3,199 institutions in March, 2004 to a whopping 14,428 courses in 11,861 institutions in March 2009. The student intake has likewise increased from 2,74,072 to 10,96,673 during this period. This expansion has taken a heavy toll on quality parameters of infrastructural provision, faculty qualification, learning resources and student profile.

Till December 2009, as many as 31 Institutes of Advanced Studies in Education (IASEs) and 104 Colleges of Teacher Education (CTEs) were sanctioned and all of these were functional. Of the 599 districts in the country, District Institutes of Education and Training (DIETs) were set up in 571 districts, of which only 529 are functional. Thus, 42 DIETs are yet to become functional.⁴ The main problem facing DIETs is non-availability of qualified faculty. Presently, the faculty appointed does not possess qualifications or experience in elementary teacher education. A good number of CTEs face faculty shortage, poor library facilities, spend more time on initial teacher education while research, development and innovative activities are yet to take concrete shape. The same is the case with IASEs. The capacity of both CTEs and IASEs in performing their mandated roles has more recently come under serious scrutiny.

The larger reality of school teaching not being a preferred option among students and the dilution of emphasis on public investment in initial teacher education since the 1990s has led to a large scale recruitment of unqualified and under-qualified persons in the formal school system. Para teachers pose a far more serious challenge to the provision of free and compulsory education

of quality to all children. An attitude of resignation towards initial teacher education and piecemeal in-service training courses have become an integral part of state provisioning for elementary education. This has led to further degradation of the status of school teachers and diluted the identity of teacher as a professional. Major initiatives during the mid-1990s including the DPEP were focussed only on in-service training of teachers. This has accentuated the divide between pre-service and in-service teacher education. School teachers continue to be isolated from centres of higher learning and their professional development needs remain unaddressed⁵.

On the positive side, with a view to achieving coordinated development of teacher education, the National Council for Teacher Education (NCTE) took up a number of initiatives during the last decade. It joined hands with the National Assessment and Accreditation Council (NAAC) to foster quality assurance and sustenance and with Distance Education Council (DEC) to ensure integrated development of in-service teacher education under the Open and Distance Learning (ODL) mode. It also entered into collaboration with the Rehabilitation Council of India in 2002 and in 2005 to develop curriculum on inclusive education and make it a part of the general teacher education programmes.

The National Knowledge Commission (NKC) has observed that teachers are the single most important element of the school system and the country is already facing a severe shortage of qualified and motivated school teachers at different levels. It is urgent to restore the dignity of school teaching as a profession and provide more incentives for qualified and committed teachers. Non-teaching official duties such as election-related responsibilities should not be allowed to interfere with the teaching process. Forums that allow and encourage teachers to exchange ideas, information and experiences including a web-based portal should be developed. At the same time, there should be transparent systems for ensuring accountability of school teachers. As far as possible, teachers should be recruited to particular schools⁶.

The training of teachers is a major area of concern at present as both pre-service and in-service training of school teachers are extremely inadequate and poorly managed in most states. Pre-service training needs to be improved and differently regulated both in public and private institutions, while systems for in-service training require expansion and major reform that allow for greater flexibility. There exists a wide variation in the status of teachers and the need for teachers at different levels of school education across the country. It is important to develop a broad framework that can address some of the

crucial issues common to teacher education across different levels with a view to enable states to respond to needs specific to their contexts. Moreover, the diversity in the institutional arrangements for school education in terms of alternative schools, government and private schools places its own demands and will also need to be addressed. Diversity also exists in terms of the set of agencies that conduct teacher education programmes. These include state institutions, university-based institutions and private institutions that have grown enormously in number in the recent past, contributing to the commercialization of the process of teacher education.

1.4 Teacher Education Reform Perspectives: Past and Present

At the heart of teacher education is the question ‘What value does teacher education add to the prospective teacher’s ability to face challenges of facilitating the development of critical and creative students and subsequently adults?’ Reform of teacher education has been one of the abiding concerns in the reports of major Education Commissions and Committees on education. The Education Commission (1964-66) discussed at length various issues related to teacher education. It recommended professionalization of teacher education, development of integrated programmes, comprehensive colleges of education and internship. The National Commission on Teachers (1983-85) recommended five-year integrated courses and internship. The National Policy on Education (NPE) (1986) recommended the overhaul of teacher education to impart it a professional orientation and referred to the same concerns voiced by the earlier Committees. Its recommendations led to the launch of the Centrally Sponsored Scheme of Teacher Education incorporating the establishment of DIETs, CTEs and IASEs. The NPE Review Committee (1990) and the National Advisory Committee on Learning without Burden (1993) have also drawn attention to the need for qualitative reform of teacher education and suggested various measures. The Review Committee recommended adoption of the internship model for teacher education involving a brief theoretical orientation followed by a 3 to 5 year period of supervised teaching in a school under mentor teachers. The Advisory Committee in its report *Learning without Burden* drew attention to the need for the involvement of teachers in curriculum and textbook preparation and training teachers in fostering learning through activity, discovery, observation and understanding. These policy recommendations have been taken cognizance of while preparing the present draft of the National Curriculum Framework for Teacher Education.

1.5 Urgency of Reforming Teacher Education

Teacher education as a whole needs urgent and comprehensive reform. There is need to bring greater convergence between professional preparation and continuing professional development of teachers at all stages of schooling in terms of level, duration and structure. Considering the complexity and significance of teaching as a professional practice, it is imperative that the entire enterprise of teacher education should be raised to university level and that the duration and rigour of programmes should be appropriately enhanced.

Both at the elementary and the secondary levels, the initial teacher preparation is fraught with a number of problems, some of them are common while others are specific to a stage of education.

Elementary Teacher Education

Initial training of elementary teachers continues to suffer from isolation, low profile and poor visibility in view of it being a non-degree programme. In professional discussions teacher education is viewed as a unitary undifferentiated category with B. Ed. and D. Ed. providing the frame of reference. The special significance of initial primary teacher education (elementary education being a fundamental human right and its crucial significance to individual and national development) is overlooked and its concerns are subsumed under more general problems. The Curriculum Frameworks thus far developed provide guidelines that are too general and do not address the stage-specific training needs of elementary teachers. The Curriculum Framework for Quality Teacher Education (1998) was perhaps the first to have provided stage-specific guidelines. The post-NPE 1986 establishment of DIETs has been the most important development in bringing the issue of elementary teacher education to the national stage.

There is a grave need to upgrade initial teacher education by enhancing the entry qualification and duration of training making it equivalent to a degree programme and locating the management and control of elementary teacher education within Universities. This is necessary as the plus two entry level does not equip prospective teachers with basic knowledge of the subjects to teach at the elementary level, particularly classes 3 to 8. Neither does the short duration of the course equip them with the necessary pedagogic knowledge and professional repertoire for understanding children's psycho-social needs and facilitating their learning. There are available a number of degree programmes for the

preparation of elementary teachers, both within and outside the country, that can provide a way forward. The Bachelor of Elementary Education (B. El. Ed.) Programme of the University of Delhi is a case in point.

Upgrading elementary teacher education calls for participatory curriculum planning involving all stakeholders, modular organization of curriculum in terms of critically engaging with theory and bringing practice within its perspective and a professional approach to teacher education processes. For accomplishing all this, there is a need for a longer duration programme, either a four-year integrated model at the Bachelor's degree level or a two-year second Bachelor's degree model. A transition to the new models will need to be done within a definite time frame – say, five years – keeping in mind the time required for preparation of teacher educators as well. However, the current two-year D.Ed. model after twelve years of schooling may continue in the interim, attempting to modify and intensify the programme with the vision and elements presented elaborately in chapter 2 of this document.

Another instance of neglect of elementary teacher education is the non-recognition of the need for specially qualified teacher educators in elementary education. It has been taken for granted that the existing arrangements for teacher preparation at different stages would do as well for teacher educators: B.Ed for elementary teacher educators and M.Ed for secondary teacher educators. The logic that seems to operate here is that one's higher position in the educational hierarchy would entitle one to train others working at the lower levels, irrespective of whether one is equipped with relevant repertoires. Other than the activity of teaching children in elementary school, all other functions related to this sector of education are attended to by people who have been trained for and taught only at the secondary level due to lack of appropriately trained personnel in elementary education. *The difficulty is exacerbated by the absence of degree and post-degree programmes in primary/elementary teacher education.* At present, elementary teacher educators in their bid to upgrade their professional qualifications pursue M.Ed. The IASE brief includes the training of elementary teacher educators which they do by running M.Ed programmes. However, it is evident that the M.Ed. programme in its current form cannot meet the requirements of elementary teacher education as it is designed primarily on the requirements of secondary education. The preparation of teacher educators for the elementary stage needs the inclusion of a variety of scholarship from the sciences, social sciences, mathematics and the languages.

Education as an area of interdisciplinary knowledge is not merely an application of a few core disciplines, but a praxis and a context where theories and practical wisdom are generated continuously. It is important to facilitate development of a discourse in education through more purposive and deliberate focus in creating explanatory terms and vocabulary. And this process has to inform and be informed by teacher education. Since traditionally, it was secondary teacher education institutions that developed into university departments of education, *elementary education and early childhood education have been neglected as distinct areas of knowledge with their own distinct concerns, concepts and methodological perspectives.* It is important to strengthen all areas within education as distinct but integrated discourses through research as well as through documenting praxis in school settings as well as field-level educational initiatives. This scattered corpus of experience and knowledge needs to be brought together to evolve a coherent vocabulary, researched and documented knowledge-base and informed perspectives for all areas of education as well as education in its entirety.

Secondary Teacher Education

There is also a dire need to critically review the secondary teacher education system. The one-year second Bachelor's degree (B.Ed.) model seems to have outlived its relevance. With the proliferation of B.Ed. colleges, particularly with privatization and commercialization, B.Ed. programmes have become weak both in theory and practice. Even the few institutions, which keep struggling to make this programme meaningful, find it difficult to overcome the structural constraints that the short duration of the programme poses. While the second Bachelor's degree model may still be relevant, it is imperative that this needs strengthening in terms of intensity, rigour and duration.

Secondary teacher education institutes continue to exist as insular organisations even within the university system where many are located. This precludes the larger academic debates on equity, gender and community to enter the day-to-day discourse of teacher educators. Institutes of teacher education have become breeding grounds of academic stagnation and resistance to change. The training of teachers happens in insular, intellectually impoverished environments that are severed from ground realities as well as the aims of education they espouse. Such an intellectual isolation actively discourages educational theorisation and the growth of disciplinary and interdisciplinary enquiry⁷.

It is desirable within a finite time frame that the existing one-year second Bachelor's (B.Ed.) degree programme is structurally transformed to a two-year one, with deeper and more protracted engagement with school-based experience and reflective and critical engagement with theory. In the transitory phase, however, the existing one-year programme can work towards better utilization of the time available, greater emphasis on school internship and emphasis on reflective practice based on perspectives on the learner and her context, contemporary society, basic concepts of education and curricular and pedagogic alternatives. (Curricular areas and suggested ideas to make this operational are provided in chapter 2 of this document).

1.6 Systemic Concerns of Teacher Education

The proliferation of sub-standard private teacher education institutions and the current state of teacher education programmes are both serious impediments to fulfilling the objectives of the NCF and the Right to Free and Compulsory Education. The programmes have come under severe criticism for not addressing the needs of contemporary Indian schools and not preparing teachers who can impart quality education in schools. Their design/practice is based on certain assumptions which impede the progress of ideas and professional and personal growth of the teacher. They train teachers to adjust to a system in which education is seen as transmission of information. They take the school curriculum and textbooks as 'given' and train teachers to adjust to the needs of the existing school system through fastidious planning of lessons in standardized formats and fulfilling the ritual of delivering the required number of lessons (NCERT, 2005).

The NCF has described the current concerns of teacher education as follows:

- Experiences in the practice of teacher education indicate that knowledge is treated as 'given', embedded in the curriculum and accepted without question; there is no engagement with the curriculum. Curriculum, syllabi and textbooks are never critically examined by the student teacher or the regular teacher.
- Language proficiency of the teacher needs to be enhanced, but existing programmes do not recognize the centrality of language in the curriculum.
- Teacher education programmes provide little scope for student teachers to reflect on their experiences.

- Disciplinary knowledge is viewed as independent of professional training in pedagogy.
- Repeated ‘practice’ in the teaching of a specified number of isolated lessons is considered a sufficient condition for professional development.
- It is assumed that links between learning theories and models and teaching methods are automatically formed in the understanding developed by student teachers.
- There is no opportunity for teachers to examine their own biases and beliefs and reflect on their own experiences as part of classroom discourse and enquiry.
- Theory courses have no clear link with practical work and ground realities.
- The evaluation system followed in teacher education programmes is too information-oriented, excessively quantitative and lacks comprehensiveness.
- Apart from conceptual and pedagogical aspects, existing programmes need to develop certain attitudes, dispositions, habits and interests in a teacher. The present evaluation protocol has no place for evaluating these aspects.

The above observations provide distinct pointers for addressing issues on the different aspects of teacher education curriculum reform.

1.7 Contemporary Context and Concerns that need to inform Teacher Education Reform

Inclusive Education

We have seen two kinds of exclusion prevalent in schools largely because of an inadequate preparation of teachers to address diversity in the classroom. The first is the exclusion of the children with disabilities of different kinds and learning difficulties. Neither does the teacher understand their needs nor what s/he can do to make learning possible for them. The Persons with Disabilities (PWD) (Equal Opportunities, Protection and Full Participation) Act, 1996 provides for free and compulsory education up to the age of 18 years for all children with disabilities. To enable the implementation of this Act, teacher education institutions will need to reframe their programme courses to include the perspective, concept and strategies of inclusive education.

The second and more insidious pattern of exclusion is the social exclusion of children who come from socially and economically deprived backgrounds Scheduled Castes (SCs), Scheduled Tribes (STs), minority and other communities, girls and children with diverse learning needs. There is a dire need to equip teachers to overcome their biases in this regard and to develop professional capacities to address these challenges. The education of socially and economically disadvantaged groups, especially the SCs/STs and minorities has remained a primary national concern of education for several years. Though the literacy percentage among the SCs and STs has increased manifold, it is still much lower than the general category students. Teachers will have to be equipped if social deprivation has to be overcome through education and Constitutional goals of social justice are to be achieved.

Inclusive education refers to a philosophical position as well as an arrangement of institutional facilities and processes. This is to ensure access to and conditions of success in education for everybody, including those in the margins, either with learning difficulties because of physical or mental disabilities or because of their social position. The aim is to create an integrated school setting, providing equal opportunities to children with special abilities, varied social backgrounds and diverse learning needs.

Teachers need to be equipped to sensitively bring and include girls in the classroom transaction. It is necessary that teachers who teach and manage the classroom are sensitized and made aware of the philosophy of inclusive education and oriented to the different kinds of adjustments that schools have to make in terms of infrastructure, curriculum, teaching methods and other school practices to relate teaching to the needs of all learners.

Perspectives for Equitable and Sustainable Development

In order to develop future citizens who promote equitable and sustainable development for all sections of society and respect for all, it is necessary that they be educated through perspectives of gender equity, the perspectives that develop values for peace, respect the rights of all, and respect and value work. In the present ecological crisis, promoted by extremely commercialised and competitive lifestyles, teachers and children need to be educated to change their consumption patterns and the way they look at natural resources.

There is also an increasing violence and polarisation, both within children and between them, being caused primarily by increasing stress in

society. Education has a crucial role to play in promoting values of peace based on equal respect of self and others. The NCF and subsequent development of syllabi and materials provide a direction in this regard. For this, teachers need to be equipped to understand these issues and incorporate them in their teaching. The new teacher education curriculum framework will need to integrate these perspectives in its formulation.

Role of Community Knowledge in Education

It is important for the development of concepts in children as well as the application of school knowledge in real life that formal school knowledge is linked with community knowledge⁸. This increases the relevance of education as well as the quality of learning. In addition, the perspective that informs the NCF promotes the inclusion of locally relevant content in the curriculum as well as pedagogy. This puts an added responsibility on the teacher for which s/he needs to be equipped to select and organise subject-content and learning experiences from the community for the classroom.

We need to develop the capacity of teachers in identifying entry points in the curriculum and textual materials which call for contextualization and development of appropriate teaching-learning sequences and episodes based on the identified local specifics. These specifics may include community knowledge about technology, local occupations both farm and non-farm, local folk culture including songs, festivals, fairs and games. As teachers develop curriculum materials and learning experiences, informed by the perspectives enunciated above (gender, peace, sustainable development), they will also learn, through actual participation, the skills to identify and process the specifics for the purposes of meaningful curriculum transaction.

ICT in Schools and e-learning

With the onset and proliferation of Information and Communication Technology (ICT), there is a growing demand that it be included in school education. It has become more of a fashion statement to have computers or multimedia in schools, the result being that in spite of its potential to make learning liberating, its implementation is often not more than cosmetic. It is also often touted as a panacea for shortage of teachers. These are detrimental to the learning of the child. Teacher education needs to orient and sensitize the teacher to distinguish between critically useful, developmentally appropriate and the detrimental use of ICT. In a way, ICT can be imaginatively drawn upon for professional development and academic support of the pre-service and in-service teachers.

1.8 Professionalization of Teacher Education

Teaching is a profession and teacher education is a process of professional preparation of teachers. Preparing one for a profession is an arduous task and it involves action from multiple fronts and perspectives. A profession is characterized by a sufficiently long period of academic training, an organized body of knowledge on which the undertaking is based, an appropriate duration of formal and rigorous professional training in tandem with practical experience in the field and a code of professional ethics that binds its members into a fraternity.

