CURRICULUM FRAMEWORK FOR

TEACHER EDUCATION

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National Council for Teacher Education

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Chapter I: Context, Concerns and Challenges of Teacher Education

1.1 Introduction

India has made considerable progress in the area of school education, since the 1990s with a significant rise in overall literacy, school enrolment, infrastructure and the political priority to Universalise Elementary Education (UEE). Regional, educational and gender disparities however, continue to pose new challenges. Large investments in reaching remote habitations and the marginalized have had little impact on the teaching-learning environment and children's learning. School curriculum and texts in many states remain dissociated from the lives of learners and the burden on children continues to grow. More importantly, teachers across the country continue to remain disempowered with increasing informalisation of their employment. A sign of this spreading malaise is a mushrooming of unregulated private schools across the country. Research indicates that this trend is growing with 70 to 90 percent of new private schools having come up in the last 10 years.

Significant positive changes in the Indian educational context over the 1990s include the political recognition of UEE as a legitimate demand and State commitment towards universalising elementary education. This is demonstrated in the 86th Constitutional Amendment (2002), which makes education for children between the ages of 6-14 years a Fundamental Right and compulsory, leading to the *Right to Education Bill, 2005* which seeks to mandate pro-active action on the part of the State vis-à-vis every child of the country in the 6-14 age group via Article 21A (CABE, 2005).

That universal participation in elementary education is crucially dependent upon improving the quality of school education is leading to a shift of public policy emphasis from mere physical provisioning to providing quality education. This is in consonance with the Dakar Framework (2000) and the more recent reiteration of the 'critical role of government as the actor most able to invest in quality' in the EFA Global Monitoring Report

(UNESCO, 2005). Policy measures with a concerted focus on the education of the girl child and adolescents in particular, have become important strategies to achieve UEE. States such as Kerala, Mizoram and Goa have already crossed the universalisation barrier, while some others such as Himachal Pradesh, Pondicherry and Sikkim are rapidly approaching it. This has led to a separate focus on the Universalisation of Secondary Education (CABE, 2005), in the anticipation of a flood of students in the next five to ten years.

1.2 The Policy Context of Teacher Education

The professional preparation of teachers has been recognized to be crucial for the qualitative improvement of education since the 1960s (Kothari Commission, 1964-66), The Commission, in particular noted the need for teacher education to be "...brought into the mainstream of the academic life of the Universities on the one hand and of school life and educational developments on the other." It is indeed a matter of concern that teacher education institutes continue to exist as insular organizations even within the University system where many are located. Recognising 'quality' as the essence of a programme of teacher education, the Commission recommended the introduction of "integrated courses of general and professional education in Universities...with greater scope for self-study and discussion...and...a comprehensive programme of internship."

Subsequently the Chattopadhyaya Committee Report of the National Commission on Teachers (1983-85), envisioned the New Teacher as one who communicates to pupils "...the importance of and the feeling for national integrity and unity; the need for a scientific attitude; a commitment to excellence in standards of work and action and a concern for society." The Commission observed that "...what obtains in the majority of our Teaching Colleges and Training Institutes is woefully inadequate..." "If teacher education is to be made relevant to the roles and responsibilities of the New Teacher, the minimum length of training for a Secondary teacher...should be five years following the completion of class 12." Reiterating the need "...to enable general and professional education to be pursued concurrently",

the Commission recommends that "...to begin with we may have an integrated four year programme which should be developed carefully...it may also be possible for some of the existing colleges of Science and Arts to introduce an Education Department along with their other programmes allowing for a section of their students to opt for teacher education." The Chattopadhyaya Commission recommended a four-year integrated course for the secondary as well as the elementary teacher.

The National Policy of Education (NPE 1986/92) recognized that "...teachers should have the freedom to innovate, to devise appropriate methods of communication and activities relevant to the needs of and capabilities of and the concerns of the community." The policy further states that "...teacher education is a continuous process, and its pre-service and in-service components are inseparable. As the first step, the system of teacher education will be overhauled." The Acharya Ramamurti Committee (1990) in its review of the NPE 1986 observed that an internship model for teacher training should be adopted because "...the internship model is firmly based on the primary value of actual field experience in a realistic situation, on the development of teaching skills by practice over a period of time."

The Yashpal Committee Report (1993) on Learning without Burden noted that "...inadequate programmes of teacher preparation lead to unsatisfactory quality of learning in schools. ...The content of the programme should be restructured to ensure its relevance to the changing needs of school education. The emphasis in these programmes should be on enabling the trainees to acquire the ability for self-learning and independent thinking."

1.3 Changing School Context and Demands

There is now public acknowledgement of the fact that the current system of school education imposes a 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 and dynamic ways. Teachers need to be seen as 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.

Taking particular note of the real concerns of the teacher and the learner, the present exercise of review of the curriculum for teacher education is being undertaken with the aim to address the need to prepare teachers in a manner that can equip them to respond to the needs of learners and learning environment. Pointing to the need to view the teacher as central to the process of change in school education, the Chattopadhyaya Commission (1983-85) had noted, "if school teachers are expected to bring about a revolution in their approach to teaching...that same revolution must precede and find a place in the Colleges of education."

The National Curriculum Framework (NCF), 2005 presents a fresh vision and a new discourse on key contemporary educational issues. We now need to define the path that can be taken to empower individual teachers who can then empower learners. The critical link that binds the curriculum and the teaching-learning environment together is the teacher. The professional need to review the teacher education curriculum also emerges from the long ossification of a national education system that continues to view teachers as "dispensers of information" and children as "passive recipients" of an "education" that is sought to be "delivered" in four-walled classrooms with little or no scope to develop critical thinking and understanding.

The NCF, 2005 has for the first time linked the ongoing debate on curriculum to the pedagogic and professional concerns of the child and the teacher. Teachers are being posed as crucial mediating agents through which curriculum is transacted. The long held belief that textbooks by themselves help develop conceptual understanding, an adequate knowledge-base, secular values and social sensitivity has come into question. The close link between curriculum design and the preparation of teachers has been repeatedly demonstrated in successful educational

innovations across the country within mainstream education as well as experiments undertaken by several NGOs.