These dimensions acquire critical importance in view of several factors. There is, first of all, the traditional idealism, the esteem and importance attached to the role of the school teachers and very high societal expectations from them. Teachers are concerned, in an important way, with the total development of human beings – physical, intellectual, emotional, social, moral and spiritual. While the dimensions of teaching other than the informational and cognitive may have suffered neglect in modern times due to a variety of factors, one cannot deny that they constitute an integral part of the teachers' role and functions. The implication of this is to give due emphasis to developing reflective teachers with positive attitudes, values and perspective, along with skills for the craft of teaching.

1.9 Preparing Teacher Educators

Teacher education, it may be seen, is a reflective undertaking that also issues forth in pedagogical prescriptions for carrying out teaching at the ground level. Being a meta-activity, it deals in showing how things are done at school and classroom levels, explaining the 'reason why' of things and the basic theory and principles behind classroom practices. These call for capacities and understanding of a different kind, in addition to the skills required for actual school teaching. The NCF 2005 position paper on teacher education elaborated this point and referred to the need to focus on pedagogies appropriate for adult learners for the preparation of teachers. (The weakest aspect, perhaps, of teacher education is the absence of professional preparation of teacher educators, the details of which are discussed in Chapter 5).

1.10 Research and Innovation

There is a need to increase research documents on educational practices reflectively and analytically – whether it is of programmes or of individual

classrooms – so that these can be included in the body of knowledge available for study to student teachers. University departments and research institutions need to undertake such research.

In addition, there is a need to innovate with different models of teacher education. Institutional capacity and capability to innovate and create are pre-requisites for the pursuit of excellence. These are facilitated when the inputs to the institution are of high quality. In teacher education, the reality on the ground rarely reflects this. Curriculum innovation at the institutional level gets restricted to its transaction within the institution. At the state level, there is a trend of applying standard solutions and common strategies to many a problem of teacher education. The central admission procedure, common curriculum, centralized examination and evaluation system have stifled institutional initiatives in admission, curriculum design and evaluation and very little space is left for institutional self-expression. There is a need to facilitate a space for such innovations to take place so that the policy can draw from them.

In spite of these constraining conditions, there are and have been a number of initiatives that could be drawn from. A case in point is the four-year integrated Bachelor of Elementary Education (B.El. Ed.) programme for the preparation of elementary school teachers offered by select affiliated colleges of the University of Delhi. NCERT's experiments with the four-year integrated programme leading to the degree of B. Sc. Ed., two-year B. Ed. programme and integrated M.Sc. Ed. are other examples. Similar innovations are also being tried out in other institutions across the country. Several initiatives for providing academic support to in-service teachers include the setting up of resource centres. Programmes and activities of such centres include organization of workshops, provision of research fellowships and study sessions.

1.11 Open and Distance Learning (ODL) in Teacher Education

Open Education as a concept, coupled with modalities associated with Distance Education, does not stand as an exclusive transactional modality. There are several aspects of ODL which will get meaningfully translated only if the boundaries between direct human engagement and ODL tend to get diffused to the extent possible and perhaps, desirable. A modular approach to the development of teacher education curriculum along with a focus on independent study and on-line offering involving interactive modes of learning and the consequent modification in the approaches to assessment

and evaluation has indeed a potential to make education reach the unreached. It is recognized that ODL can be strategically employed in continuing professional development of teachers, particularly with a view to overcoming the barriers of physical distance, especially making use of independent study material, on-line support and two-way audio-video communication. Of particular relevance are those elements of ODL which involve independent study. However, the primacy of direct human engagement and actual social interaction among student teachers as the core process of initial teacher preparation needs to be emphasized. ODL, as a strategy, can be a powerful instrument for providing continued professional support to the teacher practitioner.

1.12 Education of Teachers in Health and Physical Education

Health, physical education and yoga constitute an important part of the core curriculum at the primary, secondary and senior secondary school levels. The area needs to be considered in the framework of the overall development of the child and the adolescent – physical, social, emotional and mental. The aim of health and physical education is not just to attain physical health but also sound psycho-social development. The subject covers personal health, physical and psycho-social development, movement concepts and motor skills, relationships with significant others and healthy communities and environments. The interdisciplinary nature of the area requires integration and cross-curriculum planning with other subjects and curricular areas. The major components of the school health programme – medical care, hygienic school environment, school lunch, health and physical education and emotional health – must be an integral part of health and physical education.

In view of the crucial significance of this curricular area in the overall development of the child, it is very essential that teachers are adequately prepared. The preparation of teachers in this area has to be considered keeping in view the holistic definition of health and overall development of the individual. Currently, teacher education programmes in this area are offered at different levels – diploma courses (D.P.Ed.), degree (B.P.Ed.) and post degree (M.P.Ed.) programmes offered in colleges and institutes of physical education and universities. There is a need to review the curriculum, syllabus and pedagogy of these programmes within the conceptual framework and objectives of health and physical education outlined above. Also, all teacher education courses must provide health, physical education and yoga as

compulsory inputs. Issues involved in designing teacher education programmes in the said area merit separate consideration.

1.13 Education of Teachers for Vocational Stream

Vocationalization of education has remained an important concern for our educational system, the success of which is determined by the quality of teachers and the modality of their professional training. A significant attempt in this direction was made for the first time in the recommendations of the Secondary Education Commission (1952-53) which emphasized diversification of education after Class VIII as a part of implementing the 11-year higher secondary multipurpose scheme recommended by the Commission. Four Regional Colleges of Education (RCEs), now known as the Regional Institutes of Education (RIEs) of the NCERT were established at Ajmer, Bhopal, Bhubaneswar and Mysore. These institutions offered a variety of programmes leading to teacher preparation in major areas of vocational education covered under technology, agriculture, commerce, home science, fine arts, etc. in the best established infrastructure created in the RCEs for the success of such programmes. The four-year B.Tech. Ed. and B.Com. Ed. courses, and one-year B.Ed. (Agriculture), B.Ed. (Home Science) and B.Ed. (Fine Arts) courses were designed and offered in different RCEs with varying degrees of success under the constraints connected with implementation of recommendations of the Commission.

The multipurpose system could not be continued and the courses offered in the RCEs suffered discontinuance. This was further accentuated by the recommendation of the 10+2 pattern by the Education Commission (1964-66) which recommended diversification into academic and vocational streams at the end of Class X. Unfortunately, no teacher development programmes were developed in the RCEs in support of this. Because of this lackadaisical approach to a priority area of educational concern, it gave a set-back to the whole movement of teacher preparation for various vocational sectors as referred to above. *No system can function in the absence of the availability of the right quality of teachers and it is natural that vocational teacher preparation programmes suffered a set-back in the past and, therefore, necessary course corrections in this regard must be worked out for its success in the future.*

The implementation of vocational teacher preparation would require serious thinking on the part of the institutions which may have to be identified to provide the needed quality instructional inputs in different vocational areas.

The traditional colleges of education are perhaps not equipped both in terms of infrastructure and physical and human resources to offer programmes in vocational teacher preparation. A design will have to be worked out in consultation with professional institutions dealing with engineering and technology, agriculture, health and paramedical, and Technical Teacher Training Institutes (TTTIs) to undertake the responsibility not only of designing but also offering such courses, based on the pedagogy of vocational education. This would entail a separate exercise outside this Framework.

1.14 Vision of Teacher and Teacher Education

As we engage in the act of envisioning the role of the teacher and the shape of teacher education unfolding in the coming years, it would do us well to take note of the movement of ideas, globally, that have led to current thinking on teacher education. While the search for a philosophy of teacher education that satisfies the needs of our times continues, we seem to be converging on certain broad principles that should inform the enterprise. First, our thinking on teacher education is *integrative* and *eclectic*. It is free from the hold of ‘schools’ of philosophy and psychology. We also do not think of teacher education as a prescriptive endeavour; we want it to be open and flexible. Our emphasis is on *changing contexts* and our aim is to empower the teacher to relate himself/herself to them. Second, modern teacher education functions under a global canvas created by the concepts of ‘learning society’, ‘learning to learn’ and ‘inclusive education’. The concern is to make teacher education *liberal, humanistic* and responsive to the demands of *inclusive education*. The emphasis in teaching is not on didactic communication but on *non-didactic and dialogical explorations*. Third, modern pedagogy derives its inspiration more from *sociological and anthropological insights* on education. There is increasing recognition of the worth and potential of *social context* as a source for rejuvenating teaching and learning. *Multi-cultural education* and *teaching for diversity* are the needs of contemporary times. Fourth, we acknowledge the existence of a *diversity of learning spaces and curriculum sites* (farm, workplace, home, community and media), apart from the classroom. We also appreciate the diversity of learning styles that children exhibit and learning contexts in which teachers have to function – oversized classrooms, language, ethnic and social diversities, children suffering disadvantages of different kinds. Lastly, we have realized the tentative and fluid nature of the so-called knowledge-base of teacher education. This makes *reflective practice* the central aim of teacher education. Pedagogical knowledge has to constantly undergo adaptation to meet the needs of diverse contexts through critical reflection by the teacher

on his/her practices. Teacher education needs to build capacities in the teacher to construct knowledge, to deal with different contexts and to develop the abilities to discern and judge in moments of uncertainty and fluidity, characteristic of teaching-learning environments.

Against this backdrop and keeping in view the vision of teacher education as articulated above, the following set of concluding statements relating to a teacher's role, and the philosophy, purpose and practice of teacher education can be made :

- Teachers need to be prepared to care for children, enjoy to be with them, seek knowledge, own responsibility towards society and work to build a better world, develop sensitivity to the problems of the learners, commitment to justice and zeal for social reconstruction.
- Teachers need to view learners as active participants in their own learning and not as mere recipients of knowledge; need to encourage their capacity to construct knowledge; ensure that learning shifts away from rote methods. Learning is to be viewed as a search for meaning out of personal experiences and knowledge generation as a continuously evolving process of reflective learning.
- Teacher education must engage with theory along with field experiences to help trainees to view knowledge not as external to the learner but as something that is actively constructed during learning. Teacher education should integrate academic knowledge and professional learning into a meaningful whole.
- Teachers need to be trained in organizing learner-centred, activity-based, participatory learning experiences – play, projects, discussion, dialogue, observation, visits, integrating academic learning with productive work.
- Teacher education should engage teachers with the curriculum, syllabi and textbooks to critically examine them rather than taking them as 'given' and accepted without question.
- Teacher education should provide opportunity to student-teachers for reflection and independent study without packing the training schedule with teacher-directed activities alone.
- The programme should engage teachers with children in real contexts rather than teach them about children through theories alone. It should help them understand the psycho-social attributes and needs of learners, their special abilities and characteristics, their preferred

mode of cognition, motivation and learning resulting from home and community socialization.

- The programme should help teachers or potential teachers to develop social sensitivity and consciousness and finer human sensibilities.
- Teacher education programmes need to broaden the curriculum (both school and teacher education) to include different traditions of knowledge; educate teachers to connect school knowledge with community knowledge and life outside the school.
- Teacher education programmes need to help teachers appreciate the potential of hands-on experience as a pedagogic medium both inside and outside the classroom; and work as integral to the process of education.
- Teachers need to re-conceptualize citizenship education in terms of human rights and approaches of critical pedagogy; emphasize environment and its protection, living in harmony within oneself and with natural and social environment; promote peace, democratic way of life, constitutional values of equality, justice, liberty, fraternity and secularism, and caring values.
- In view of the many-sided objectives of teacher education the evaluation protocol needs to be comprehensive and provide due place for the evaluation of attitudes, values, dispositions, habits and hobbies, in addition to the conceptual and pedagogical aspects through appropriate quantitative as well as qualitative parameters.

Chapter 2

Curricular Areas of Initial Teacher Preparation

2.1 Introduction

The kind of teacher and teacher education we have envisioned calls upon us to look at teacher education as a holistic enterprise involving actions of different kinds and from multiple fronts aimed at the development of the total teacher – knowledge and understanding, repertoire of skills, positive attitudes, habits, values and the capacity to reflect. To recall, we need teachers who:

- Care for children and love to be with them, understand children within social, cultural and political contexts, develop sensitivity to their needs and problems, treat all children equally.
- Perceive children not as passive receivers of knowledge, augment their natural propensity to construct meaning, discourage rote learning, make learning a joyful, participatory and meaningful activity.
- Critically examine curriculum and textbooks, contextualize curriculum to suit local needs.
- Do not treat knowledge as a ‘given’, embedded in the curriculum and accepted without question.
- Organize learner-centred, activity-based, participatory learning experiences – play, projects, discussion, dialogue, observation, visits and learn to reflect on their own practice.
- Integrate academic learning with social and personal realities of learners, responding to diversities in the classroom.
- Promote values of peace, democratic way of life, equality, justice, liberty, fraternity, secularism and zeal for social reconstruction.

This can only be achieved if teacher education curriculum provides appropriate and critical opportunities for student teachers to:

- Observe and engage with children, communicate with and relate to children.

- Understand the self and others, one's beliefs, assumptions, emotions and aspirations; develop the capacity for self-analysis, self-evaluation, adaptability, flexibility, creativity and innovation.
- Develop habits and the capacity for self-directed learning, have time to think, reflect, assimilate and articulate new ideas; be self-critical and to work collaboratively in groups.
- Engage with subject content, examine disciplinary knowledge and social realities, relate subject matter with the social milieu of learners and develop critical thinking.
- Develop professional skills in pedagogy, observation, documentation, analysis and interpretation, drama, craft, story-telling and reflective inquiry.

Each of the above stated opportunities can be provided through a carefully crafted curriculum design that draws upon theoretical and empirical knowledge as well as student teachers' experiential knowledge. This chapter gives concrete suggestions on how the education of teachers can be redesigned to focus on the learner, to provide a greater 'space' for the personal, social and professional development of the teacher and to equip him/her to evolve pedagogic approaches and create a learning environment that addresses the needs of learners. Through the process of weaving theoretical knowledge across multiple disciplines with the student teachers' own experiential realities and learners' social milieu, teachers can be prompted to reflect, develop habits of self-learning and independent thinking. A sustained engagement with educational practice and theory will enable student teachers to generate knowledge and continually seek clarity of ideas.

The layout of a curriculum for teacher education can be conceived as comprising three broad curricular areas: (A) *Foundations of Education* which include courses under *three broad rubrics*, namely, Learner Studies, Contemporary Studies and Educational Studies; (B) *Curriculum and Pedagogy* which include courses under *two broad rubrics*, namely, Curriculum Studies and Pedagogic Studies; and (C) *School Internship* leading to the development of a broad repertoire of perspective, professional capacities, teacher sensibilities and skills.

Together, these areas constitute the *common core curriculum* for teacher education programmes across stages – pre-school, elementary, secondary and senior secondary. The nature and form which these core components may take and the quantum, intensity, their relative importance, quality of learning

experiences to be provided under them and their relative importance may, however, vary with reference to the stage of teacher preparation, the school and learner context and other factors. It is important that they should not be looked upon as independent and separate curricular areas but as interconnected, feeding each other towards total development of the teacher.

For instance, a focus on the young child: psychological development, processes of thinking and learning, socialization processes and the construct of childhood need to be the thrust of pre-primary, primary and upper primary stage of teacher education, along with engagement with subject-content and questions of epistemology. To prepare teachers for the upper primary, secondary and senior secondary stages, it would be appropriate to bring focus to issues related to adolescence along with an understanding of children's development in a continuum. Questions of epistemology, deeper engagement with school knowledge need to acquire a major thrust as we move towards the secondary (including upper primary) and senior secondary stages of education. Teachers need to be prepared to view subject content critically, within the frame of disciplines as well as within inter-disciplinary frames.

Issues related to the social context of learning, aims of education, vision of education in India, identity, diversity and equity, ideas of educational thinkers, peace education, school and physical health, child rights, developing the self and aspirations as a teacher would form the common core of teacher education for all stages of school education.

The attempt is to organize the entire teacher education curriculum as an organic, integrated whole. The contours of each of these curricular areas indicate the kind of learning experiences they offer and the opportunities they provide for the beginning teacher to develop professional knowledge, capacities, sensibilities and skills. These are described in generic terms; they are not to be treated as prescriptive syllabi or course titles. They constitute the basic ideas/themes on which the curricula and courses are to be built to suit particular contexts. Questions of offering one or more teaching subjects and organising them within two-year or four-year models will need to be addressed, given the state needs and demands.

However, the framework takes a clear approach in suggesting the design of pedagogy courses within the frame of languages, mathematics, sciences and social sciences rather than in terms of school subjects. School Internship design should include the choice of selecting school subjects to be taught by

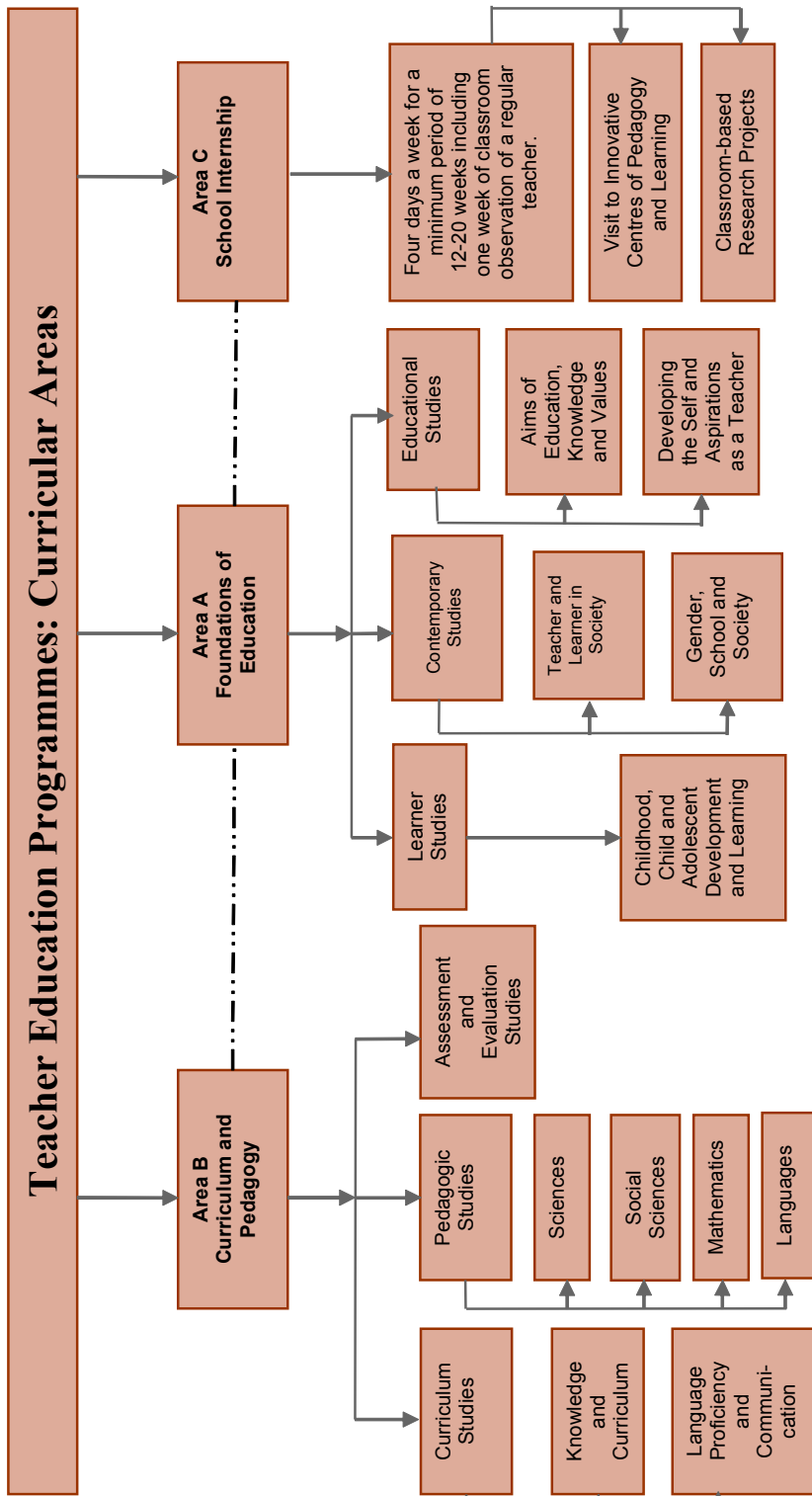
an intern. One would expect a variety of context-specific curriculum and course designs to emerge from the framework that resonate the basic principles contained in the vision of teacher and teacher education. Professional development programmes for in-service teachers can also be designed along the suggested direction indicated in the proposed curricular areas.

The proposed process will demand a training schedule that enables student teachers to participate as regular teachers for a sustained length of time, with the advantage of the institutes' support to analyse their experiences as a teacher. A sustained involvement in the life of the school during the programme and long stretches of time with learners would help student teachers to address the 'unplanned' and 'uncertain' aspects of classroom teaching which often originate in interaction and not from generalized models of learners' development.

The Flow Chart I presents the main curricular areas along with potential courses.

This is followed by brief statements on the rationale and curriculum provision for each of the outlined areas.

Flow Chart I



2.2 Curricular Area-A: Foundations of Education

2.2.1 Learner Studies

Childhood, Child and Adolescent Development and Learning

Rationale

The courses on Learner Studies are visualized as the first systematic introduction to the study of childhood, child development and adolescence. Beginning teachers need to engage with and understand *children of different ages* by interacting with them and observing them in diverse social, economic and cultural contexts rather than through an exclusive focus on psychological theories of child development. This would include a close study of *adolescence* in contemporary India as it poses several new challenges that emerge from the personal as well as social turmoil characteristics of societies in transition. It is equally important for teachers to engage with the social *construct of childhood and adolescence*, the various socio-cultural and political dimensions associated with its positioning and development in society.

Foundational learning in this area involves establishing links between developmental constructs and principles in psychological theory and the larger socio-political realities in which children grow and develop. Understanding the development of children in diverse contexts is necessary to equip student teachers to address diversity in the classroom and to teach within the frame of inclusive education. Pre-service teacher education programmes at all levels (including senior secondary) should be designed to include the observation and study of young children in order to appreciate the developmental process as a continuum.

An adequate opportunity for this can be provided through courses designed around key concepts and research from the disciplines of Psychology, Philosophy as well as Sociology.

Understanding children's (of diverse age groups) questions, their observations of natural and social phenomena; *enquiring into children's thinking and learning* and learning to listen to children with attention and empathy are necessary pre-requisites to develop teachers who are learner sensitive. Such engagement will help teachers to understand that *learning* is not a linear process; that it is a divergent process, essentially spiral in nature, and takes

place in a variety of situations, including everyday contexts. Exclusive engagement with theories of learning fails to provide this perspective.

Every child needs to be made aware of the importance of healthy living and preventing disease. There is an urgent need, therefore, to generate health awareness and cultivate habits conducive to healthy living. It is suggested that comprehensive, systematic and scientific approaches to health education and health awareness be included in teacher education curricula. The contents proposed include: nutrition, personal and environmental hygiene, family and *school health*, disease prevention and control including HIV/AIDS, mental health, prevention of accidents, health information, use of health services, *physical health and sports*.

Curricular Provision: Theory and Practicum

Theory Course Work : 2 to 3 *theory courses* designed around key concepts and research from psychology, philosophy and sociology to engage student teachers with theoretical concepts and frameworks. These would include a critical reading of theories of child and adolescent development; context and processes of socialization; social and emotional development; self and identity; cognition and learning; language acquisition and communication; constructs of childhood and child-rearing practices; school and physical health and inclusive education. Each of the theory courses should have *in-built field-based units of study* leading to projects and assignments focusing on observations and interaction with children and adolescents, their conceptions and learning of natural and social phenomena and examining issues of school health and related social constructions.

Practicum Course Work : The aim is to provide hands-on experience with children of diverse ages and contexts as children and as learners; and to enable a back-and-forth movement between theory and the field. Student teachers need to be given opportunities to be with children of diverse contexts such as first generation learners and street children, interact with them, organize creative activities for them with the aim to learn to communicate and relate with them. While engaging with developmental theories and constructs, many of the experiences they have had with children during this practicum are consciously brought into the classroom discourse to draw interconnections, verify and evolve theory and help them articulate new ideas.

Using the mode of group and individual field-based assignments followed by workshops and seminar presentations, specific practicum courses should be designed for student teachers to:

- Observe, interact with and study children and adolescents of different ages in natural settings in and outside the school, in diverse socio-economic, cultural, linguistic and regional contexts.
- Observe and analyse learning and thinking processes of children of different age groups, including adolescents.
- Examine their thoughts, questions and observations of natural and social phenomena in order to appreciate the developmental process as a continuum.

2.2.2 Contemporary Studies

(a) Teacher and Learner in Society

Rationale

There is a need to shift the focus from an overwhelming emphasis on psychological characteristics of the individual learner to his/her social, cultural, economic and political contexts. Therefore, a rigorous engagement with issues of *contemporary Indian society* must necessarily be examined through an engagement with concepts drawn from a diverse set of disciplines including sociology, history, philosophy, political science and economics. Courses under this rubric are likely to provide space for engagement with issues and concerns of India's pluralistic nature; issues of identity, gender, equity, poverty and diversity. This would enable teachers to *contextualize education* and evolve a deeper understanding of its purpose and its relationship with society and humanity. It is also important to understand the *classroom as a social context*, as it provides a setting for interaction, generation of dialogue and the opportunity to appreciate diverse perspectives on a given issue.

Critical awareness of *human and child rights* equips the teacher with a proactive perspective and a sense of agency. Respect for human rights cannot be seen in isolation from an analytical awareness of the contexts in which human rights are to be observed, starting from Constitutional provisions (e.g., reservation and the right to education), the institutional context, extending to the social, national and global contexts. Teachers also need to be aware of children's rights, the role of the NCPCR in protecting these rights, rights for gender equality and their implications for social change. The critical perspective of *environmental education* also falls within the rights' perspective that asserts the role of education in sustaining a democratic social order.

Curricular Provision: Theory

Theory Course Work: one or two courses to engage learners with social science concepts and specific issues critical in contemporary Indian society. Concepts from across a range of social science disciplines such as civilisation and democracy, nation-state, Constitutional values and provisions, culture and societal stratification are likely to equip the teacher with tools of analysis and a perspective on social reality. An engagement with *issues and concerns of contemporary Indian society*: pluralistic culture, identity, gender, equity, poverty and diversity would provide a social, cultural and political context to locate education and its practice. This is likely to help student teachers understand the *classroom as a social context* where learning is greatly influenced by the social context from which learners and teachers come. It provides a setting for interaction, generation of dialogue and the opportunity to appreciate diverse perspectives on given issues.

Each course would have an *in-built field-based unit of study*. Student teachers study the major characteristics of India's pluralistic make-up with the help of field interviews while studying the issue of reservation as an egalitarian policy, collate people's experiences of such a provision and examine policy and theory. Through such a pedagogic process, the onus of drawing connections between experience and theory is not left to the student teacher alone. Learning spaces are structurally provided in the design of teacher education programmes for drawing such connections.

Student teachers can undertake *projects* such as tracing the process by which a consumer product is made available from its raw form to a finished product and studying the various factors of geography, economics, politics, history and sociology that may have influenced it in one way or another. Projects can be complemented with workshops, seminars, assignments and group discussions around issues and concepts studied in theory.

(b) Gender, School and Society

Rationale

Developing a gender perspective through teacher education necessarily requires a pedagogic approach that allows not just systematic study of gender theory but also an engagement within their own position in society vis-a-vis gender roles. Student teachers also need to do a critical reading of the existing literature that draws linkages between democracy and education from the perspective of gender. Space needs to be provided within such courses to

build teachers' abilities to make linkages between theory and real life situations. This implies rigorous systematic theoretical study as well as intensive observation and analysis of field realities. This approach is likely to strengthen teachers' ability to conceptualise from a given experience.

Curricular Provision: Theory

Theory Course Work : A single course that deals with theoretical perspectives in gender studies, questions of identity and self; examining their positions in society; curriculum and text analysis from the gender lens, critically analysing disciplinary studies, analysing school cultures, engaging in debates associated with professional education and the feminisation of the teaching profession and strategies of creating change. Hands-on experience with examining textbooks, curriculum framework and syllabi from a gender lens would provide immense opportunities to develop critical perspectives. These can be *in-built field-based units of study* in the course on gender.

Although this course will provide necessary focus on the theory and construct of gender, all other courses would require an engagement with gender perspectives whether in understanding the development of children and adolescents or in understanding issues of society, culture, equity and diversity.

2.2.3 Educational Studies

(a) Aims of Education, Knowledge and Values

Rationale

Basics of education like the meaning of education, curriculum, teaching, learning and school need to be discussed with a view to providing a sound foundation for advanced discussions on issues relating to the theory and practice of education. Among the many questions that contemporary educational discourse excludes are substantive *philosophical questions about the fundamental aims and values* that should provide the intellectual basis of contemporary education policy and practice. Student teachers need to engage with issues in a manner that makes them sensitive to the fact that educational debate is never neutral; it always tends to promote certain educational values while marginalizing others.

True education is a process of developing the human personality in all its dimensions – intellectual, physical, emotional, social, moral and spiritual.

Peace provides an integrating principle for the value-orientation of education. *Education for peace* is education for life, not merely training for a livelihood. Equipping individuals with the values, skills and attitudes, they need to be wholesome persons who live in harmony with themselves and others and are responsible citizens is the goal of education for peace⁹. *Ideas of educational thinkers* such as Gandhi, Tagore, Dewey, Krishnamurti, Montessori and others examined in their socio-historical contexts would provide the philosophical basis to engage with these questions.

Curricular Provision: Theory

Theory Course Work : One or more courses focussed on philosophical thinkers in education, theoretical constructs that help to question and debate issues around aims of education and questions of epistemology. Philosophical and sociological probing into the idea of knowledge, morality and values; status, problems and concerns of school education in India; frames and persuasions of peace education within the national and international contexts would be some of the critical units of study; engagement with school culture and school as a learning organization. Apart from lectures and discussions, a close reading of original writings, seminar/term paper presentations and self-study of select units of study must be encouraged.

(b) Developing the Self and Aspirations as a Teacher

Rationale

Teacher trainees need to study issues related to self and identity, human relationships, adult-child gaps, assumptions, beliefs and attitudes. They could explore the meaning of ethics and values, observe and understand feelings of fear and trust and their influences in personal and social attitude, attitudes towards competition and co-operation, analyse and observe the impact of competition in personal and social life, observe the role of listening, attention and empathy and the role of a teacher in establishing relationship with children and as a communicator. A greater insight into one's aims of life, one's strengths and weaknesses and the dynamics of identity formation provides the base for developing a professionally competent teacher who is sensitive to issues of equity, democracy and social justice.

Curricular Provision: Theory and Practicum

Theory Course Work : One course with focussed workshops through link with theory that would require specific inputs from professionals engaged

with self-development, theatre and creative drama. These often provide non-threatening and non-judgmental learning environments that enable the participants to reflect on their own positions in society with ease. Theoretical study on issues of identity, interpersonal relations, adult-child gaps, personal and social constructs, schools as sites for struggle and social change; complementary workshops with focus on identity development; recognising one's own strengths and limitations and developing social sensitivity; and the capacity to listen and empathise.

Practicum Course Work : Student teachers need to engage with their childhood experiences, personal aspirations and aspirations to become teachers, their views on issues of gender and identity, personal, familial and social conflict. This can be best done through *workshops in drama, art, music and craft*. They need to be encouraged to record and analyse observations to interpret reality within varying theoretical and experiential frameworks.

2.3 Curricular Area-B: Curriculum and Pedagogy

2.3.1 Curriculum Studies

(a) Knowledge and Curriculum

Rationale

It is important to engage prospective teachers with the conceptual knowledge they have gained through general education. Most teacher education courses focus exclusively on the methodology of teaching individual school subjects. It is assumed that the teacher trainees have the subject-content knowledge which they would draw upon when required. Hence, teacher education curricula do not engage teacher trainees with subject-content. However, if we want to prepare teachers to present subject-content in developmentally appropriate ways and with critical perspectives it is essential that several theoretical concepts learnt during general education in school and college be revisited and reconstructed. This course also aims to engage student teachers with epistemological and ideological assumptions about knowledge, learner and learning; their implications for curriculum, pedagogy and assessment in school education.

Although much learning and teaching takes place at home, within the neighbourhood and communities of rural and tribal India, the school introduces the child to an environment of teaching and learning that, quite

by design, marks itself off from the rest of the child's environment. Schools need to facilitate the creation of vital links between children's experiences at home and in the community and what the school offers them.

Curricular Provision: Theory

Theory Course Work : Four to six courses with units of study that are designed along the syllabi of plus two and graduation level as the case may be in each of the major disciplines of language, mathematics, social sciences and natural sciences. The concepts studied by student teachers in their general education are revisited and reconstructed using several hands-on activities. This will enable a deep engagement with concepts and sub-concepts, thus enabling many misconceptions to come to the fore for interrogation, and thus enabling clarity.

Understanding school curriculum: Philosophical and ideological basis of curriculum design, selection of knowledge; critical examination of curriculum, design and analysis of textbooks, negotiating curriculum; *linking school knowledge with community life:* examining textbooks to contextualize school knowledge, learning to draw upon resources other than textbooks, including local oral histories.

In-built field-based units of study can provide sustained engagement with content through the close examination of select concepts. Science, for example, can involve laboratory work, library and reference, field surveys, group discussions, seeking expert opinion to investigate into questions that children often ask such as, Why is the sky blue? Why do stars twinkle? Similarly, mathematical concepts and operations can be reconstructed, through activities and problems using concrete materials from everyday experiences as well as from mathematical kits, to arrive at solutions or conduct investigations. These need to be followed by reflective discussion on the concepts, solutions, results and the methods used, both 'right' and 'wrong'. A variety of investigative projects can be designed for this purpose. Reconstructing concepts helps student teachers and teacher practitioners to appreciate the nature of subject knowledge and to link it with appropriate pedagogic processes that communicate meaningfully with children. Student teachers can undertake projects in oral history; alternative medicine; appropriate technologies; pedagogies of informal learning situations in order to grasp the diverse nature of knowledge.

(b) Language Proficiency and Communication

Rationale

Language cuts across the entire school curriculum and hence, the role of language as a medium and tool of communication assumes great importance. A teacher talks, explains, narrates, asks questions, illustrates, translates, guides, instructs, cautions, motivates, encourages and plays various other roles. All of these imply an appropriate and context-specific use of language. Concepts, constructs, examples are the building blocks of knowledge and all these are language-based. This makes the teacher's language proficiency and communication skills critical factors in school education, apart from a sound knowledge-base, pedagogical and other professional capacities.