The Constitutional commitment towards UEE has been further strengthened with 86th Constitutional amendment that makes education a Fundamental Right and compulsory. The launch of the Sarva Shiksha Abhiyan (SSA) in 2002 and the recent financial commitment and the educational cess to augment the mission of UEE, provides the context for the need to focus concertedly on preparing teachers adequately to address the growing demand for quality education.

The education of teachers not only facilitates improvement of school education by preparing professionally competent teachers, but also functions as a bridge between schooling and higher education. The mechanisms that can help create a cadre of professional school practitioners who can not only teach in schools but can also develop further to become teacher educators can be laid only when school teaching has intimate links with the system of higher education. Given the critical role centres of higher learning play in generating new knowledge it is crucial that links between Universities and other centres of higher education are established especially for elementary education and strengthened for secondary and higher secondary education.

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. Within this it would be necessary to develop an informed understanding of who comes to be a school teacher at the elementary and secondary levels through the development of profiles of the existing cadre of school teachers, their qualifications and training status. Moreover, the diversity in the institutional arrangements for elementary 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 in numbers in the recent past, contributing to a commercialization process of teacher education. This will need to be examined within the provisions of the NCTE Act and the availability of in-house strength and the schemes proposed.

1.4 Interface with the Process of School Curriculum Renewal

One of the more important ideas articulated in the NCF 2005 is of the school curriculum as an inclusive space: a space that extends beyond the conventional curricular realm of textbooks into the realm of teaching-learning processes that enables children to participate in their own learning and provides teachers with the opportunity to plan her transaction according to the pace and context of her learners. In doing this the NCF recognises the critical role of the teacher in enabling an empowering education that seeks to bridge gaps between the child and the adult, the pace of the child and disciplinary demands and disparities in terms of gender, regions and linguistic differences.

Connecting knowledge to life outside the school and enriching the curriculum by making it less textbook-centered are two important concerns of the NCF. This is possible only when teachers are able to play an active role in the design of learning materials and are also able to organize meaningful learning experiences for children. To enable this, the teacher needs several support mechanisms, including a pool of learning resources to choose from, the skills to identify developmentally appropriate text materials, a critical and analytic mind and the opportunity to engage children with learning outside the classroom. In order to help children to move away from rote learning, teachers will need to be prepared to give children the opportunity to make meaning of what they read, see, hear and experience.

The concept of knowledge as traditionally embedded in the prescribed school curriculum is usually treated as a "given". For example, many teacher education programmes take the school curriculum and the textbook as a given. It is assumed that if

there are certain problems in the syllabi and textbooks, teachers must be trained to adjust to existing realities. Thus many teachers get trained to adjust to the needs of the existing school system through the fastidious planning of lessons in standardised formats, fulfilling rituals of delivering the required number of lessons and organising school assemblies and other routine activities during practice-teaching.

Often the links between theories of child development, courses on teaching methodology and subject content knowledge are never really formed in the understanding developed by teacher-trainees. Most teacher educators training elementary schoolteachers for example, are trained in secondary education, based on the premise that elementary education is only a simplified form of secondary education. It is a widely held belief that teachers do not need to engage with subject-content knowledge beyond the levels at which they teach. The popular notion that teaching young children is a casual vocation gets reinforced through existing training programmes and approaches.

1.5 Reform in Teacher Education

Reform in teacher education is driven by ideas, ideals, values, and assumptions about the purposes of schooling, the social and economic future of a nation, and the role of public education in a democratic society. Ideally, a curriculum framework for teacher education should be expected to be in consonance with the curriculum framework for school education. This consonance would be the first step towards charting a clear trajectory for the translation of the vision proposed by the National Curriculum Framework (NCF) 2005. For this, the teacher education curriculum framework would need to engage with the issues that the NCF, 2005 lays out in its vision. For instance, while defining learning as "...a generative process, of representing and manipulating concrete things and mental representations, rather than storage and retrieval of information," the NCF subscribes to a view of the learner as an active participant in the process of learning and knowledge as social construction. The teacher education curriculum framework will need to engage with questions of the learner (in this case the teacher), the learning process and the content and pedagogy of educating teachers.

The curriculum framework needs to lay down the contours of a trajectory that can provide opportunities and processes to enable the agency of teachers in bringing about social transformation, as is envisioned in the NPE 1986/92.

Examples of empowering the school teacher towards this goal exist in many innovations in school education all over India. It would be worthwhile to learn from these in order to create a mainstream system of teacher education that allows teachers to be partners in the process of curriculum reform rather than mere implementers of a pre-designed given framework. Several examples of educational innovations in India demonstrate how teacher education programmes, pre-service and in-service, can be designed to provide the opportunity to engage with theoretical concepts and frameworks for appropriate intervention in the experiential and social realities that surround them.

Since the last revision of the Curriculum Framework for Teacher Education in 1998, large scale and far reaching developments, debates as well as changes have taken place in national and international spheres of social, political, economic, cultural, scientific and technological fields. These developments have affected education, including teacher education, necessitating review and reform towards the larger constitutional goal of achieving universalisation of education, social change and development. The National Council for Teacher Education (NCTE), established as a statutory Council by an act of Parliament in 1993, is committed to initiate suitable measures to make teacher education responsive to various levels of development and change. The NCTE is committed not only to facilitate improvement of school education by preparing competent, committed and professionally qualified school teachers but is also committed to function as an important bridge between schooling and higher education.

The agenda before the NCTE is thus twofold; to remove and minimize the existing deficiencies of teacher education and to meet the demand of new challenges before it. The Council is

therefore committed to both, by highlighting the following functions of teacher education institutions:

- To provide qualified faculty, adequate infrastructure and learning resources, including print material, off-line IT material and computers as per prevalent NCTE norms for quality transaction of its teacher education programme;

- To promote corporate institutional life based on values and ideals enshrined in the Indian Constitution for all stakeholders in the institution, including students, faculty and non-teaching staff;

- To create all necessary resources and use these for institutional planning with mid-term appraisal for quality improvement of the teacher education institution;

- To function as a nodal agency for networking community and its schools with the teacher education institute and use their resources for improving and enriching its teacher education programme;

- To promote and strengthen action research and faculty research projects;

- To organize on-campus and off-campus professional development activities and programmes for its faculty and the faculty of other teacher education institutes and school teachers in the network of schools attached to the institutes;

- To make its teacher education programmes school-based along with a rigorous theoretical base; vibrant and collaborative between schools and the teacher education institute.