Curricular Provision

Course Work : One course that focuses on developing the proficiency levels of student teachers in the appropriate language. This should be the language in which the teacher would teach. Irrespective of stage specificity and subject specialisation, all teacher education programmes must focus on and accord *high priority to the development of student teacher's language competence and communication skills*. This course should be designed to include hands-on experience in using the language in different contexts, meta-linguistic awareness with a focus on listening, speaking, reading, comprehension and writing for varying contexts.

2.3.2 Pedagogic Studies

School Knowledge, Learner and Pedagogy

Rationale

The purpose of pedagogic study is to understand school subjects and their pedagogic approaches in the concrete context of the school and the learner by forging linkages among learner, context, subject discipline and the pedagogical approach. The key departure of pedagogical courses from conventional teacher education would involve shifting the focus from pure disciplinary knowledge and methodology to the learner and his/her context as well. For instance, a course on language pedagogy would promote an understanding of the language characteristics of learners, language usage, socio-cultural aspects of language learning, language as a process and the functional use of language across the curriculum. This would mean moving

away from the conventional focus on language as a subject, which emphasizes its grammatical structure rather than usage.

Pedagogic study of school subjects such sciences, social sciences, languages and mathematics needs to be organized as such rather than for individual school subjects of history, geography or chemistry. This would facilitate a teacher to draw upon epistemological insights while teaching any of the key disciplines that fall under one rubric – sciences or social sciences. This approach also has the advantage of preparing teachers for teaching integrated courses in sciences and social sciences.

Curricular Provision : Theory and Practicum

Theory Course Work : Two to four courses on Pedagogy: Knowledge as construction through experiences, nature of disciplines, critical understanding of school curriculum; and pedagogy as the integration of knowledge about the learner, the discipline and the societal context. This would include separate courses on languages, mathematics, social sciences, sciences and environmental sciences at the primary, upper primary, secondary and senior secondary stages of education.

For instance, a pedagogy course on EVS should include the following: philosophical and epistemological basis of EVS as a composite area of study that draws upon the sciences, social sciences and environmental education; acquainting student teachers with children's ideas of their physical and social world so that these can later be interpreted for classroom instruction; helping student teachers develop the ability to plan comprehensive units that do not compartmentalize knowledge but view it holistically.

Engagement with research relating to different aspects of young children's learning in languages, mathematics, environmental education, history, geography, followed by reflective discussion, records of observation, analysis can form an important part of developing sound pedagogic understanding of the elementary school teacher. *A critical examination of and engagement with teaching methods* such as concept formation, enquiry-based teaching, problem-solving, discovery and activity-based learning and related terms can go a long way in making him/her a reflective teacher.

The secondary and senior secondary school teachers will need to engage with deeper epistemological questions of the disciplines they specialize in.

Specific tasks related to, how learners engage with school subject-content mis-conceptions need to be addressed through a rigorous study of disciplinary knowledge, besides a specific focus on content area literacy and tasks of writing observations and analysis for enhancing conceptual understanding.

Pedagogy courses will need to be designed to address different stages of education: preschool, elementary (primary and upper primary), secondary as well as senior secondary.

Practicum Course Work : Practicum courses can be designed on themes of classroom management, material development and block teaching in schools. Student teachers *learn to integrate ideas, experiences and professional skills* through hands-on experience of developing curriculum and learning materials, designing appropriate activities for children of different age groups and formulating questions to facilitate learning. Teachers also need to learn to prompt children to ask questions and to learn to collate these to further processes of learning. For instance, for a language pedagogy course, student teachers would need to engage with projects involving listening to children's reading, observing and analysing reading difficulties, observing and identifying mismatches between school language and home language, analysing textbooks and other materials used in different subjects in terms of presentation, style and language used.

Practicum activities for social sciences could be based on organizing and planning for excursions, drawing upon local sources of evidence in history, projects on oral history, collection and presentation of specimens of rocks, leaves, stamps, flags, using reports, newspapers, documents, local maps, atlas, map drawing and reading in the classroom. These could be followed by reflective discussion, learning how to make observations, record them and analyse them. Such an approach would help forge linkages between the learner and his/her context, disciplinary content and the pedagogical approach.

Placing student teachers with learners of secondary and senior secondary classes will help them design developmentally appropriate projects. This would necessarily require deeper and wider engagement with disciplinary knowledge. Practicum of this nature can help teachers develop a repertoire of skills for reflective practice, such as critical reading of school textbooks, making pedagogical sense of learner errors and learning styles.

2.3.3 Assessment and Evaluation Studies

Perspective and Practice of Learner Assessment

Rationale

An important role that every teacher has to play is that of assessing children's progress, both in terms of their psychological development and the criteria provided by the curriculum. The scope of learner assessment and evaluation needs to be broadened to go beyond the limited context of syllabus-based achievement testing; achievement scores in a subject need to be linked with the child's overall development; testing should cover higher level of learning objectives, not just information. The NCF proposes school-based evaluation as a long-term goal of examination reform. For this goal to be attained, teacher education programmes will need to build capacity to introduce student teachers to the history of evaluation and current practices, including contemporary debates on perspective and the practice of testing. There is a need to emphasise on the need to view assessment as an aspect of learning. Teachers must recognise the role evaluation plays in motivating children to learn. This is particularly crucial to achieve the goals of the right to education and to bring every child into the fold of quality education. The current system of evaluation as a means to select by failing is not consistent with the goal of universalizing education. A rigorous informed understanding of assessment has become even more important in the current global context of laying undue stress on student performance.

Curricular Provision: Theory and Practicum

Theory Course Work : Theoretical engagement with learner assessment needs to be integrated with courses in pedagogic studies and curriculum studies. This engagement should include a rigorous *critical reading of perspectives* that regard learner assessment as the panacea of school and teacher reform; examining the *history of evaluation and current practices; place of evaluation in learning* and development of the learner, and *broadening the scope of assessment* beyond achievement testing to cover child's overall development.

Practicum Course Work : Student teachers need to get hands-on experience of designing assessment methods that are qualitative in nature and assess children's developing capacities to think and solve problems rather than to recall. Tasks of formulating different types of questions, studying their impact in terms of learner performance and learning grasp in the classrooms could

be undertaken consistently. Systematic recording of learners' errors, examining them in the light of empirical research and attempts at leading learners towards newer ways of thinking need to be closely recorded and discussed with faculty.

2.4 Curricular Area-C: School Internship

Rationale

It is common knowledge that practice teaching which constitutes the most functional part of the teacher preparation has suffered severe neglect and dilution in quality. The common complaint is that theory dominates the curriculum and practice teaching continues to suffer from inadequacies of different kinds such as: it follows a mechanical routine (observation, micro teaching, teaching practice and examination), operates with rigid lesson plan formats, inadequate mentoring and supervision; exhibits no original thinking, lacks variety and context specificity in teaching. There is no attempt made towards comprehensive, qualitative evaluation covering professional attitudes and values and provision of sustained engagement with schools. The major drawbacks of the current model of practice teaching are :

- Current practices in teacher education take the school curriculum and textbooks as 'given' and train teachers to adjust to the needs of the existing school system through fastidious planning of lessons in standardized formats, fulfilling the ritual of delivering the required number of lessons.
- Repeated 'practice' in the teaching of a specified number of isolated lessons is considered a sufficient condition for professional development.
- There is no opportunity for teachers to examine their own biases and beliefs and reflect on their own experiences as part of classroom discourse and enquiry.
- Theory courses have no clear articulation with practical work and ground realities.
- The evaluation protocol is too theoretical, excessively quantitative and lacks comprehensiveness.

Situating the practice of teaching in the broader context of the vision of the role of the teacher

It is obvious that in imparting professional rigour to the preparation of

a teacher, the practice of teaching and associated rigorous theoretical study play a crucial part. It is the effectiveness with which the multiple components of field learning—getting to know the school, observing children, observing teaching and learning in real classroom contexts, practising teaching, developing capacities to think with educational theories and applying concepts in concrete teaching-learning situations, managing classroom learning, evaluating learners and providing feedback, learning to work with colleagues, reflecting on one’s own professional practice—are drawn upon to provide appropriate learning experiences for the student teacher that is critical to the education of teachers.

At the outset, it can be seen that any attempt towards reform of current practices and design of innovative approaches in practice teaching should begin with an understanding of the place of teaching practice in the overall scheme of things. The first thing to be noted is that the practice of teaching constitutes the hub of the multiple and varied activities comprising the total programme of teacher education. It is interconnected with theoretical study, field work and practicum and a wide range of institutional experiences involving school students, teachers, student teachers, mentor teacher educators. In a way, it acts both as the evaluation tool for effective teacher education as well as its critical quality indicator.

Curricular Provision: Sustained engagement with learners and the school

The School Internship programme needs to have the following critical components:

- Visits to Innovative Centres of Pedagogy and Learning, wherever feasible;
- Classroom-based Research Project;
- Internship in schools for a continuous period of 4 days a week and a minimum duration of 6-10 weeks for a two-year programme and 15-20 weeks for a four-year programme, including an initial phase of one week for observing a regular classroom with a regular teacher;
- Developing Unit Plans and maintaining Reflective Journals; and
- Creating and maintaining resources for teaching-learning in the Internship schools.

While functioning as a regular teacher for a sustained period of a minimum of 12-20 weeks, the intern would get an opportunity to learn to set realistic goals in terms of learning, curricular content and pedagogic practice.

A *sustained contact through internship* would help teachers to choose, design, organize and conduct meaningful classroom activities, critically *reflect upon their own practices* through observations, record keeping and analysis and develop strategies for evaluating students' learning for feedback into curriculum and pedagogic practice.

The school would benefit from such an alliance in terms of *witnessing possibilities of unconventional pedagogies*. In this process of internship, teacher trainees develop new materials for teaching-learning which can become valuable resource for the regular teachers of the school.

The internship needs to be worked as a *partnership model* with the school rather than a continuation of the current model of practice teaching during which the trainees merely 'use' the school for their own 'formal degree requirements'.

The feature distinguishing the *proposed process-based teacher education* from conventional teacher education is that of bringing the learners' own experiences centre-stage. Engagement with theoretical concepts and frameworks takes place within the learner's experiential and larger social realities. The structural provision for such opportunity is to be made in the design of the teacher education programme structure and within each area of study. By structural provision we mean the positioning of areas of study/inquiry in a manner that allows an easy flow of movement from experience to theory and theory to field experiences.

A back-and-forth movement between theory and the field could be provided through inbuilt field-based units of study, in each theory course as well as specially designed practicum as has been indicated in each of the curricular areas presented in Table 1.

The school internship programme provides the platform for the interns to give expression to their learning while planning and reflecting on their own practice.

Table 1: Teacher Education Curricular Areas –A Schema

Curricular Areas	Major Components	Curricular Aspects	Curricular Provision
Area-A: Foundations of Education	Learner Studies	Drawing upon psychology, sociology, linguistics and education.	2-3 theory courses with in-built field-based units of study; Practicum courses, workshops, seminars, group and individual assignments
	<i>Childhood, Child and Adolescent Development</i>	<i>Constructs of childhood, adolescence; socialization; language; cognition, thinking and learning; school and physical health; self, identity; inclusive education</i>	
	Contemporary Studies	Drawing upon sociology, history, philosophy, psychology, political science and economics.	1-2 theory courses with in-built field-based units of study, projects, seminars, group and individual assignments
	<i>Teacher and Learner in Society</i>	<i>Issues and concerns of contemporary Indian society; human and child rights; classroom as social context</i>	
	<i>Gender, School and Society</i>	<i>Identity development; understanding curriculum and texts from a gender lens; debates about professionalism and feminization of the teaching profession</i>	
	Educational Studies	Drawing upon educational theory, philosophy, history and sociology.	1 theory course with in-built field-based units of study; group and individual assignments, seminar presentation
<i>Aims of Education, Knowledge and Values</i>	Basics of teaching-learning; theoretical constructs, educational thinkers; vision of education in India, issues and concerns; school culture and school as a learning organization; peace education		
<i>Developing the Self and Aspirations as a Teacher</i>	Self and identity; interpersonal relations, adult-child gaps; personal and social constructs; schools as sites of contestation and social change.		
			1-2 theory courses with in-built field-based units of study; assignments, group presentations, term papers
			1 course workshop-based with a brief on theory; workshops on issues of gender; identity; social and personal conflict; childhood; relationships

<p>Area-B:</p> <p>Curriculum and Pedagogy</p>	<p>Curriculum Studies</p> <p><i>Knowledge and Curriculum</i></p> <p><i>Language Proficiency and Communication</i></p> <p>Pedagogic Studies</p> <p><i>Language Mathematics Social Sciences Sciences</i></p> <p>Assessment and Evaluation Studies</p> <p><i>Perspective and Practice of Learner Assessment</i></p>	<p>Focus on key concepts of the basic disciplines of language, mathematics, social sciences and sciences; sociology of knowledge and curriculum</p> <p>Engagement with subject content and school curriculum, textbooks; philosophical and ideological basis of curriculum; design and selection of knowledge; Knowledge as construction; disciplinary knowledge.</p> <p>Language proficiency and communication skills; meta-linguistic awareness; skills of speaking, listening, reading and writing in varying contexts; content area literacy</p> <p>Drawing upon pedagogical theory, constructivist and socio-constructivist perspectives</p> <p>Nature of discipline and knowledge; understanding school curriculum; critical engagement with principles of teaching; epistemological issues</p> <p>Draw upon critical reading of psychometric approaches; sociological frames of analysis and constructive approaches</p> <p>Critical reading of evaluation perspective and practice; place of assessment for learning; qualitative and quantitative measures; hands-on experience clinical interviews, observation formats and interpretation of qualitative data.</p>	<p>4-6 theory courses with inbuilt field-based units of study; investigative projects; recording and analysis of observations.</p> <p>1 course designed as workshops with hands-on activity in the use of language for communication</p> <p>4-6 optional theory courses offering areas of specialization; practicum courses comprising of curriculum and text analysis and creation of alternative learning materials.</p> <p>1 theory course with complementary practicum; analysis of question types and assessment formats; group and individual assignments.</p>
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Area-C: School Internship	School Internship	Sustained engagement with schools; internship as a partnership model; teaching and participating in school activities; recording observation of learners, analysis and reflection on teaching; developing and maintaining teaching-learning resources; developing unit plans and maintaining reflective journals	4 days of teaching for a period of 12-20 weeks, including an initial one week of classroom observations; case studies, classroom research, development of learning resources
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2.5 Time as a Critical Factor in Teacher Preparation

The issue of quality teacher education is closely tied up with the concern for the duration of initial teacher preparation (pre-service) programmes. Any form of initial teacher preparation needs to be of reasonable duration that provides enough time and opportunity for self-study, reflection and involved engagement with learners, the school, the classroom and pedagogic activities, along with rigorous theoretical study.

An analysis of teacher education practice today would reveal that the practice of teaching is usually of a short duration, not more than five to six weeks and that too, piece-meal in approach. Foundational knowledge, pedagogic understanding and perspective and skill inputs are expected to be integrated and applied during this period. It is commonly held that there is not sufficient time for learning either the conceptual or the skill components of teaching for them to manifest in the individual and his/her performance. Due to paucity of time, 'lessons' are planned with virtually no reflection on the content of subject-matter and its organization. As a result, most products of teacher education programmes are neither proficient in general pedagogic skills nor are they adept at reflecting on the subject content of school texts.

It is perhaps high time that we pay heed to the specific suggestion of increasing the duration of initial teacher education, recommended by the two most significant policy Commissions of post-independence India, namely the Kothari Commission (1964-66) and the Chattopadhyaya Commission (1983-85). It would be logical to first work towards a redesign of initial teacher education and then consider an appropriate time frame for fulfilling its major objectives, keeping in mind the suitability of pedagogic approach and strategies of implementation. It would no doubt be a wasted effort to provide 'more' of the 'same content and approach' that is already being critiqued heavily and has proved dysfunctional in creating opportunities or spaces for change.

2.6 Redesigning Current Teacher Education Programmes

As already stated, the broad spectrum of expected learnings in a would-be teacher demands that initial teacher education be of 4-year duration after Senior Secondary; or of 2 years duration after a Bachelor's degree programme. This would provide enough time and opportunity for self study, reflection and involvement, engagement with teachers, school, classroom and pedagogic activity and rigorous theoretical study. Any compromise on the duration of the initial education of teachers, for whatever reason, adversely affects the quality of teacher and teaching in schools.

It is, therefore, recommended that current models of teacher education at all levels of school education be gradually replaced by models of teacher education that *integrate general education with professional development along with an intensive internship* with schools. These integrated models should be designed using the specific features outlined in the curricular areas and transaction process. The time-frame recommended to ensure the institutionalization of these models would be between 4-6 years from the bringing out of this document. As an interim measure, current models of teacher education such as the B.Ed. and D.Ed. are required to redesign their courses as well as the Programme Structure to include the specific features and structural mechanisms proposed in the new Framework in terms of curricular areas and transaction processes. Transaction of teacher education programmes should follow the broad strategies presented in the following chapter.

SUGGESTED REDESIGN of: (a) D.Ed.: Two-Year Diploma after +2
(b) B.Ed.: One-Year Degree after graduation

Area-A: Foundations of Education

- *Learner Studies*

Theory : Childhood, Child and Adolescent Development and Learning

Practicum : School Initiation Programme; Observing Learners; Story Telling and Children's Literature

- *Contemporary Studies*

Theory : Teacher and Learner in Society; Gender, School and Society

- *Educational Studies*

Theory : Aims of Education, Knowledge and Values; Developing the Self and Aspirations as a Teacher

Practicum : Self-Development Workshops; Creative Drama, Craft and Music

Area-B: Curriculum and Pedagogy

- *Curriculum Studies*

Theory : Knowledge and Curriculum; Language Proficiency and Communication

- *Pedagogic Studies*

Theory : Language Education; Mathematics Education; Science Education; Social Science Education

Practicum : Material Development and Evaluation; Classroom Management and Block Teaching

- *Assessment and Evaluation Studies*

Theory : Perspective and Practice of Learner Assessment

Practicum : Designing Assessment Frameworks; Formulating Questions; Recording and Analysing Qualitative Aspects

Each of the theory courses to have *units of study from various disciplines*. For instance, Courses on Child and Adolescent Development to have units of study on constructs of childhood drawn from sociological studies, units on cognitive and language development from psychological and socio-linguistic perspectives.

Each of the theory courses to include *field-based units of study*. For instance, a course on Contemporary Studies can include a project on reservation, or the understanding of a consumer product such as 'glass bangles' from its raw form to its reach in the market.

The Curriculum Studies Courses would necessarily include units of study that provide a critical study of school curriculum materials, syllabi, textbooks in the light of theoretical frameworks and empirical research.

The Pedagogic Studies Courses would necessarily include units of study that provide for a critical study of content, an examination of learners' thinking and learning and pedagogic processes in the light of theoretical frameworks and empirical research.

Each of the above theory courses to be *complemented with practicum courses*. For instance, a course on Child and Adolescent Development and Learning could have a practicum on Observing Learners, in natural settings to study play patterns; to study diverse economic and societal-cultural contexts; understand learners' thinking and learning processes and text-learner dynamics.

Each of these practicum should be positioned strategically to enable a back-and-forth movement between theory and the field.

Area-C: School Internship

- Visits to Innovative Centres of Pedagogy and Learning, wherever feasible.
- Classroom-based Research Project.
- School Internship of 4 days a week for a minimum period of 6-10 weeks, including an initial phase of observing a regular classroom.
- Developing and maintaining resources in the Internship schools.
- Developing Unit Plans and maintaining Reflective Journals.

The practice of teaching during school internship would include not more than 4 Unit Plans per subject. Planning of the Units would include a critical engagement with content from multiple sources including the school textbook, organization and presentation of subject-matter, formulating questions, specifically to: (a) assess knowledge base and understanding of students; (b) further the process of knowledge construction and meaning-making in the classroom; and (c) assess students' learning to improve pedagogic practice and further enhance learning.

2.7 Exemplar of a Four-year Integrated Programme

Outlined below is a short synopsis of the vision and features of a four-year integrated programme of Elementary Teacher Education designed to integrate general education with professional training. These features are drawn from the Bachelor of Elementary Education Programme approved by the NCTE.

- Foundations of Education located in the sociological, historical, economic, ecological, philosophical, cultural and political context and thought in education.
- Core courses to engage with subject-content with the aim to revisit and reconstruct concepts and perspectives.
- Engagement with theory of pedagogy and hands-on experience in understanding the learner, his/her context and processing of thinking and learning as a base to evolve relevant and appropriate pedagogic strategies.
- Pedagogic courses designed in the frame of broad disciplinary areas such as, Sciences, Social Sciences, Languages and Mathematics rather than individual school subjects.
- Theory courses designed to enable inter-disciplinary engagement as well as to engage with theory in the light of personal experiences and social realities.
- Theory courses to include in-built field-based units of study to enable porous boundaries between theory and practice.
- Rigorous study of a chosen liberal course out of a pool of courses in languages, mathematics, sciences and social sciences.
- Opportunities for developing the self through drama, craft, music, self-development workshops along with a critical engagement with theoretical constructs of identity development and the individual-social interface.
- Extensive and intensive practicum courses to equip teachers with a grip over existing systemic issues in education, a developing capacity to rise to the un-certainties of a learning environment and changing learner needs and a capacity to feel empowered to make a difference.
- Practicum courses to develop other professional capacities and sensibilities: the ability to understand learners in context, evolve developmentally and contextually relevant pedagogies, re-arrange subject-matter to communicate effectively with learners, design and choose appropriate learning experiences activities, learn to observe and document, analyse, synthesize, interpret and reflect.

- Sustained engagement with schools to appreciate the given constraints of a system and to learn to strategise to think out of the box. Understand and learn to negotiate formal learning spaces as sites of struggle, contestation and social transformation.

Chapter 3

Transacting the Curriculum and Evaluating the Developing Teacher

3.1 Introduction

The most critical aspect of the proposed teacher education curriculum is its transaction. Teaching is a profession and teacher education a process of professional preparation of teachers. A profession, as we all know, is characterized by an organized body of knowledge on which the undertaking is based (the knowledge base of teacher education), a reasonable duration of formal and rigorous professional training in tandem with practical experience in the field and a code of professional ethics that binds its members into a fraternity. Preparing one for a profession thus is an arduous task and involves action from multiple fronts and perspectives. It also calls for systematic evaluation of all facets of the professional training – knowledge and understanding of educational theory, practical field skills and competencies related to learning and teaching and professional attitudes and values. These two aspects of professional training, namely, curriculum transaction and evaluation of learning are discussed here:

3.2 Transacting the Teacher Education Curriculum

Table 2 presents a set of processes that unfold in teacher education programmes firmly rooted in the perspective briefly outlined above. These have been juxtaposed against ‘activities’ that dominate most current teacher education programmes. The comparison serves to illustrate processes that are likely to empower teachers rather than create ‘implementers’ of a given curriculum. This is followed by a brief presentation of some of the key aspects of transacting a process-based curriculum to develop reflective teachers.

Table 2: Comparison between the Dominant Current Practice and Proposed Process-Based Teacher Education Curriculum Framework

<i>Dominant Practice of Teacher Education</i>	<i>Proposed Process-Based Teacher Education</i>
Focus on psychological aspects of learners without adequate engagement with contexts. Engagement with generalised theories of children and learning.	Understanding the social, cultural and political contexts in which learners grow and develop. Engagement with learners in real life situations along with theoretical enquiry.
Theory as a “given” to be applied in the classroom.	Conceptual knowledge generated, based on experience, observations and theoretical engagement.
Knowledge treated as external to the learner and something to be acquired.	Knowledge generated in the shared context of teaching, learning, personal and social experiences through critical enquiry.
Teacher educators instruct and give structured assignments to be submitted by individual students. Training schedule packed by teacher-directed activities. Little opportunity for reflection and self-study.	Teacher educators evoke responses from students to engage them with deeper discussions and reflection. Students encouraged to identify and articulate issues for self-study and critical enquiry. Students maintain reflective journals on their observations, reflections, including conflicts.
Short training schedule after general education.	Sustained engagement of long duration professional education integrated with education in liberal sciences, arts and humanities.
Students work individually on assignments, in-house tests, field work and practice teaching.	Students encouraged to work in teams undertaking classroom and learners’ observations, interaction and projects across diverse courses. Group presentations encouraged.
No “space” to address students’ assumptions about social realities, the learner and the process of learning.	Learning “spaces” provided to examine students’ own position in society and their assumptions as part of classroom discourse.
No “space” to examine students’ conceptions of subject-knowledge.	Structured “space” provided to revisit, examine and challenge (mis)conceptions of knowledge.
Practice teaching of isolated lessons, planned in standardised formats with little or no reflection on the practice of teaching.	School Internship – students teach within flexible formats, larger frames of units of study, concept web-charts and maintain a reflective journal.

Teaching the Adult Learner

Teacher education programmes are concerned with adult learners. They need to be based on an adequate understanding of how adults learn. Adult learners are autonomous and self-directed, have a vast amount of life experiences and knowledge, are pragmatic and goal-directed and respond better to problem solving and task-oriented learning. The emphasis, therefore, has to be on developing professional knowledge and capacities through a variety of self-directed tasks including case studies, projects, seminars and research activity.

Bringing the Learners' Own Experiences Center-stage

An important feature distinguishing the proposed process-based teacher education from the conventional teacher education is that an engagement with theoretical concepts and frameworks takes place within the learner's experiential and larger social realities. The structural provision for such opportunity is to be made in the design of the teacher education programme structure and within each area of study in a manner that allows an easy flow of movement from experience to theory and theory to field experiences.

Engagement with Theoretical Concepts and Frameworks

It is important to note that an engagement with theoretical concepts and frameworks is necessary, or else, there is the real danger of reducing all classroom discussions, including project work, to revolve merely around personal experiences. In such an event, there is little hope to lift the discourse from mere description of experiences to reflective analysis. This must be cautioned against, if we want to develop the student teachers' capacity to think, analyse, interpret and reflect.

As regards teaching of theory, we may note that the knowledge component in teacher education is derived from the broader area of the discipline of education as well as foundation disciplines of philosophy, sociology, history, political science and psychology. It needs to be represented so. It is thus multi-disciplinary in nature within the context of education. In other words, conceptual inputs in teacher education need to be articulated in such a manner that they describe and explain educational phenomena – actions, tasks, efforts, processes, concepts, events and so on. In doing so, concepts from various disciplines need to be integrated for arriving at a composite understanding of educational components and realities. The point of significance here is that *while formulating knowledge components for teacher*

education, conscious efforts need to be made to represent explanations from the perspective of education as well as other social science disciplines. Attempts must be made to shift from the usual 'theory to practice' model to understanding theory in order to develop tools and frameworks of thinking and to theorize about field realities.

Training to be Reflective Practitioners

Teacher education programmes at all stages should provide opportunities to the would-be teachers for understanding the self and others, develop sensibilities, the ability for self-analysis and the capacity to reflect. They should also provide ample opportunities to observe and engage with learners and learn to work collaboratively in groups. There needs to be adequate curricular space for critical content engagement and the development of professional capacities in pedagogy, observation, drama, craft, story-telling and reflective enquiry.

Professional opportunities need to include reflection on their own experiences and assumptions as part of the course and classroom enquiry; critical observation and reflective analysis of the practice of teaching. Availability, quality, appropriateness and sufficiency of feedback are necessary for learning to be reflective practitioners.

Theory-practice Dialectic

Theory courses must be designed and transacted such that they provide greater space to generate a deep understanding of linkages between knowledge, learner, learning and methods of teaching. The most effective way of ensuring such learning is to include opportunities to engage with theory as well as the field. Practicum courses that enable student teachers to engage with children and their contexts; schools and their contexts and themselves as persons aspiring to be teachers need to complement theoretical study.

Meaningful Internship and School Experience

Pre-service teacher education programmes should provide sustained engagement with learners in school situations, experiences of teaching learners and observing them and regular teachers in classrooms. While functioning as a regular teacher, the intern would get the opportunity to learn to set realistic goals in terms of learners' learning, curricula content and pedagogic practice. A sustained contact through internship would help teachers to choose, design, organize and conduct meaningful classroom

activities, critically reflect upon their own practices through observations, record keeping and analysis and develop strategies for evaluating students' learning for feedback into curriculum and pedagogic practice. The school would benefit from such an alliance in terms of witnessing possibilities of unconventional pedagogies. In this process of internship, teacher trainees develop new materials for teaching-learning which can become valuable resource for the regular teachers of the school.

Internship experiences need to be organized in a way that is useful in evaluating teacher's ability, supports socialization within the profession, stimulates development of teaching-learning concepts, provides a protected field of experimentation, allows insight into new perspectives and enhances motivation to continue learning and reflecting.

3.3 Need for Complementary Structures and Mechanisms

It must be noted that in order to translate this vision of transacting the teacher education programme, it is essential that complementary structures and mechanisms are in place to allow such a transaction. All theory courses will need to be *inter-disciplinary* in structure and have *field-based units of study*. For instance, only if a theory course on 'Contemporary Indian Studies' draws on a variety of critical social science disciplines such as sociology, history, political science, economics and geography, will it create a substantive understanding of the social, cultural, political and economic context of education? This will be further strengthened only if theory courses have field-based units of study.

Likewise, establishing resource centres that enable hands-on engagement with concepts and 'tools' of education such as textbooks and other resources is critical to transacting a process-based teacher education programme. These resource centres are viewed as mechanisms for grounding the education of pre-service students as well as in-service teachers within immediate classroom contexts, the wider societal context and learner diversity. The conceptual framework within which these centres can operate is given below:

Establishing Teacher Learning Centres (TLCs)

TLC: A Structural Space for Hands-on Experience

A TLC would be a structural space located within a teacher education institution for providing student teachers with hands-on experience with

learning materials, engagement with learners and opportunities for self-reflection. The perspective and design of the TLC would enable processes that engage teacher trainees with the world of the learner and his/her context; subject-content, learning materials and the process of learning; and the trainee himself/herself as an aspiring professional.

TLC: A Resource for Teacher Trainees, Teacher Practitioners and Teacher Educators

A TLC would house diverse sets of resources that would be required for teacher trainees to engage with a diverse set of processes during their training. These would range from learning materials developed by the trainees themselves and those collated from various organizations that specialize in creating teaching-learning materials, activity manuals, children's literature, a variety of school textbooks and other alternative materials available. Opportunities to work with a variety of learning materials would help break the 'habit' of relying on the school textbook as the only source of knowledge and teaching in the classroom.

TLC: A Forum for Interaction and Sharing

A TLC would serve as a forum for interaction among teacher trainees and teacher practitioners on issues of developing materials and planning for teaching. Frequent interaction and sharing would help trainees to articulate concerns with clarity and learn from each other's experiences. Interaction among trainees could be organized within yearly, monthly and weekly schedules. The nature of these meetings could range from planning the curriculum for the year to planning units and web-charts for a unit.

TLC: A Platform for Classroom-Based Research

A TLC would serve as a platform for undertaking short research projects that aim to broaden teachers' understanding of learners and prompt them to enhance their knowledge of subject-content. For instance, an investigative project on numeracy of how children learn mathematics by focusing on the strategies they use to solve arithmetic tasks. By increasing teachers' understanding of how children develop increasingly sophisticated ways of solving arithmetic tasks, the research based learning framework (used in such projects) provides direction for teaching and learning. This in turn would improve students' learning through teacher's professional development.

TLC: A Structural Space for Self-directed Activities

A TLC would serve as a structural space whose resources would be available for teacher trainees to undertake self-directed activities such as analysis of school textbooks and literacy primers. Learning teachers would undertake analysis of textbooks to assess their suitability for children of different levels. Analysis of textbooks, using dimensions of subject-content, presentation style, language used, treatment of concepts and issues of gender and pedagogic approach would also facilitate trainees to think critically. The study of alternative text material would expose them to the different ways in which texts can be written.

Trainee teachers could be engaged with collating learners' questions about natural and social phenomena such as the following: Why do we speak different languages? Why does the lizard not fall from the ceiling? An analysis of these would prompt them to engage with subject-content and to appreciate the nature of learners' reasoning at different ages. TLCs could provide opportunities for teacher trainees to understand learners' thinking through personal interviews and probing with individual learners. Trainees could develop profiles of learners from diverse contexts to help them appreciate their unique social, cultural and political environments.

TLC: A Platform for Developing a Repertoire of Skills

A TLC could provide a platform for organizing workshops to develop a repertoire of professional skills such as story-telling, craft, music and drama. Trainees would learn to use stories as a medium to facilitate expression, imagination and the creative use of language in learners; create bulletin boards, story-poem folders and organize reading corners in classrooms. They would learn to use drama and art as learning tools and as strategies for classroom management. Through short research projects, teacher trainees and teacher practitioners will develop skills of observation, documentation, analysis and interpretation.

TLC: A Structural Space for the Personal and Psychological Development of Teachers

A TLC would focus on activities directly related to the personal and psychological development of the teacher. Trainees would be encouraged to engage with their own childhood experiences, aspirations to become a teacher and their views on issues of gender and identity, personal, familial and social

conflict. Through focussed workshops, they would examine adult-child gaps in communication, explore their own attitude towards competition and co-operation, analyse and observe the impact of competition in personal and social life. Dimensions of self can be explored through activities of drama, art, music and craft which often provide non-judgemental and non-threatening learning environments. Some of the self-directed learning strategies would include finding answers to deep reflective questions; reflective reading; reflection on observations in the classroom followed by group discussion; identification of issues for further self-study; keeping reflective diaries/journals.

TLC: A Structural Space for Forging Links between Pre-service and In-service Teacher Education

A TLC in a teacher education institution will provide the necessary space which could be commonly used both for pre-service and in-service teachers. Teacher education institutions that organize both programmes would need to co-ordinate with the aim to impact select schools in a concerted manner. For instance, regular teachers of the internship/practice teaching schools (where pre-service students are placed) could participate in the in-service programmes, re-oriented to address the immediate classroom context and learner diversity. A cluster of schools selected by DIETs/IASEs/Departments of Education each year to place pre-service students can also be the selected schools for in-service programmes. All teachers of these schools can be involved in a concerted way through in-service programmes that are redesigned to provide individual support and mentoring. A DIET-TLC, for example, may provide the necessary structural space to: (a) design the in-service package of 20 days and provide hands-on training, which addresses classroom concerns and teachers' needs; and (b) provide school-based resource support to individual teachers through the school-based Learning Centre established by interns. Concerted individual support to teachers on classroom-based concerns and issues for duration of about three years is likely to enable a process of change and deep impact. A formal partnership with a university department, IASE, or an NGO, where possible, can support the effort of the DIET-TLC in this direction, in particular, in the redesigning of the in-service programmes and in providing the bridge between the teacher education institution and schools.