Chapter II: Teacher Education Curriculum: Systemic Concerns and Current Status

India has one of the largest systems of Teacher Education in the world. Besides the University Departments and their affiliated colleges, government and government-aided institutions, private and self-financing institutions and open universities are also engaged in teacher education. Though most teacher education programmes are nearly identical, yet their standards vary across institutions and universities. There are several systemic concerns and needs that need to be addressed in this exercise of redesigning the Curriculum Framework for Teacher Education. These are enumerated below:

2.1 The Need to Redesign Curricula Content, Perspective and Pedagogic Approach[*]

During the last few decades teacher education curricula have come under severe criticism and their weaknesses have been highlighted. Some educationists feel that they do not fully address the needs of contemporary Indian schools and society and they do not prepare teachers who can impart quality education in schools. Principals of some schools hold the view that there is hardly any difference between the performance of trained and untrained teachers because of outdated curricula. The revamping of teacher education curricula has thus become the need of the hour. The orientation has to be towards a visible shift from information-based to experience-based and from traditional instruction domination to a constructivist orientation. The design and practice of current teacher education programmes is based on certain assumptions, which impede the progress of ideas and the professional and personal growth of the teacher. These are as follows:

- Programmes of teacher education often assume It is assumed for instance, that disciplinary knowledge is a 'given', which the trainees 'acquire' through general education and which is independent of professional training

in pedagogy. This divide is reflected in the common belief that a Class V teacher of mathematics need not engage with the discipline of mathematics beyond the 'levels' required for the primary school.

- that the language proficiency (in the language of the medium of instruction) of the student teacher is adequate and therefore need not be the concern of those who educate teachers. Experience indicates that the need to enhance the proficiency of the language spoken by the teacher (be it English or a regional language) is indeed very real. Courses of language proficiency should form an integral part of pre-service programmes, followed by on-the-job support.

- It is assumed that repeated 'practice' in the 'teaching of isolated lessons' (of a required number) is a sufficient condition for professional development of a teacher. It is also assumed that links between theories of child development and learning, instructional models and methods of teaching specific subjects are automatically formed in the understanding developed by student-teachers. Both national and international experiences challenge these contentions. Teacher education programmes must make a conscious effort to design courses to provide greater 'space' to generate a deeper understanding of such linkages.

- Existing programmes of teacher education treat knowledge, embedded in the prescribed school curriculum, as a 'given'. Student teachers do not engage enough with the curriculum framework, syllabi and textbooks because it is assumed that "...there is nothing fundamentally wrong with the school curriculum as a whole or with the syllabi of different subjects. It is also assumed that if there are certain problems in the syllabi and textbooks, nothing can be done about these problems in teacher training. Therefore teachers must learn to adjust to existing realities" (NCERT: NFG, 2005).

- It is also assumed that "...teachers can easily set aside their own biases, beliefs and assumptions about children/learners, knowledge and learning and follow meticulously what they have been 'taught' through methodology courses. Most

teacher education programmes fail to empower the teacher as an agent of change as they do not provide spaces for student teachers to reflect on their own experiences and assumptions as part of classroom discourse and enquiry"

- In the present teacher education curricula a large number of activities – theoretical and practical, have to be carried out and assiduously practiced by prospective teachers for enhancing their professional expertise. This is done through the meticulous planning of lessons in standardized formats; the ritual of fulfilling the required number of lessons delivered and supervised; the ritual of organizing school assemblies and other routine activities and the rituals of completing the required number of written assignments and projects. "Lesson planning, as it is taught during teacher training is merely a formal routine which masks the acculturation of the young trainee into the profession without disturbing its underlying assumptions about knowledge and curriculum and also without making the new entrant aware of these assumptions and the consequences of the practices based on them"

- The theory courses have no clear articulation with practical work and ground realities. The methods courses are routine and are distanced from actual classroom situations. Practice teaching has assumed the form of a 'meaningless ritual' and its carry-over potential in the development of a dynamic strategy for handling instruction issues and problems in real classrooms is inadequate.

2.2 The Need to Enhance the Professional Identity of School Teachers

Teacher education institutes suffer from isolation at both levels: the school as well as from centres of higher learning. Often in schools, the method of teaching curricula and various other requirements are different from those advocated and implemented in teacher education institutes. As a result schools consider teacher education institutes as alien and not a space for 'realistic' professional development of teachers. The teacher education institutes on the other hand, merely fulfill the formality

of completing the prescribed number of 'lesson plans' with little concern for preparing teachers for constantly demanding and fluid classroom situations. The rapid commercial mushrooming of private 'teacher education shops' has further accentuated such divides. Currently no systemic mechanisms exist for continued teacher academic support and professional development.

Despite repeated reiterations of the need to professionalise the school teacher in Policy documents and Commission reports, over the last 30 years, most teacher education programmes continue to 'train' teachers to adjust to the needs of an education system in which education is seen as the transmission of information and learning reproduced from textbooks. Hence, this dominant practice continues despite many individual efforts in bringing fresh perspectives, ideas and concepts in the mainstream teacher education curricula.

It may not be an exaggeration to state that for many students enrolled for teacher education courses, school teaching is not a preferred option. Research also indicates that many students join teacher education courses only as a last resort. Even after joining, student-teachers are inclined to look for opportunities other than school teaching. This larger reality and the rigid design and content of conventional teacher education programmes, tend to create inertia and maintain status-quo in school practices. This coupled with the dilution of the emphasis on public investment in pre-service teacher education has, since the early 1990s, led to the promotion of several alternative measures of teacher recruitment and training. Large scale recruitment of para-teachers within the formal school system, an attitude of resignation towards pre-service programmes and piece-meal in-service training courses have become an integral part of state provisioning for elementary education. This trend has resulted in the appointment of under-qualified and unqualified persons and a further degradation of the status of school teachers, thus diluting the identity of a teacher as a professional. This in turn has led to a considerable erosion of faith in the agency of the teacher in bringing about change within the government school system and communities. This situation needs to be changed with meaningful and perhaps radical

changes in the way we conceptualise the education and professional development of our teachers.

2.3 The Need to Link School Practice with Activities of Knowledge Generation

A foremost step in addressing systemic challenges facing Indian education is to reaffirm the faith in the agency of the teacher in bringing about a radical change in the process of schooling. It is important to build the conviction that there can be no substitute for quality pre-service education in reviving our public education system.