3.4 Evaluating the Developing Teacher

A glaring weakness of existing teacher education practices is the restricted scope of evaluation of student teachers and its excessively quantitative nature. It is confined to measurement of mainly cognitive learning through annual/terminal tests; skill measurement is limited to a specified number of lessons. The qualitative dimensions of teacher education, other professional capacities, attitudes and values remain outside the purview of evaluation. Further, evaluation is not continuous as it should be; the teacher education process is characterized by a wide range and variety of curricular inputs spread over the entire duration of training according to a thought out sequence. These need to be evaluated at appropriate stages and feedback given to the trainees.

(a) *The Comprehensive Nature of Evaluation*

Evaluation in teacher education needs to be objective while giving value to subjective understanding of the developing teacher. It also needs to be comprehensive so as to cover the entire gamut of conceptual, pedagogical dimensions as well as attitudes, dispositions, habits and capacities in a teacher incorporating both the quantitative and qualitative dimensions of growth. These include: engagement with learners in their contexts; school curriculum and textbooks; process of learning and knowledge; psychological and professional development; understanding of institutional arrangements, policy perspective, pedagogy and curriculum.

Assessment should cover an understanding of the process of child and adolescent development; societal context of education; nature of children's thinking – mathematics, language, natural and social phenomena; philosophical and sociological frameworks; the school as a system and the ways in which developing teachers demonstrate their changing dispositions, professional skills in organizing group learning and team work.

(b) *The Evaluation Protocol*

Qualitative indicators specific to each area of assessment need to be drawn up and initial allotment of marks should lead eventually to grades. The bases and criteria for evaluation may include:

Observing earners for a specified duration in specific situations: Number of hours of observation, method used, detailed notes, recording formats, data coding, reports, analysis and interpretation.

Observational records maintained by the student teacher on a set of criteria relevant to the task and report writing: Field notes, classification schemes used to make sense of qualitative data.

School contact practicum to relate and communicate with learner: Preparation, choice of activities, materials, developments that take place in the classroom, interaction with children, reflection on issues regarding students' learning, expressions, creativity, discipline, influence of varying contexts.

Planning for the school contact: Choice of theme, activities, materials, time, organization of material, communication skills, ability to engage learners, interaction, time management.

Post-contact discussions, report writing and group presentations: Quality of discussions, insights, analysis, reflections.

Psychological and professional development of the teacher: Courses, theory and practicum on the development of the self; personal growth can be assessed using the criteria of the capacity of participants to question and be critical of their own assumptions, thoughts, opinions and ideas, developing insight into one's own self: articulating one's own limitations and strengths, capacity to integrate thought and action, feeling and intellect, developing self-confidence and questioning over-confidence, open-mindedness, ability to listen with empathy and attention, social sensitivity, ability to take initiative, developing positive attitudes and reflecting on negative attitudes. *Self-evaluation* of students would use the same criteria of personal growth.

Assessing a repertoire of skills: Regularity and nature of participation in workshops; skills of creating bulletin boards using relevant themes and stories, story-folders that make a collection of stories in terms of variety, context, social and cultural diversity and sensitivity, adequate reference to sources and acknowledgements, classification and retrieval system for the use of stories in classrooms and outside, capacity for evaluating 'sound' children's literature with substantive reflection on the why of such a criteria, skills of telling stories to children. In addition, skills of handling laboratory and audio-visual equipments, designing teaching-learning materials, use of library, organizing field visits, seminars and group discussions and exhibitions.

Understanding the learner, curricular and pedagogic issues: Practicum courses

complementing theory learning with curriculum studies: observation of classroom teaching practices; visits to centres of innovation; curricular materials, document and text analysis; observation records; individual and group reports; reflections; material development etc.

Teacher as researcher: Teacher trainees are also given the opportunity to learn to keep observational records, to analyse their observations and interpret reality within varying theoretical and experiential frameworks. Such engagement through structured classroom-based research projects develops in them several skills to function as a researcher, thus equipping them to use mechanisms that enable reflective practice. Over the year, trainees undertake several such tasks, including analysis of school textbooks and alternative materials, analysis of learners' errors and observation of their learning styles and strategies.

Internship activities on which students may be assessed: Observing and reflecting on classroom practices, regular teaching, teaching-learning resources developed, records of planned units of study and regular daily diary/journal of reflections, evaluation of learners: design of assessment of learning, type of questions in domain areas, viewing assessment as an aid to learning and not merely as an indicator of learning.

Reflective journal: Each intern would be expected to keep a reflective journal that would help him/her revisit his/her experiences in the classroom over the period of internship. The journal would include short descriptions of how the class was conducted, how learners responded, followed by analytical and reflective statements about his/her preparedness for the class, responses to learners' questions, capacity to include learners' sharing of their experiences, response towards their errors, difficulties in comprehending new ideas and concepts and issues of discipline, organization and management of the group, individual and whole class activities. Evaluation of the journal would mean looking at how the intern has been able to gradually move towards writing reflections rather than merely describing classroom events and processes.

(c) *Designing Instruments of Evaluation and Assessment*

In order to evaluate the parameters listed above, suitable instruments that address both the quantitative and qualitative nature of the learnings are to be employed. These include: observational schedules and records, checklists,

portfolio assessment, case study, project reports, participation in workshops, seminars, discussions, open-ended questionnaire and interviews, oral and written tests, cumulative records, profiles as well as formats for self-appraisal.

(d) Preparation of a Scheme for Continuous and Comprehensive Evaluation

The evaluation of the student teacher should be spread over the entire duration of the teacher education programme covering all the parameters described above. Performance of students may be indicated in Grades.

Chapter 4

Continuing Professional Development and Support for In-Service Teachers

4.1 Introduction

All initiatives in curriculum, whether of the whole curriculum, special inputs in specific subject areas or infusing new social concerns, have been implemented through the renewal or up-gradation in the knowledge and practice of teachers already in school. These concerns have, in general, provided the overarching aims for the design of in-service teacher education and activities contributing to their professional development.

The system has responded by creating structures and institutions for this purpose and providing financial support for these activities. Following the Kothari Commission Report, school clusters were created in several states to forge inter-linkages between primary, middle and high schools. They provided a forum and structure for interactions between teachers and receiving professional inputs. The NPE 1986 maintained that pre-service and in-service teacher education are inseparable for the development of teachers. In-service teacher education received support through central government funding for the establishment of Institutes of Advanced Studies in Education (IASEs) in chosen institutions and University Departments of Education and District Institutes of Education and Training (DIETs) in each district. These institutions, together with SCERTs in states, provided space for conducting in-service courses for teachers. The DIETs in addition had the mandate to work towards universalizing elementary education through supporting innovations and strengthening field activity. The District Primary Education Programme (DPEP, 1995-2003) set up Block and Cluster Resource Centres across the country, with the explicit mandate to provide in-service training to primary school teachers in learner-centred pedagogic methods and school based support to teachers. The attempt has been to shift away from the idea of subject inspectors and inspectors of schools towards the idea of a resource person attached to an academic resource and support centre. The Sarva Siksha Abhiyan (SSA, 2001) has also placed emphasis on continuous in-service

teacher education requiring each teacher to receive 20 days of training every year.

There has also been a growth in other kinds of professional activities for teachers. All teachers are members of associations which have from time to time taken up academic activities and organized conventions and meetings to discuss professionally important developments. Teachers' involvement in textbook preparation and indeed even in the preparation of training modules has grown over the years. Teachers themselves have opportunities to work in the Block and Cluster Resource Centres as well as to contribute to training as resource persons. They are also members of committees formulating educational policies. NGO initiatives in several parts of the country have developed and implemented models of teacher professional development and support in ways that directly impact the classroom practices. There is thus a plethora of opportunities and avenues for the continued professional development of teachers. These have varying degrees of success in terms of motivating teachers to alter and develop their classroom practice in ways that improve students' learning and provide educationally rich experiences to them. Micro-stories of success often seem to 'fail' when up-scaled. There is very little research into the effectiveness of training, or the status of school support activities on the ground, or detailed understanding of even reported successes and failures. Evidence of 'effectiveness' of training programmes and support activities, especially within the government system, continues to be only anecdotal and impressionistic, and even contrary, depending on who is asking the questions or doing the observation. The whole approach to teachers' professional needs continues to be determined, planned, implemented and monitored extrinsically, compromising on the concept of the teacher as a professional and with little or no basis for the design of the interventions.

4.2 Aims of Continuing Professional Development Programmes for Teachers

The broad aims of continuing professional development programmes for teachers are to :

- Explore, reflect on and develop one's own practice.
- Deepen one's knowledge of and update oneself about one's academic discipline or other areas of school curriculum.
- Research and reflect on learners and their education.

- Understand and update oneself on educational and social issues.
- Prepare for other roles professionally linked to education/teaching, such as teacher education, curriculum development or counselling.
- Break out of intellectual isolation and share experiences and insights with others in the field, both teachers and academics working in the area of specific disciplines as well as intellectuals in the immediate and wider society.

Educational and curriculum planners also seek to provide avenues for the professional development of teachers as a part of implementing curricular reforms to :

- Enable teachers to work towards prioritized goals in education such as universalization and inclusion.
- Influence social attitudes and generate greater commitment to constitutional values and overcoming discrimination in the classroom.
- Transform existing practices towards more learner-friendly methods and methods suited to strengthening conceptual learning and understanding rather than rote learning.
- Enable teachers to implement and achieve specific targeted aspects in the curriculum, such as the use of a type of technology, or the addition of topics such as AIDS and adolescent education.
- Prepare teachers to play enhanced roles in the education system as resource persons, or head teachers, etc.

In the context where many pre-service training programmes are of poor quality and often fail to provide teachers with sufficient understanding that could lead to reflective practice and where state governments have recruited untrained para-teachers in various kinds of formal schools and non-formal centres, it becomes necessary to include the unaddressed needs of teachers through continued professional development and support.

4.3 Designing In-service Programmes: Some Principles

The design of in-service programmes would depend on the specific aims of each programme, given a vast variation in the context. However, some general principles with regard to the content and pedagogic approach would need to be kept in mind during the designing and implementation across various programmes.

Content and Pedagogic Approach

- Programmes must build on the principle of creating ‘spaces’ for sharing of experiences of communities of teachers among themselves, to build stronger shared professional basis of individual experiences and ideas. Giving teachers a space to develop and hear their own voices is of utmost importance.
- Programmes must be designed with a clear sense of their aims and how the strategies of the programme are going to achieve these aims. This alone can ensure that programmes remain on track and ‘alive’ rather than routine when they are implemented. This may also require then, that every group of trainers either directly participate in the design of the programme, keeping in mind a specific group of teachers, or adapts a given programme to a specific group of teachers. Programmes also need to include a plan for post-programme support and include training/orientation of support faculty in the same.
- All programmes must find acceptance of their aims with the teachers’ group concerned, regarding whether they need such a programme and why they are to attend it. The principle of choice of programmes to attend, based on teacher’s own assessment of what he/she needs or is advised based on some valid assessment of professional requirement, would provide a sound basis for in-service programmes, especially those that are of a long duration and which seek to impact practice. One size cannot fit all.
- Interactivity must not be compromised on any account. Large numbers and the use of electronic media in the place of human interaction compromise on the non-negotiable.
- The content of programmes must be such that teachers can relate to it from their own experience and also find opportunities to reflect on these experiences.
- The approach of motivating for change must not put the burden on individual development alone, but must also recognise and respond to the structural issues that affect teacher’s day-to-day practice. Equally, structures and people in supervisory positions must be educated to support and provide space to encourage teachers to plan and practice autonomously.
- Programmes that seek to develop or alter basic practice need to be planned towards extensive interactions over time with the same resource group.

Addressing Teachers as Learners

- Teachers, as adults, have already formed a working professional identity and have experiences of teaching and associated beliefs about learners, themselves as teachers and of the teaching-learning process. Any in-service programme, whether it attempts to seed new ideas, challenge existing notions and assumptions or simply provide content knowledge, needs to acknowledge and respect this professional identity and knowledge of the teacher and work with and from it.
- Any effort to strengthen teachers' professional practice must equally respect them as professionals. This includes matters of training in content and approach, how trainings are announced and how they are implemented. Programmes must build on and strengthen the teacher's own identity as a professional teacher and in many cases also establish and nurture the linkage with the academic disciplines of their interest. Programmes that compromise on the professional identity of the teacher and his/her autonomy will be unsustainable in the long run, providing very little psychological motivation for teacher to internalize what they have been 'told' in their practice.
- As adults and professionals, teachers are critical observers of the contents of in-service activities. The extent to which they learn from the training is a function of their assessment of its quality and the extent to which it relates to their needs.
- The practice of a teacher cannot be developed through quick-fix strategies and activities, without the development of an accompanying framework/theory on the process of learning and the aims of education.
- Over-training, routinised and superficial training leads to cynicism and training fatigue.

4.4 Routes Towards Teachers' Continuing Professional Development

Keeping in mind the aims of in-service programmes for professional development, there is a need to recognize the variety of types of in-service programmes and experiences that can contribute towards and sustain professional development. This is especially so in the context in which 20-days of 'training' for all elementary teachers is being mandated by the government. If it is for the development and strengthening of overall practice of the teacher, then there is a need to recognize a variety of activities and interactions that could also contribute towards this objective.

Short and Long Term Courses

Courses of short and long duration designed to develop either specific skills or areas of interest could be developed and offered to teachers to attend over the year. For example, a DIET could design and offer courses in specific topics such as ‘teaching fractions’, ‘developing secular attitudes among children’ or ‘AIDS education’. Some of these could be of a short duration, say 4 to 5 days, while others may even be for a longer period of time, from 1 to 3 months, to enable teachers to develop a specific core area in which they need to strengthen their knowledge-base and professional skills, e.g., using theatre in the classroom, organizing and managing group activities. If schedules for such courses along with their content areas are announced well in advance, teachers could sign up and take these courses as and when they wish to. Some of these courses may be designed as continuous periods while others may be designed with gaps in between, during which teachers could practice and come back to share experiences. Such courses could award certificates. Enrichment of content and acquaintance with newer pedagogical approaches will add to improving the performance level of teachers.

Use of Distance Media

ICT including TV, radio, telephony and internet are useful as resources and providing access to ideas or for the wider dissemination of information. Distance media can be effectively used to keep teachers in touch with other professionals in the field and to give access to professionals in education as well as in pure academic disciplines (within universities). This would go a long way in breaking the isolation of teachers while promoting a ‘culture’ of seeking academic support and collaboration.

Sabbatical for Study and Research

Teachers could be provided with the option of taking a year off (paid or unpaid) to pursue a course or spend time at another school, university or NGO in order to learn and study. Such sabbaticals could be tied to a report or even a publication for wider dissemination that is produced at the end. Such sabbaticals could also be linked up with an appropriate mentor on the site to guide the teacher during this period. Small research projects and case studies through which teachers can reflect on, share and develop their practice must be encouraged. At the same time, the insistence that teachers must carry out action research is not productive, particularly in a context where

there is little understanding of action research, and virtually, no forum to share such research.

Professional Conferences and Meetings

Attending meetings and conferences connected to the profession, e.g., on one's subject areas, could also be counted towards professional development and teachers could be permitted to avail of duty leave, 3 to 4 days a year, to attend such meetings. Some funding support to travel to and attend such meetings could also be provided.

Professional Fora, Resource Rooms and Materials

Providing professional fora such as meetings in the school and in the cluster to discuss and review one's practice, to plan for annual work calendars, and on a weekly and monthly basis to plan for one's teaching as well as to discuss with colleagues, the school academic head and resource persons at the cluster or block level, is an essential aspect of the teaching profession. The school time-table needs to include the provision of time for enabling teachers to discuss classroom concerns and plan for teaching. At the cluster level, the availability of resources in the form of reference materials, access to internet resources and to resource persons is essential.

Equally important and significant is the participation of teachers in teacher networks, school-based networks, school twinning partnerships and union networks. Participation in such activities should be encouraged as a valid form of in-service development of teachers.

Teachers could be encouraged to form subject groups at the block level, which could be provided with support to plan for development of teaching of the subject in the block through a variety of ways – seminars for teachers, trainings, 'melas' and children's clubs. These could be given an official status and space at the concerned block resource centre and have linkages with the DIETs, CTEs and IASEs. Such subject groups could be linked with the faculty of local colleges or universities in order to strengthen interactions between groups and provide for synergy between them. Each DIET, CTE and IASE could support a few university faculty fellowships to enable interested people from the university to come and spend up to 4 to 5 months, undertaking activities with teachers and children.

Faculty Exchange Visits and Fellowships

A few exchange teacher fellowships could be provided for each district to enable selected teachers to go for a period of three months to one academic year to a school in another state within the country or even outside the country, to teach and learn there. Similarly, schools could play host to such visiting teachers and plan how best to utilize their services during the period of their stay.

Teachers could also be provided short-term fellowships and funding support (based on proposals) to either come to the DIET, CTE, IASE and University Department or carry out specific activities for the school children and teachers in their own district. There could, for example, be a good story-teller, who either plans and conducts workshops for teachers on the art of story-telling, or to visit schools to conduct story-telling workshops. In the long term, in every DIET, CTE, IASE and University Department offering teacher education, some of the faculty positions may be converted into such fellowships for teachers from the district.

Teacher fellowships could also be provided to enable them to spend one or two years in colleges of teacher education, as faculty of these colleges, involved in the preparation of teachers.