A long-standing need has been to provide opportunities and to promote the entry of appropriate talent in the field of teacher education, through a series of structural and process intervention. There is for example, the need to link the professional qualification of teachers to post-graduate studies in different disciplines with the aim to promote interdisciplinary enquiry in the theory and practice of education. Currently, the link between the study of education and post-graduate studies in different disciplines is provided through the BEd degree. This link currently serves the exclusive aim of providing enhanced disciplinary knowledge in a given school subject for teaching at higher levels (PGT) of school education. An engagement with post-graduate studies in the social sciences in particular, is needed to develop frameworks within which educational theory and practice can be enquired into, analysed, interpreted and further developed. Mechanisms for this will need to be created through various means such as (a) provision for integrated undergraduate studies in teacher education, (b) provision for the study of education as an elective subject at the undergraduate and post graduate levels (c) provision for entry into research programmes of education other than through the route of teacher education degrees alone. Such avenues would be especially required for graduates and postgraduates in the disciplines of philosophy, sociology, economics, psychology and political science, subjects that are not offered in schools until the stage of high school, but form crucial foundations for meaningful teacher education.

One of the key problems with our elementary education system for example is the complete lack of a system of building a cadre of teacher educators trained in elementary education. The most popular programme for preparing teacher educators is the MEd, though a few universities offer an MA in Education. The MEd programme by and large is of general nature and does not train specialists in different areas. The same course meets the requirements of schools at different levels, from early childhood to higher secondary; teacher education institutions and administration, there being very little differentiation. Moreover, the standard of research in University Departments of Education leaves much to be desired. It is distressing to observe that research in our universities and institutes is largely conducted for obtaining a degree and much of it is repetitive and incapable of informing theory or practice of education.

Developing structural mechanisms for creating a professional cadre of teacher educators, especially for the elementary stage will also encourage University-based research in education. One way in which knowledge generation can be enhanced in education is by providing structural spaces for inter-disciplinary enquiry within programmes of teacher education and post-graduate studies in education. Currently, teacher-education programmes operate in an insular manner even within a University system. Locating programmes of teacher education within colleges of general education as suggested by the Chattopadhaya Commission and as demonstrated by the four-year integrated BElEd model of Delhi University, is one way of breaking this insularity. Other ways could include the design of post-graduate programmes in education in a manner that allows students to choose course credits across different disciplines of humanities and social sciences. This is likely to help identify relevant questions for research and reflective inquiry in the theory and practice of education and to promote talent into developing education as a discipline, leading to knowledge generation in areas of curriculum and pedagogic studies.

Given the current status of teacher education programmes and the specific issues and problem areas identified, a proposed framework within which teachers could be trained differently is

suggested below. This framework, further elaborated in the subsequent chapter in the form of a vision statement, is likely to develop a more connected understanding of their role as educators:

- engaging teachers with the larger socio-political context in which education is situated and in which the learners are situated

- engage teachers with children in real contexts rather than teach them only about children through theories and research-based studies

- bring into the teacher education curriculum and discourse teacher-trainees own assumptions about children, beliefs about knowledge and processes of learning

- help teachers to reflect upon their own positions in society vis-à-vis gender, caste, class, poverty, linguistic and regional variation, community, equity and justice.

- Such processes, unfolded within the frame of a teacher education discourse is likely to promote habits of independent thinking, collaborative learning and develop the capacity of teachers to adapt the process of education to the changing learning needs of children and society.

- Focus on the psychological and other developmental aspects of children with constant reference to with socio-economic and cultural contexts from where different children come. This would help trainees to understand children as part of the wider socio-cultural milieu in which they live rather than as abstract notion. Trainees would also engage with the concept of child and childhood.

- An engagement with theory along with field experiences and field-based assignments will help

teacher-trainees to verify theory and not treat it as a "given" to be applied in the classroom.

- These processes will help teacher-trainees to view knowledge not as external to the learner and as information existing in textbooks but as something that is actively constructed during the process of learning, involving interpretation of information via interaction with fellow classmates and dialogue with teachers and texts.

- Normally teacher educators instruct and give structured assignments to be submitted by individual students. The training schedule is almost always packed with teacher-directed activities. There is little or no opportunity for reflection and independent study for the student-trainees. This calls for a reasonable duration of programme that can enable a wider and deeper discourse as well as opportunity to reflect and learn.

It has to be emphasized that these objectives cannot be achieved without increasing the duration of teacher education programmes. Academic knowledge and professional skills are not independent of each other. A teacher education curriculum has the crucial responsibility of integrating them into a meaningful whole like the curricula of medical sciences and other professional courses. The vision for the reconstruction of teacher education curricula is presented in the following chapter.

Chapter III: Vision of Teacher Education

3.1 Towards a National System of Teacher Education

There exists such a wide variation both in the substantial and methodological aspects of teacher education programmes that the endeavor of preparing teachers for the diverse schools of the country has become a cause for serious concern. This may largely be due to the fact that much of the foundation of current teacher education rests on a set of beliefs and assumptions that are neither articulated adequately nor investigated comprehensively. The effort should be to bring the various programmes of teacher education, currently available, and contexts of school education under one umbrella called the 'national system of teacher education'. As there exists a national system of school education, so there should be a national system for the education of teachers. This national system should be able to provide a broad framework within which state specific and other local conditions can suitably inform the formulation of more specific teacher development programmes and strategies.

3.2 The Vision of a Teacher and School

The vision of teacher education should be in keeping with the vision of a teacher and school. The NCF 2005 visualizes a major shift in the conceptualization of learning and accordingly that of teaching. While emphasizing the primacy of the active learner, the curriculum framework views teaching as a process that enables learners construct knowledge. Teacher is a "facilitator who encourages learners to reflect, analyze and interpret in the process of knowledge construction." This shift in the conceptualization of the role of a teacher has crucial implications for the aims, content and methodology of teacher education. Given the extensive articulation of the learner, learning, teaching, teacher, this document on the Curriculum Framework for Teacher Education needs to be read along side the NCF, 2005. A brief glimpse of the NCF vision is presented in this section.

What is learning?