4.5 Organization of Continuing Professional Development Programmes

Organisation and Coordination

The DPEP and SSA have put in place a system of sites which are to provide professional development to all government school teachers through block and cluster resource centres. In addition, there are DIETs, IASEs and various departments and colleges of teacher education and several networks of teachers and teacher associations. Several NGOs and other agencies are also involved in providing training for teachers, often connected with their own curriculum interventions. These must be recognised as sites and agencies for the professional development of teachers.

Currently, all these trainings target only government and aided schools, leaving all teachers of private schools out of the ambit. Secondly, they are all based on directions which are issued to teachers to attend these trainings, without giving teachers any choice in the matter. Finally, there is no co-

ordination between these agencies, nor does the education department have any mechanism for co-ordinating the total training being undergone by teachers, with the result there is a lot of over-training, repetition and overlap. In this situation, it is necessary to conceive ways in which teachers can opt for different kinds of trainings, based on their interest and requirement, and along with the recommendation of school supervisors. For this, it would be necessary for training schedules to be announced well in advance (at the end of each academic year, for the next year) and for processes to be in place to enable teachers to register for the trainings they wish to undergo. Processes for field support for training would need to be worked out by these agencies providing training, and this need not fall as a mass responsibility of the concerned CRP, or co-ordinator in-service programmes as is currently happening. Allocation of funds, training dates, duration and other logistics would need to be made more decentralized and based on individual teacher's preferences, thus, doing away with the current model of mass trainings, based on the one-size-fits-all design. Further training dates allocation could also include time spent in other professional activities such as seminars, conferences and other activities suggested in this chapter. Systems that would enable teachers to avail of long-term courses, sabbaticals and fellowships would also need to be evolved. A follow-up mechanism for keeping track of trainings and professional activities of teachers would need to be evolved and put in place.

Sites and Agencies

By opening up the method of organising and providing trainings on the lines suggested above, many agencies that are connected with schools and teachers could become involved in meaningful ways in supporting teachers, which would have a much better impact and mutual benefit, breaking the isolation not only of teachers but also of other institutions. The following could be additionally considered:

- i. University and college faculties of sciences, humanities and social sciences could include extension services for school teachers, opening up their labs and libraries to teachers and sharing with them advances and new ideas.
- ii. Colleges of pre-service teacher education could include extension activities which would also enable their own students and faculty to keep in touch with active teachers. Teacher Learning Centres (TLCs) in teacher education institutes can act as the hub of both pre-service

education as well as continued professional development for teachers in service. They could also provide special services to their alumni, continuing to mentor and keep track of their developments.

- iii. Schools, under the leadership of interested principals and able to support additional adjunct faculty, could themselves develop into resource centres for neighbouring schools. These could also include schools run by NGOs and other private agencies interested in contributing to the development of all schools in the neighbourhood, both government and private, and affiliated to any board.
- iv. IASEs, CTEs, DIETs, BRCs and CRCs could also research and develop training aimed at overall school improvement or to target the needs of special schools or groups of children in the district. They could also focus on providing school based support to teachers, by working closely with the school heads.

4.6 Impact

The expectation that ideas that are engaged with during workshops will be directly taken into the classroom for practice is misplaced. Often direct support on site is required in order to translate ideas into practice. The results of training in the practice of teachers can often be seen unfolding and developing through a series of interactions. Frequently, there are also many structural issues for why training is not carried into the classroom. These also need to be addressed. Pre-test, post-test ways of assessing training impact are invalid and often counter-productive. Nevertheless, training and workshops need to be conceived in 'goal-directed' ways and in order to have an impact, they need to be supported on the ground as well as monitored. Clear indicators for short-term and long-term impact need to be conceptualized along with the design, and subsequently monitored as well. Change is a slow process and it requires patience to see change on the ground. It is easy to blame teachers and find fault with their moral commitments, yet it is also the least reflective and responsible response. Sustaining change equally requires continuous involvement and support of resource agencies and school administration to sustain impact on the ground. Programmes and agencies such as SCERTs, DIETs, CTEs and IASEs, including University Departments of Education need to be alert to this requirement and willing to invest in the long-term in such involvement.

4.7 Structural and Operational Issues of Continuing Professional Development

In-service Programmes and Continued Teacher Support at the Elementary Stage

- The ‘redesigned in-service programmes’ offered by DIETs could be linked to the ‘redesigned pre-service programmes’ of DIETs. For instance, the regular teachers of the schools where diploma students undergo their internship should participate in ‘in-service training’ as a matter of priority. All teachers of the specific chosen schools should undergo ‘in-service training collectively’ to make a deeper impact.
- All training content and approaches should be based on the classroom needs of the teachers, may it be content enrichment, need for skills and strategies in classroom organization and management, understanding student’s learning strategies, error analysis and learners’ assessment.
- Short-term courses could be designed for the professional development of teachers in service along the line of courses designed by IGNOU in Primary Mathematics Teaching.
- The language proficiency of primary teachers should be enhanced through specifically designed training modules and programmes offered on the job.
- The SSA funds can be drawn upon for the training of teacher educators by the IASEs and for redesigning the in-service training of teachers to make it more classroom and learner need-based.
- Resource centres set up by pre-service student teachers during school internship programmes should become the hub of professional development of regular teachers.
- Following the establishment of appropriate IASE-based programmes in elementary education, academic support should be provided to teacher educators in the SCERT-DIET system for re-conceptualising in-service training of teachers. The objective should be to develop professional development programmes that are rooted in classroom realities and directly address teachers’ needs.
- Established mechanisms for teacher support such as BRCs and CRCs could be strengthened in skills of pedagogy and teacher support by SCERT-DIETs using the proposed new process framework. Co-ordinators of BRCs and CRCs be trained by SCERT-DIET to assess teachers’ needs for support to function as reflective practitioners.

In-service Programmes and Continued Professional Development at the Secondary Stage

- In-service programmes should be redesigned to provide classroom support to teachers and to orient interactive sessions based on teachers' needs and concerns.
- A focus should be established within in-service programmes on the methods of enquiry specific to the sciences and social sciences, along with an emphasis on disciplinary content.
- The content and method of in-service training should be based on an assessment of teachers' needs initiated jointly by SCERT-IASEs.
- IASEs chiefly responsible for the in-service training of secondary teachers should be strengthened with capacity to undertake professional development of secondary teachers and elementary and secondary teacher educators as well.

Chapter 5

Preparing Teacher Educators

5.1 Introduction

It is obvious that the education and training of a prospective teacher will be effective to the extent that it has been delivered by teacher educators who are competent and professionally equipped for the job. The quality of pedagogical inputs in teacher education programmes and the manner in which they are transacted to realize their intended objectives depend largely on the professional competence of teacher educators.

The need and importance of professionally trained teacher educators has been underscored in statements on educational policy, time and again, but the situation on the ground remains a matter of concern; there is a considerable shortage of properly qualified and professionally trained teacher educators at all stages of education and especially at the elementary stage. The shortage refers both to the inadequacy of required numbers as well as to mismatch in the qualifications of teacher educators and their job requirements. There are many reasons for this. Primary among these are structural gaps, such as the complete lack of provision for the professional development of pre-school and elementary level teacher educators and the inadequate design of post-graduate programmes in education.

5.2 Education of Teacher Educators – Basic Issues

Teacher Educators and School Education

The profile and role of teacher educators are to be conceived primarily with reference to the philosophy and principles that govern the various aspects of school education – aims of education, curriculum, methods and materials and the socio-cultural context in which the school functions – and the role of the teacher in translating educational intents into practical action. Accordingly, a teacher as teacher is expected to be a particular kind of person, for example,

as mentioned in the NCF and cited as follows:

One who:

- Cares for children and loves to be with them, understands them within social, cultural and political contexts, treats all children equally;
- Does not treat knowledge as a ‘given’, embedded in the curriculum and accepted without question, perceives children not as passive receivers of knowledge, encourages their capacity to construct knowledge;
- Discourages rote learning, makes learning a joyful and participatory activity, organizes learner-centred, activity-based, participatory learning experiences – play, projects, discussion, dialogue, observation, visits, integrate academic learning with productive work;
- Critically examines curriculum and textbooks, contextualizes curriculum to suit local needs; and
- Promotes peace values - democratic way of life, equality, justice, liberty, fraternity, secularism and zeal for social reconstruction, reflects on her teaching experience;

then, it follows that the teacher educator (whose job is to contribute towards the preparation of such a teacher) should share the underlying educational philosophy and possess the needed understanding and professional competencies to develop such teachers. This would imply a corresponding change in the professional development of teacher educators who can:

- Engage would-be teachers with the larger socio-political context in which education and learners are situated, engage them with children in real contexts than teach them about children through theories, focus on the developmental aspects of children with constant reference to their socio-economic and cultural contexts.
- Bring into the teacher education curriculum and discourse trainees’ own assumptions about children and beliefs about knowledge and processes of learning, help teachers to reflect upon their own positions in society – gender, caste, class, poverty, linguistic and regional variation, community, equity and justice.
- Engage with theory along with field experiences to help trainees to view knowledge not as external to the learner but as something that is actively constructed during learning, integrate academic knowledge and professional learning into a meaningful whole.
- Provide opportunity for trainees for reflection and independent study

without packing the training schedule with teacher directed activities, provide opportunities to the student teacher to critically examine curriculum, syllabi and textbooks.

- View knowledge not as an external reality embedded in textbooks but as constructed in the shared context of teaching-learning and personal experience, change perception of child as a receiver of knowledge and encourage its capacity to construct knowledge, view learning as a search for meaning out of personal experiences and knowledge generation as a continuously evolving process of reflective learning.

In other words, the locus of the functions of teacher educators lies in the role perceptions of teachers with regard to educational objectives, practices and processes of the school.

Stage Specificity in the Preparation of Teacher Educators

It is generally the case that those who function as teacher educators do not possess appropriate stage-specific professional training or experience. The paradox is that although teachers are trained/appointed for specific levels of schooling (even this is not strictly adhered to nowadays with B.Eds. being allowed to teach in primary schools), teacher trainers are not. For a long time it has been taken for granted that the existing arrangements for teacher preparation at different stages would do as well for teacher educators too: B.Ed. for elementary teacher educators and M.Ed. for secondary teacher educators. B.Ed., it may be noted, is basically a course for preparing secondary school teachers. The logic that seems to operate is that one's higher position in the educational hierarchy would entitle one to train others working at the lower levels, irrespective of whether one possesses the relevant capacities, knowledge and skills or not. The difficulty is exacerbated by the absence of established mechanisms to create a professional cadre of teacher educators, especially at the pre-primary and elementary stage. At present elementary teacher educators in their bid to upgrade their professional qualifications pursue M.Ed. The IASE brief includes the training of elementary teacher educators which they do by running the M.Ed. programme of the concerned university. But the M.Ed. degree cannot meet the requirements of primary teacher training unless it is redesigned to impart the needed focus.

The worst sufferer of this situation is elementary education. First, the large scale expansion of the elementary education sector and the plethora of new support structures that have come up at the district and sub-district levels have created the need for suitably trained human resources to carry

out such field functions as training of teachers, field supervision of educational activities, research and development of curriculum and teaching-learning materials, advocacy and developmental work with teachers and communities. Other than the activity of teaching children in elementary school, all other functions related to this sector of education are attended to by people who have been trained for and taught only at secondary level due to lack of appropriately trained personnel in elementary education. There exist no large scale, focussed degree/post-degree programmes in these areas.

Second, despite its critical importance to the individual and the nation, elementary education remains sadly neglected as a knowledge field. As a knowledge field, elementary education has its distinct concerns, a domain of interdisciplinary knowledge, concepts and methodological perspectives. A wide range of experiences, insights and knowledge of different kinds related to elementary education exists in the country in the form of NGO's work, academic and field research and other quarters. This scattered experience and knowledge needs to be brought together to evolve a coherent vocabulary, researched and documented knowledge base and informed perspectives for elementary education.

Thirdly, the M.Ed. programme in most universities neither widens nor deepens the discourse of education at the secondary stage that students bring with them after their B.Ed. degree.

The issue of stage-specificity should not be misunderstood as an argument for extending existing hierarchical arrangement of school teachers to teacher educators as well, but to forcefully acknowledge the special nature of school education at different stages and to make a case for appropriately trained professionals to work in the system. The issue needs to be addressed in the wider context of irrational disparities in the career path, remuneration packages, service conditions and conditions at the workplace that characterize school education and teacher education, in particular, at the elementary stage.

5.3 M.Ed. as a Programme for the Preparation of Teacher Educators

M.Ed. is the dominant post-graduate programme in education offered by Indian universities. The entrants to this programme are already initiated into rudiments of educational theories, institutions, processes and practices. The course draws a large variety of clientele: fresh graduates from different disciplines with B.Ed., experienced teachers and education functionaries in different government departments. Due to the heterogeneous clientele and

shifting demands of jobs related to education, the course has to cater to a wide range of academic and professional needs. The products are employed by the Boards of School Education, Directorates and Inspectorates of Education, schools, SCERTs, teacher training colleges and institutes as teachers, teacher educators, curriculum experts, evaluation experts and population education experts. The assumption seems to be that the omnibus M.Ed. can create a professional capable of contributing meaningfully to the varied role expectations which is not a well-founded assumption.

Even as a general programme of post-graduate studies in education, M.Ed. has not responded to the many shifting and newer concerns in education. It is also indistinguishable from the 2-year M.A. in Education (considered a programme of liberal, academic study of education) because in actual course design and content, the two do not differ on any sound academic rationale. The existence of two parallel post-graduate programmes in education has created an anomalous and confusing situation and has raised questions of equivalence.

Although M.Ed. is generally accepted as the requirement for one to become a teacher educator, the programme as offered in most universities is simply an extension of the B. Ed., seriously lacking in inputs focussed on the preparation of teacher educators, secondary or elementary. The *NCF Position Paper on Teacher Education* observes: Existing programmes of teacher education such as the M.Ed. have become, in many universities, programmes of liberal studies in education and are woefully inadequate in facilitating a deeper discourse in education and an opportunity for inter-disciplinary enquiry. These offer little scope for professional development and research in key areas of school education such as curriculum enquiry and design, pedagogic studies, epistemological concerns and issues related to school and society. As a consequence, the dominant ethos of teacher education remains confined to a positivist approach drawn from classical schools of thought in educational psychology and having little contact with a large number of innovative experiments that have been carried out across India since the 1980s.

5.4 Imparting Professionalism to a Post-graduate Programme in Education

Several proposals have been made to improve the design and impart greater rigour and professionalism to the M.Ed. Programme. Efforts have

tried to align M.Ed. to teacher education, elementary or secondary. The need is now being effectively articulated for identifying the objectives for the education of teacher educators and the designing of programmes that offer specializations for meeting the needs of different levels of schooling. The NPE Review made a specific recommendation to organize a specially designed training programme to fit all the desired attributes of a teacher educator. Suggestions have been made for post-graduate courses in teacher education of two years with provisions for specialized areas in the development of scholarship in education and applied fields, such as teacher education, curriculum planning, evaluation, counseling, sociology and philosophy of education.

It is becoming clear that apart from addressing the immediate needs of preparing teachers, post-graduate courses of education need to contribute towards building the discipline and the knowledge-base of education especially within the Indian context. A multi-purpose model of M.Ed., as it exists today and even in its improved form, offers little scope to either widen or deepen the discourse on education. Areas of specializations required to be carved through post-graduate study and research in education include: foundations of education: philosophical, historical, political, sociological and psychological; curriculum studies: disciplinary and interdisciplinary study; pedagogic studies: language education, mathematics education, social science education and science education; planning and finance of education; policy studies; gender and equity studies. Core areas should include philosophical and social science basis of education and a rigorous engagement with methods and approaches to educational research.

This necessarily means that in addition to revamping the existing M.Ed. programme, a fresh discourse has to be initiated in teacher education to arrive at tangible understandings of the implications of aspects such as: creating multilateral entry points for the study of educational studies as a pursuit in higher education; broadbasing the profile of teacher educators by infusion of persons who have knowledge of disciplines generic to teacher education so that the discipline of education grows into specialization requiring persons to be well-versed in cognate disciplines outside education; working out possibilities to pursue educational study at the post-graduate level through the route to teacher education involving bridge courses, wherever required and considered necessary. These may look like impediments in the current reality but can be addressed through appropriate discourse in future in order to improve the overall health of education as a higher education pursuit of knowledge and practice.

5.5 Needed Thrusts for Developing Teacher Educators

Early Childhood Education

Early Childhood Education (ECE) aims at total child development in a learning environment that is joyful, child-centred, play and activity-based. Teacher education programmes in ECE should develop in the trainee concepts, competencies, attitudes and skills related to implementation of developmentally appropriate curriculum based on child-centred and play and activity based approach: cognitive and language development, health and nutrition, social, emotional development, physical and psychomotor development, aesthetic development, creativity and play, programme planning and school organization, community mobilization and participation. These requirements call for a teacher educator who has a sound educational philosophy of ECE, besides specialized content and methodology skills pertaining to the above areas.

The diversity that characterizes the ECE situation calls for development of multiple models of training of workforce with reference to age groups, nature of programme, level of staff and mode and location of training. Available institutional arrangements for pre-school teacher education are grossly inadequate considering the expected expansion of pre-school education sector in the coming years. Also there is need to evolve specially designed programmes at the degree and post-degree levels for the training of teacher educators. One possibility is to develop the M.Ed. as a teacher educator training programme with specialization in pre-school/elementary/secondary teacher education.