"Learning takes place through interactions with the environment around, nature, things and people, both through actions and through language. Physical activity of moving, exploration and doing things, on on'es own, with one's peers or in the company of adults, using language—to read, to express or ask, to listen and to interact, are the key processes through which learning occurs…" (NCF, 2005: 18)

Teaching for construction of knowledge

"The teachers' own role in children's cognition could be enhanced if they assume a more active role in relation to process of knowledge construction in which children are engaged. A child constructs her/his knowledge while engaged in the process of learning. Allowing children to ask questions, that require them to relate what they are learning in school to things happening outside, encouraging children to answer in their own words and from their own experiences, rather than simply memorising and getting answers right in just one way -- all these are small but important steps in helping children develop their understanding. `Intelligent guessing' must be encouraged as a valid pedagogic tool. Quite often children have an idea arising from their everyday experiences, or because of their exposure to the media, but they are not quite ready to articulate it in ways that a teacher might appreciate it. It is in this `zone' between what you know and what you almost know that new knowledge is constructed. Such knowledge often takes the form of skills, which are cultivated outside the school, at home or in the community. All such forms of knowledge and skills must be respected. A sensitive and informed teacher is aware of this and is able to engage children through well chosen tasks and questions, so that they are able to realize their developmental potential. "…. (NCF, 2005: 17)

The aim of teacher education thus ought to be to create conditions of learning that can facilitate the development of such

sensitive teachers. Teaching is not an activity of planning a lesson or presenting ready-made knowledge for achieving outcomes that can be measured objectively. It is a process of making children "think and try out what they are learning". A teacher has to shift away from his/her traditional stance of "informing" to that of "eliciting" and "guiding". A teacher's role is one of facilitating construction of knowledge and engaging children by raising the right kind of questions and organizing well chosen activities and tasks. "Active engagement involves enquiry, exploration, questioning, debates, application and reflection leading to theory building and creation of ideas/positions. Schools must provide opportunities to question, enquire debate, reflect, and arrive at concepts or create new ideas." (NCF, 2005:).

As acknowledged by the NCF, 2005 "the term 'activity' is now a part of the register of most elementary school teachers, but in many cases this has just been grafted onto the 'Herbartian' lesson plan, still driven by 'outcomes' at the end of each lesson. There is now more talk of competencies, but these competencies are still pegged onto lessons much in the manner of 'outcomes'. Instead teachers need to develop the ability to plan 'units' of four or five sessions for each topic.   The development of understanding and of competencies is also possible only through repeated opportunities to use the competencies in different situations, and in a variety of ways…activities could enable teachers to give individualised attention to children and to make alternations in a task depending on their requirements and variations in interest"(NCF, 2005:).

Schools should shape themselves as institutions that provide new opportunities for all learners to learn about themselves, others, and society, without any discrimination of gender, caste, religious, linguistic and regional background.

The making of a teacher involves a process of development of a beginner into an equipped professional. Such a process of development is viewed by some researchers as consisting of stages. A pre-service teacher education programme accepts a student at the novice stage and aims to make her into a

competent professional who then strives to further her own professional development and participates actively in creating communities of professional practice. It is important to consider the pre-service preparation of teachers as *Initial Training*, requiring further honing of professional skills through a longer-term placement in schools. Mechanisms should be evolved for a teacher to be declared a fully *licensed* teacher only on certification by a professional academic body in collaboration with school level employers. This process should include elements of self and peer evaluation within a frame of a participatory review. This is likely to ensure a certain standard of professional competence amongst teachers as well as create a self-driven system of being accountable to the profession of teaching.

3.3 Nature of Adult Learning

Just as the curriculum of school education is to be based on an adequate understanding and articulation of the way in which children learn and develop, the curriculum of teacher education is to be based on an understanding and articulation of the way in which adults learn and develop. Exponents on adult learning believe that the approach to teaching adults should differ from that of children since adults differ in a number of important ways that affect learning and thereby the approach they adopt to learn. Since the 'pedagogical' methods used for teaching children are not quite suitable for the education of teachers, 'andragogical' methods need to be based on the typical characteristics of how adults make meaning. Adult learners are *autonomous* and *self-directed*, have a vast amount of *life experiences* and *knowledge*, are inclined to be *pragmatic and goal-directed* and respond better to learning if learning is problem/life/task-oriented. Evidence from research show that adult learners are willing to take responsibility in situations of learning, are prepared to work hard at learning, are clear about what they want to learn, are much more influenced by the practicability of learning and hence are concerned about the applications and implications of what they learn. It is in this context that the 'andragogical' approach of teacher preparation would require a teacher educator to avoid *disciplining* and *giving directions or loosely structure training activities* and *incorporate a*

variety of teaching strategies. Even though adult learners may not need emotional support from teacher educators as much as children would need from a teacher, they do need detailed and specific feedback on their learning and development. A learning task that is relevant to their life circumstances and context, whether immediate or future, would enable adults to participate with greater involvement and conviction.

Literature on adult learning reveals that adults learn when the need to learn is internal to them. On the contrary, they do not respond to learning activities that are not in accordance with their competence. Hence, teacher education programmes need to give student teachers greater control over the what, how, why, when and where of their learning. This is as truer of children as well.

In the light of the above, the following would emerge as implications for teacher education: teaching instruction needs to be problem oriented and not discipline or theory oriented; approaches such as case studies, simulations, role-play and action research would be more appropriate for the professional development of teachers; emphasis of instruction should not be memorization of content but accomplishment of tasks, insights and competence; open-ended activities and questions could help bring out the vast experiences of the prospective teachers, as also their 'personal theories' about knowledge, learning and learners for scrutiny and analysis.

3.4 Need for Unlearning

Adult learners have a vast amount of educational and life experiences before they undergo courses in teacher education. Since the life circumstance of one learner differs from that of another learner, there would be differences in their learning. Certain basic beliefs, attitudes, values and life skills are available with each learner for a teacher educator to work with. However, not all beliefs, attitudes, values and life skills of a learner need be in keeping with the requirements for becoming an effective teacher. Where contradictions exist between the '*required*' and

the '*available*', it would necessarily require a challenging of assumptions along with a process of *unlearning.*

For instance, one of the basic tenets of effective teaching is a belief that all students, whether male or female, are equal and that equality is not only an end product but also a guiding principle for the process of education. However, many trainees may carry a strong belief that men and women are not equal since the cultural and child-rearing practices of which they are a part would have consistently reinforced such a belief. Such beliefs would need to be continually challenged through processes of self-reflection and analysis. The following observation supports the view that teacher education programmes must have provisions for such processes of reflection and insight:

"*It is also assumed that teachers can easily set aside their own biases, beliefs and assumptions about children/learners, knowledge and learning and follow meticulously what they have been 'taught' through methodology courses. Most teacher education programmes fail to empower the (would be) teacher as an agent of change as they do not provide spaces for student teachers to reflect on their own experiences and assumptions as part of classroom discourse and enquiry.*" (NCF, 2005:).

3.5 Role Modeling, Observation, Reflection and Practice

The nature of any teacher education programme, in its substance and methodology, is influenced by the way teaching is conceptualized, be it a scientific endeavour or an artistic one. Despite the fact that teaching has a strong foundation of knowledge and skills, as a process it calls for intuition, improvisation, expressiveness and creativity. The teacher education curriculum must provide for both these inseparable aspects of teaching.
At present, teacher education programmes seek to provide a theoretical understanding through the '*foundation*' and '*methods*' courses and attempt to develop an ability to apply them in classroom through a rigidly planned '*practice-teaching*' programme of various durations.

For a novice teacher to imbibe the qualities required for performing the 'art' of teaching would necessitate a *critical observation* and *reflective analysis* of the practice of teaching. The curriculum of teacher education must provide for sufficiently extensive hours of observation of teaching being undertaken by regular teachers/teacher educators. Student teachers need to discern for themselves differences between "teaching by telling' and 'teaching through dialogue and reflection.' The formality of presenting one or two *demonstration lessons* before the indulgence called practice-teaching is woefully inadequate in enabling a process of reflection. Providing possibilities of witnessing 'reflective practice' is crucial to the process of directing the professional development of a novice towards gaining proficiency and expertise in teaching. Modern technological facilities of video clippings of the performance of reflective teachers could be of invaluable use as curricular material for the education and professional development of teachers.

Availability, appropriateness and sufficiency of *feedback* to the practicing teacher/intern assume even greater importance in learning to be a reflective practitioner. Though the amount of practical experience in terms of the number of lessons taught by an intern is of significance in deciding the sufficiency of learning experience in learning the complex art of teaching, more important is the *quality of feedback* received by the interns. Visual feedback in the form of video recordings of the performance of student-teachers would be of immense help in providing quality feedback.

3.6 Time as a 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 children, 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, no more than five to six weeks and that too piece-meal in approach. Foundational and skill inputs introduced earlier are expected to be integrated and applied during this period. It is commonly held that there isn't 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 skill 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 Chattopadhaya 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 proven dysfunctional in creating opportunities or spaces for change.

3.7 Dialectical Processes in Teacher Education

3.7.1 Teaching and learning
A student teacher is a learner in so far as undergoing a teacher education programme is concerned. The dialectical relationship between teaching and learning influences all aspects of teacher education. This dialectical relationship needs to be reflected in the curriculum of teacher education.

3.7.2 Theory and practice

It is generally believed that the teacher education curricula emphasize theory at the cost of practice and performance. The requirement, however, is in trying to hone instructional skills and connecting theory to pedagogic approaches in a reflective manner. Theories introduced at a stage when students are more at ease with their own strategies helps to crystallise the integration between theory and practice.

Normally, theory and practice are viewed as separate components in a teacher education curriculum. Hence, they are organized separately, both in space and time. The assumption is that the integration of the two would happen naturally in the minds of the learners. The following observation made in the National Focus Group on Teacher Education, 2005 amply illustrates this point:

"It is assumed that repeated 'practice' in the 'teaching of isolated lessons' (of a required number) is a sufficient condition for professional training to be a teacher. It is also assumed that links between theories of child development and learning, instructional models and methods of teaching specific subjects are automatically formed in the understanding developed by teacher-trainees (student teachers). Both national and international experience challenges these contentions. Teacher education programmes therefore must make a conscious effort to design courses to provide greater 'space' to generate a deeper understanding of such linkages."

It is in this background that the possibility of incorporating 'internship in teaching' within the teacher education curriculum needs to be given a serious thought instead of organizing teaching of isolated lessons. Internship creates space for a trainee to bring all his theoretical learning pertaining to the art and science of teaching to bear on the concrete realities of the school and classroom situations. It is through internship that a teacher education curriculum could help a trainee-teacher to get insight into the comprehensive nature of the teacher's role and the varieties of skills and competencies required for its reflective teaching. Stated broadly, internship is an attempt not only for

providing the first hand experience of teaching to a student teacher, but also for providing an opportunity to perform the 'multiple roles' of a teacher. It may be mentioned in this regard that the Acharya Ramamurti Committee (1990) in its review of the NPE-1986 had observed that an internship model (in teacher education) is firmly based on the primary value of actual field experience in a realistic situation, on the development of teaching skills by practice over a period of time.

3.8 Content and Pedagogy

The NCF, 2005 observes that, the existing programmes of teacher education treat the concept of knowledge embedded in the prescribed school curriculum as a 'given'. Student teachers are not expected to examine critically the curriculum framework, syllabi and textbooks because it is assumed that there is nothing fundamentally wrong with the school curriculum as a whole or with the syllabi of different subjects. It is also assumed that if there are certain problems in the syllabi and textbooks, nothing can be done about these problems in teacher training. Therefore teachers must learn to adjust to existing realities. On the contrary, if we believe that teachers need to constantly reflect on subject-content and learn to respond to the needs of children then it is important that teacher education programmes provide opportunities for trainees to examine the school curriculum and text materials more critically and design pedagogy that is suitable to a given context. Neither content nor pedagogy is independent of each other. Hence, conscious efforts need to be made in the curriculum of teacher education to enable a dialectical exploration of both.

3.9 Need for Encouraging Self Appraisal and Self Learning

It is important that a teacher holds herself accountable for helping children learn and develop. This includes teachers taking positive steps toward improving their professional practice based on meaningful feedback, analysis of educational outcomes, and self-assessment. Such reflective practice supports our desire to be a community of lifelong learners and mirror the habits and values we try to instill in our students. On the contrary, if a teacher takes her work as a job, she is likely to undertake that

which is asked of her and no more. Not only is a teacher required to have commitment to the profession of teaching but also an inclination to make appropriate reflection and assessment of where things stand and the constraints in attaining desired goals.