Primary/Elementary Education

With the establishment of DIETs, two categories of teacher educators at the elementary level have emerged – those who teach in DIETs and others who teach in other training institutes, government or private. In most states, DIETs are the main supply institutions for elementary teachers (however, in response to massive demand for elementary teachers and limited initiative taken by the State to meet this demand this situation has drastically changed with the large scale proliferation of private ETE institutions whose number has soared to 5533 courses/institutions over the past five years). There are 571 DIETs sanctioned, of which 529 are functional¹⁰.

The multi-functions expected from each DIET, namely, pre-service and in-service teacher training, non-formal and adult education workers, curriculum and materials development, educational research, extension, planning and management call for high level of competencies, knowledge and skills. Currently, DIETs find themselves under-equipped in required faculty capabilities; the faculty appointed do not possess the required academic qualifications or professional experience. Many of them do not possess basic experience in primary school teaching, insights into primary education problems and professional skills in teacher training and research. Teacher educators in non-DIET institutions share the same shortcomings.

The basic orientation of the initial training of elementary teachers should be transformed towards front-line national concerns like access, drop out, participation, achievement, gender, teaching in difficult contexts. This calls for participatory curriculum planning involving all stakeholders, modular organization of curriculum in terms of tasks integrating relevant theory, greater curriculum time for skill learning and practice, a professional approach to training strategies and development of materials and application of relevant educational technology in training processes. The system as of now severely lacks teacher educators trained in carrying out such tasks. Apart from isolated efforts of some universities and institutions such as RIEs of the NCERT and Faculty of Education, Jamia Millia Islamia which offer M.Ed. (Elementary) programmes, there exist no programmes for the professional preparation of elementary teacher educators. Neither B.Ed. nor M.Ed. programmes in their present form equip prospective teacher educators with the required capacities, sensibilities and skills.

Secondary Education

The B.Ed. programme is offered in Colleges of Education and University departments of education. The programme is also offered through centres of distance education/open universities. There has been a proliferation of private colleges offering the B.Ed. over the past number of years. Triggered by market factors, their total number, as on March 2009, is 14,428 in 11,861 institutions with an approved intake of 10,96,673 candidates¹¹.

Secondary teacher education got a major boost with the elevation of selected institutions as Colleges of Teacher Education and Institutes of Advanced Studies in Education under the centrally sponsored scheme of strengthening teacher education. The CTE/IASE guidelines particularly

focussed on the need for recruiting persons with high academic and professional qualifications on par with those obtaining at the general arts and science colleges and universities as per university norms. It also indicated the creation of a separate cadre of teacher educators, parity in pay scales with the general colleges, financial incentives for outstanding performance and promotional avenues.

In practice, the typical secondary teacher educator is a graduate with a post-graduate degree in education. The NCTE norms prescribe a Master's degree with M.Ed. having 55% marks with Ph.D./M.Phil. carrying special weightage. Although M.Ed. is generally accepted as the requirement for one to become a teacher educator, the programme as offered in most universities is simply an extension of the B.Ed. (as stated earlier) and seriously lacking in inputs focussed on the preparation of teacher educators, secondary or elementary.

By way of summing up, we may note that at all stages, teacher education institutions are managed by faculty with little or inadequate professional training to handle the tasks of a teacher educator. The absence in the system of institutions and programmes focussed on the professional preparation of trainers/teacher educators for different stages of education accounts for the situation. With the mushrooming of teacher education institutions over the years, the situation has become critical as the supply of teacher educators has not kept up with the increasing demand for faculty and institutions have compromised faculty requirements with reference both to qualifications and number.

5.6 Encouraging Innovation for Preparation of Teacher Educators

Any system in order to be forward looking must be bold in encouraging experimentation and innovations and also be involved with constant review of the outcomes of such efforts. The field of teacher education should be no exception. Such experimentation would, however, not mean replacement of the existing models but should be seen as an attempt to try new structures towards viable alternative models which would bring a culture of freshness to make teacher education vibrant.

An innovative experiment in point is a collaborative post-graduate programme of M.A. Education (Elementary) launched by the Tata Institute

of Social Sciences, Mumbai, recently. It is the first of its kind, pan-Indian programme intervention in elementary education at the post-graduate stage. Its interdisciplinary and collaborative design and dual mode operation (on-line learning and student contact) makes it a bold and novel venture.

Since the programme is of a recent origin, the extent to which it has served the objectives stated in its design should become a subject of special discourse in teacher education. The programme could be examined for its replication for preparing teacher educators who could be imbued with the expertise for the multi-dimensional aspects of the elementary stage of education.

5.7 Enhancing the Status of Educational Studies and the Professional Development of Teacher Educators

Isolation of education as a discipline from the system of higher education is identified as one main cause for the continued low status of educational studies. Several suggestions have been made to deal with this issue. One proposal is to diversify specializations into areas of curriculum and pedagogic studies in mathematics, languages, social sciences and sciences and encourage students to pursue post-graduate studies in a chosen discipline along with the option of specializing in a select curriculum and pedagogic study course. It is also suggested that undergraduate students be provided with a variety of routes to pursue studies in education like four-year integrated courses in elementary and secondary education, electives in educational studies in undergraduate programmes of general education, followed by a range of post-graduate studies in education, social sciences, sciences, humanities, mathematics, language studies and the liberal arts. Such diverse routes are likely to tap talented and motivated young people to enter into education and pursue options such as teacher education, research, curriculum, pedagogy¹².

What is needed is a comprehensive and enduring arrangement for the professional development of teacher educators and enhancement of the status of education as a discipline. It is heartening that the Working Group for Teacher Education of the XI Plan has addressed the issue in all its aspects and has come out with a range of recommendations covering institutions, structures, programmes, activities and incentives. The recommendations include the following:

- Setting up of *Schools of Education* in selected (30) university departments including the RIEs for breaking the isolation of elementary and secondary teacher education from the mainstream and integrating it with higher education. The Schools will have *Centres* for pre-service teacher education, curriculum research policy and educational development, learning and pedagogic studies, assessment and evaluation, professional development of teacher educators and teacher education curricula and teacher resource and academic support.
- Setting up one *Inter-University Centre* at the national level functioning under the UGC to co-ordinate the Schools in terms of academic content: redesigning teacher education curricula, developing curriculum materials, commissioning of materials in regional languages, setting up of web portals on curriculum and pedagogic materials for teacher education. The mandate for Centre would be to provide an integrated focus on elementary and secondary levels of school education.
- Instituting *Specialized Centres of Education* in lead national level institutions like IISc, Homi Bhabha Centre, TIFR to offer sandwiched post-graduate courses of 3 years' duration (B.Ed. for 2 years or M.Ed. for 3 years towards developing a specialized cadre of Senior Secondary school teachers and teacher educators.
- Establishing four *Regional Centres of Educational Management* in the IIMs and NUEPA to provide a post-graduate degree in educational management for Heads of DIETs, SCERTs.
- The *Centre for Professional Development of Teacher Educators* will offer Master's programme in elementary education/secondary education with specialization in curriculum and pedagogic studies in mathematics/science/social science education and assessment.
- Reorientation of select secondary school teachers for elementary school teaching through Advance Diploma in elementary education; focussed programmes of professional development for DIET/SCERT faculty including curriculum and pedagogic studies and disciplinary knowledge base.
- Special emphasis for professional renewal of existing teacher educators through Refresher Courses for all teacher educators including elementary school teachers in the proposed University Schools of Education and special subject refresher courses by university departments.
- Institute teacher educator fellowships to undertake research with provision for mentoring. About 200 or more Fellowships for teacher educators working in government and aided institutions of teacher

education. The Fellowships will offer opportunities for attachment to institutions of higher learning to pursue teaching and research for a period of 2 years.

- Periodic academic enrichment activities – public lectures, film and book discussion sessions, need-based issues, short-term orientation courses on teaching-learning skills, meta-learning strategies related to different curricular areas and child development, pedagogical aspects related to reading, writing, thinking and instructional design theories for curriculum developers.
- The *Centre for Teacher Resource and Academic Support*: provision of teacher resources, children’s literature, variety of school curricula, textbooks, multimedia materials, internet access; platform for teacher interaction, faculty exchange, seminars, study sessions, academic support, face-to-face as well as through ICT; development of learning and teaching materials for use in schools and sharing across schools.

Recommendations of the nature mentioned above hold the promise of enhancing the status of educational studies in general, forging critical links between the higher education sector and school education and enable the development of a professional cadre of teacher educators in the country.

5.8 Preparation of Teacher Educators – Future Directions and Possibilities

Presently, the education of teacher educators takes place mainly through the well-entrenched one-year M.Ed. Further advancement is available through M.Phil. and Ph.D. routes. As already pointed out, none of these are designed specifically to prepare a teacher educator, although they all provide knowledge related to some aspects of teacher education.

It is a promising development that the education of teacher educators has been acknowledged as a major issue in teacher education and academic bodies have addressed themselves to the task of curriculum renewal. This is evident in the different models of M.Ed. that have been proposed by individual universities and innovative programmes of teacher preparation launched by some institutions. The concern to make the M.Ed. a focussed learning encounter rather than a general study of education is clearly visible. The need for professional rigour, relevance of content, emphasis on research related skills are also appreciated. These concerns demand that we think out of the box in addressing the issue of new programme designs for the education

and training of teacher educators. The following recommendations deserve serious consideration in addressing these concerns:

- Mechanisms need to be evolved to promote the entry of talent in teacher education programmes.
- Vertical linkages for post-graduate studies in education, including research programmes for students from a variety of science and social science disciplines need to be provided.
- Integrated models of teacher education of four or five years' duration could comprise of core components that would be common to all teacher education programmes (pre-primary, elementary, secondary and senior secondary) followed by specialization of professional development, specific to the stage of education.
- Specialization at the post-graduation level in science education, language education, social sciences education and mathematics education need to be developed.
- The distinction between education as a liberal study and education as a professional preparation needs to be appreciated and post-graduate programme design should take this into consideration.

Proposals for the comprehensive reform of teacher education include integrated programmes of teacher education as the way forward; forging critical links between school education and universities; providing for diversification of specializations at the post-graduate level and providing for diverse routes for undergraduate students to pursue higher studies in education.

Reform of teacher education to move forward on a sound footing demands dedicated research in the area of foundations of education in the Indian context by universities, preferably in independently established departments. The research in such departments would help develop the teacher education programmes on a more sound theoretical basis. The existing departments of education have hardly been able to engage themselves in this long-pending need for their pre-occupation in conducting routine teacher training and research programmes.

Chapter 6

Implementation Strategies

6.1 Introduction

The foregoing pages of the National Curriculum Framework for Teacher Education bear testimony to a major exercise undertaken by the NCTE towards improving the quality of teacher education. The exercise initiated some two years ago has culminated in the development of this Framework. Documents of this type contain seeds of ideas which have the potential of germinating during the journey that may be undertaken towards reforming teacher education which is so vital for nurturing and sustaining the quality of school education. In order that this effort results in achieving the intended objectives, it is imperative that the concerns deliberated in the Framework are now put on the anvil of implementation on a scale which could bring some discernible change in the content and process of teacher education. Some strategies in this regard are listed below;

6.2 Advocacy

- The document is being uploaded on the website of the NCTE (www.ncte-india.org) for the benefit of the system at large.
- The initial step towards implementation involves wider dissemination of the document among institutions which have a stake in the future of teacher education. This is being immediately done to generate a climate of awareness and initiation of relevant discourse.
- The Framework will be circulated to the Deans of the Faculties of Education of all the Universities in the country as well as to the Directors of the State Councils of Educational Research and Training (SCERTs) and other similar bodies, connected with teacher education seeking their active support in working out modalities towards the implementation of this Framework. At least five Consultation Meetings, one in each region, will be organized to share with the institutions referred to above the underpinnings of this document; and to exhort them to revisit their existing teacher education programmes in the light of the Framework.

- The NCTE will facilitate the university system, academically to initiate the work of revision of the existing teacher education programmes offered by them, through workshops that may be organized for the purpose. A similar facilitation mechanism will be made available to the SCERTs and similar institutions dealing specifically with teacher education in the States.
- A national dialogue will be initiated with the university system to consider bringing all teacher education programmes under the aegis of Universities, a vision advocated by the Education Commission (1964-66) but which has remained unrealized till today. A positive action in this regard can go a long way in rejuvenating teacher education.
- Regional workshops involving faculties of teacher education institutions will be organized to apprise them about the expectations of the Framework from them and to involve them in the process of change. This will be undertaken as an academic movement.
- A serious national discourse on the structural aspects of teacher education programmes will be immediately initiated to bring out the strengths and understand the related implications of implementing models of teacher education of varying durations and to encourage institutions to experiment with the new innovative models with the academic support of NCTE.
- A four-year integrated programme of elementary teacher education in select state universities and all Central Universities, in particular, via IASEs and select DIETs could be undertaken in the initial phase.
- Teacher education programmes should ideally be of four-five years' duration after the completion of 10+2 level of school education. To begin with, four year integrated programmes could be instituted. Along with a four-year model, other models should be encouraged, for instance, two-year models after graduation with a 6 months to a year of school internship.
- Appropriate structural mechanisms need to be evolved in universities and other institutions offering teacher education in order to promote the entry of talent in teacher education programmes.

6.3 Curriculum Development

- The NCTE will constitute a working group of scholars in the field of teacher education and related disciplines generic to teacher education to develop syllabi and course outlines, based on the NCFTE, spelling out objectives, distribution of courses, weightages and other such

aspects, to facilitate the implementation process of the provisions contained in the Framework.

- The NCTE will play a catalytic role in the development of textual and related materials by commissioning eminent scholars in the disciplines of knowledge, generic to the field of teacher education. The quality of materials so developed would set some benchmarks for learning materials for different levels of teacher education. The current literature on teacher education in India will be enriched by the new wave of teaching and learning materials, expounded on the ideas reflected in the Framework.
- Individual states will be facilitated to bring out regional language versions of the NCTE commissioned materials by adoption or adaptation to suit the specific needs of the State programmes of teacher education.
- As an interim measure, current models of teacher education offered by the DIETs such as the D. Ed. and B. Ed. offered under the university system are required to redesign their courses as well as the programme structure to include the specific features and structural mechanisms proposed in the NCFTE in terms of curricular areas and transaction processes. This task could be completed in the next 1-2 years.
- Existing B. Ed. programmes should be reviewed to facilitate the choice between a 4-year integrated model after +2 or a 2-year model after graduation, based on State requirements and available institutional capacity.

6.4 Special Teacher Education Areas

The Framework has suggested the need for a separate exercise on working out details for the preparation of teachers for the curricular area of Health and Physical Education. The programme goes beyond the general pedagogic concerns as it does not fit into the conventional models of teacher preparation for other curricular areas. The NCTE will constitute an expert group in this area to discuss the issues related to this field and come out with a well-deliberated teacher education programme which will effectively serve the needs of the area.

A similar exercise for teacher education in vocational education will also be initiated as it requires development of a pedagogy relevant to vocational education which involves a multitude of skills spread over the entire spectrum of vocational areas. Conventional teacher education

programmes and institutions are not equipped to do justice to offering teacher preparation for vocational education.

6.5 Professional Orientation/Training Programmes

A series of professional orientation/training programmes will need to be organized across the State of the country to expound the contours of Learner Studies, Contemporary Studies, Educational Studies, Curriculum and Pedagogic Studies which inform the structures of the Framework.

6.6 Teacher Educators

Steps will be initiated to evolve suitable mechanisms to promote the entry of talent in teacher education programmes through a variety of initiatives referred to in Section 5.4 after due deliberations amongst an expert body of teacher educators.

6.7 Research

A study to assess the dominant entry qualification of candidates for pre-service programmes in elementary education to design state-specific strategies will need to be undertaken.

A nation-wide review of teacher education curriculum in the light of the school curriculum renewal exercise would need to be undertaken.

Endnotes and References

- ¹ Selected Educational Statistics, 2004-2005, Ministry of Human Resource Development (MHRD), Government of India, New Delhi.
- ² Annual Report, 2007-08, MHRD, Government of India, New Delhi.
- ³ Right of Children to Free and Compulsory Education Act, 2009. The Gazette of India, August 27, 2009, New Delhi. pp 9.
- ⁴ Working Group Report on Elementary Education and Literacy, XI Five Year Plan, Jan 2007, pp. 187-190.
- ⁵ Batra, Poonam (2005), Voice and Agency of Teachers: The Missing Link in the National Curriculum Framework, 2005, EPW, October 1-7, pp. 4347-4356.
- ⁶ National Knowledge Commission Report, 2007, Government of India, New Delhi.
- ⁷ Batra, Poonam (2005) Voice and Agency of Teachers: The Missing Link in the National Curriculum Framework, 2005, EPW, October 1-7, pp. 4353.
- ⁸ Community Knowledge here refers to the knowledge that people construct, develop and amass as a result of their life and ecological experiences. For instance, a community's understanding of their land, soil, herbs and other ecological dimensions that influence agricultural practices is valuable as well as legitimate knowledge. It is important to regard such knowledge, indigenous and local in nature as legitimate so far as it is within the frame of Constitutional values.
- ⁹ Position Paper of the National Focus Group on Peace Education, NCERT 2006, pp185.
- ¹⁰ Working Group Report on Elementary Education and Literacy, XI Five Year Plan, 2007-12, Planning Commission of India, New Delhi.
- ¹¹ Annual Report 2008-2009, National Council for Teacher Education, (NCTE), New Delhi.
- ¹² Curriculum Framework for Teacher Education, draft 2006, National Council for Teacher Education (NCTE), New Delhi.