3.10 Evaluation in Teacher Education

The content of teacher education programmes need to enable a deep engagement with children and their socio-political context, the school curriculum and textbooks, the process of learning and knowledge, the teacher's psychological and professional skill development, an understanding of institutional arrangements and policy perspective and a school-based approach to pedagogic studies. Accordingly, a major revamping is needed in the evaluation system followed in teacher education programmes. The present system of evaluation is too theoretical. Also, the measurement tends to be excessively quantitative and often at the cost of understanding and estimating the qualitative development of a trainee-teacher. For instance, assessing the teaching performance of a trainee in terms of marks and percentages could serve the purpose of examination but not making an analytical statement about the trainee's developing capacities as a teacher. What would it mean if a trainee obtains seventy percent in practice teaching, or if two trainees obtain the same percentage?

The problem of evaluation in teacher education is not merely one of over quantification but also one of lack of comprehensiveness in coverage. Apart from conceptual and pedagogical aspects, a pre-service teacher education programme needs to develop/foster certain attitudes, dispositions, habits and hobbies in a teacher. A teacher's attitude towards children and their problems, dispositions such as tolerance, habits such as punctuality and habits of reading and reflection are important for developing reflective practitioners. The fact that the present evaluation protocol has no place for evaluating them shows the extent to which the present evaluation system in the curriculum of teacher education lacks comprehensiveness.

3.11 A Perspective of Pre-service and In-service Teacher Education

A Curriculum Framework needs to articulate a perspective for both pre-service and in-service teacher education, including continued professional development and research opportunities. It should be able to spell out a system of teacher education that addresses the real needs of teachers in terms of classroom support as well as seeking support from existing structures such as the Block Resource Centers and Cluster Resource Centers. As stated in the NPE 1986, teacher education is a continuous process and its pre-service and in-service components are inseparable.

To link the professional development of teachers with opportunities for undertaking postgraduate studies and research programmes with the aim of generating knowledge in education needs to be explored. On the one hand, if professional growth of a teacher should not be limited to just a diploma or bachelor's degree in education as a one time acquisition of qualification, the experience of teaching could provide much needed direction and substance to otherwise too theoretical endeavor of Master's and Doctoral level research. Scope of linking promotions with acquisition of additional qualifications needs to be explored for this to be a realistic possibility.

3.12 Need for Multiplicity of Players and Alternate Models of Teacher Education

The pre-service teacher education programmes for preparing secondary school teachers rests largely with Universities and with State Governmental Agencies for preparing primary school teachers. More recently private players have entered in a big way to meet the increasing demand for qualified teachers. However, research indicates that the best practices of school teaching and curriculum development have actually emerged from a series of innovations initiated by non-governmental organizations (NGOs). Given the need to prepare quality teachers for different contexts, levels and content, certain flexibility in terms of involving NGOs

in meeting this challenge needs to be considered seriously. Institutional arrangements and organizational structures enabling such an involvement of multiple players will need to be worked out.

Similarly, the enormous need for trained teachers to the ever-growing number of schools would require a rethinking of the possibility of alternate models of teacher education. Since the stipulation of one year duration for the dominant model of teacher education is more a notional than empirical stance, one possibility of multiple models could emerge on the rationale of a longer duration for pre-service teacher education. The nature and composition of theory and practice components of teacher education could be the other basis for evolving other alternate models. This is in light of the fact that different durations of school attachment are required for achieving different objectives of teacher education.

Another possibility of alternate models emerges from the need for preparing teachers for different levels of school education. A generic model for preparing teachers for different levels would include *'core components'* that are common to all stages and *'specific components'* oriented to the demands of each stage.

Chapter IV: Framework for Curricular Areas of Pre-service Teacher Education

4.1 Introduction and Rationale

This chapter gives concrete suggestions on how the education of teachers can be redesigned to focus on the child, to provide a greater 'space' for the personal, social and professional development of the teacher and to professionally equip her to evolve pedagogic approaches and create a learning environment that addresses the needs of learners. The content and process of teacher education will need to be reworked to be rooted in the 'practice' of teaching-learning. Through the process of weaving theoretical knowledge across multiple disciplines with the student teachers' own experiential realities and children's social milieu, teachers will 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 proposed process will demand a training schedule that enables teacher trainees to participate as a regular teacher for a sustained length of time, with the advantage of the training institutes' support to analyse her or his experience as a teacher. A sustained involvement in the school's life during training and spending long stretches of time with children would help teacher-trainees to address the 'unplanned' and 'uncertain' aspects of classroom teaching which often originate in interaction and not from generalized models of children's development. It would be valuable for trainee-teachers to plan 'units' of study rather than piece-meal 'lesson plans' and to write reflective notes on teaching at the end of each day, enabling them to reflect on their own practice.

There is need to reiterate the continuity between pre-service and in-service education of teachers. Considering teachers as life long learners will change the perspective of in-service education as well. Teachers will need to be seen as adult learners and hence promotion of self and experiential learning and incorporating

teachers as active participants in the definition of their own learning will become central. 'Self reflection' among teachers needs to be acknowledged as a key component of in-service teacher education. Redesigning of in-service teacher education would essentially mean shifting the focus from piece-meal and adhoc collation of 'lectures' to a well planned engagement with issues of knowledge, aims of education, learner diversity and the process of learning. In this context in-service teacher education would necessarily include the professional and personal development of the teacher along with sustained classroom support.

The process to prepare such teachers would therefore include providing opportunities:

- For understanding the self and others (including one's beliefs, assumptions, emotions and aspirations); developing the ability for self-analysis, self-evaluation, adaptability, flexibility, creativity and innovation; understanding and developing oneself as a professional.

- To observe and engage with children, communicate with and relate to children.

- For self-learning, reflection, assimilation and articulation of new ideas; developing capacities for self-directed learning and the ability to think, be self-critical and to work collaboratively in groups.

- For content enrichment to generate understanding and knowledge, examine disciplinary knowledge and social realities, relate subject matter with the social milieu and develop critical thinking.

- To develop professional skills in pedagogy, observation, documentation, analysis, drama, craft, story-telling and reflective inquiry.

4.2 Teacher Education Curricular Areas

The key features of a pre-service teacher education curriculum and the continued professional development of practicing teachers that could enable the realization of the full potential of the new vision would include the following areas of study:

4.2.1 Childhood, Child Development and Learning

Understanding the learning and growing child is a major priority of teacher education. The key point of departure would be to understand children by observing them in diverse social, economic and cultural contexts and interacting with them rather than through an exclusive focus on psychological theories of child development. This would also include the close observation and analysis of the learning and thinking processes of children. It is suggested that the programme design of teacher education provides 'spaces' for the direct observation of children at play and at work in diverse socio-economic, cultural, linguistic and regional contexts. Participating teachers should be given the opportunity to establish links between developmental constructs and principles studied in theory and the larger realities in which children grow and develop. Specific assignments could be evolved to help student teachers to understand children's questions and their observations of natural and social phenomena, to enquire into children's thinking and learning and to learn to listen to children with attention and empathy.

Field-based projects and several opportunities to interact with and observe children would provide the necessary learning spaces for developing in the teacher, a fascination for children's thinking and learning and the capacity to listen to children. Hands-on experience with children/learners (through practicum courses) is likely to help teachers to view the learning process as participative. Learning happens only when the learner is actively engaged in something or participating in an activity. This is true as much for the children who the teachers will teach as for the teachers who prepare themselves to interact with children. It is also important for teachers to understand that learning is not a linear process. It is a divergent process, essentially spiral in nature and takes place in a variety of situations including everyday contexts. Learning does not necessarily happen through uniform, singular and pre-planned exposures.

Pre-service teacher education programmes at all levels (including higher 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.

4.2.2 Teacher and Learner in Society

Learning is greatly influenced by the social environment/context from which learners and teachers come. The social climate of the school and the classroom exert a deep impact on the process of learning. Given this, there is need to provide a major shift from an overwhelming emphasis on the psychological characteristics of the individual learner to her social, cultural, economic, political and humanitarian context. Learning is to be appreciated as occurring in shared social and everyday contexts. Ordinarily, many of the ideas expressed by educational thinkers such as Gandhi, Tagore, Gijubhai, Dewey and others are studied with virtually no reference to the socio-historical contexts in which they developed. Teacher education programmes need to provide the space for engagement with issues and concerns of contemporary Indian society, its pluralistic nature and issues of identity, gender, equity and poverty. This can help teachers to contextualise education and evolve a deeper understanding of the purpose of education 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.

A teacher is as much a social entity as the children they teach. Key issues in the study of contemporary India for instance would provide teachers with opportunities to situate education in a wider social context. Student teachers can undertake projects such as tracing the process by which a consumer product (such as tea) 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. Such engagement can help teachers to examine their own conceptions of knowledge, to construct knowledge through interactive processes, the exchange of views, beliefs and reflection on new ideas and break free from the overwhelming need to protect their individual views on education and learning.

A rigorous engagement with issues of contemporary India must necessarily be examined through an engagement with concepts [†]drawn from a diverse set of disciplines, including sociology, history, philosophy, political science and economics.

4.2.3 Aims of Educating: Children and Adults[‡]

School education is a deliberate and more-or-less external intervention in the life of a child. 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. While the school must perhaps have boundaries of its own, these boundaries must not become barriers. They must, on the other hand, facilitate the creation of vital links between children's experiences at home and in the community and what the school offers them.

Education needs to be seen as a continuous process of self-discovery, reflection about oneself and the world around us. This holds true for both, child and adult learners. Self-knowledge can be achieved only through the knowledge of the other, and one cannot know the other without being just to the other. This is a life long process; but the school, through insightful teaching and learning experiences of various kinds, can bring to the child the great importance of this process. This process can be set in motion only when teaching is carried in a dialogical mode rather than in the mode of authoritarian monologue. It is in the conversational mode that the child is likely to grow in self-confidence and self-awareness and will more easily learn to establish connections between what is being taught and his own experience. Similarly, while learning discipline is an important part of education, externally imposed discipline should merge into the orderliness that children perceive as an essential part of their well-being. Enforced accountability should therefore gradually give way to a sense of responsibility, which means that

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[‡] This section is largely based on the Position Paper on Aims of Education, National Focus Group, NCERT, 2005.

there should be more emphasis on self-assessment and shared accountability.

Intelligence is diverse and unique; therefore pedagogy and evaluation should aim at making it possible for this diversity to bloom. It is the learner's responsiveness to what is taught rather than just their capacity to retain it that should be the focus of evaluation. Such responsiveness includes their ability to connect their learning to various other experiences in their life, their capacity to frame questions about the content of their learning in novel ways, and, particularly, their capacity to see deviations in their 'lessons' from the idea of the 'right' and the 'good'.

Education, as a planned endeavour, at a personal level on a small scale or institutional level on a large scale, should aim at making learners capable of becoming active, responsible, productive, and caring members of society. They are made familiar with the various practices of the community by imparting the relevant of skills and ideas. Ideally, education is supposed to encourage students to analyse and evaluate their experiences, to doubt, to question, to investigate and to think independently.

As we grow, we face new and unfamiliar experiences which question our old ways of thinking as these experiences are either inconsistent with or at a considerable variance from what we had gradually learnt to take for granted. Such experiences are critical and challenging as they involve or require formulation of new concepts, revision of preconceived notions, and new ways of looking at and dealing with the world. It is this unique human ability, called rationality, which is manifested in a wide variety of ways. Teacher education courses need to offer opportunities for such reflection and self-questioning.

Our attempts to make sense of our experiences, to comprehend the world that we live in, require that we recognize patterns, structures, and order in the world. Without such recognition, we would not be able to make any discerning judgments; we would not be in a position to be certain about anything. This quest for certainty, taken to its extreme, tends to become a demand for a monistic and absolute criterion which leads to the drawing of

sharp lines between the rational and the irrational, knowledge and the lack of it. In becoming captives of such a restricting vision, we forget that there are numerous ways in which we learnt to know and to reason about the world. Thus rationality tends to be reduced to mere formulas of deductive reasoning, placing greater value on theory over practice, natural sciences over art, and information over knowledge. Teacher education courses have the responsibility to pro-actively counter such tendencies and to bring to the surface several contradictions that distort our perceptions and hence the ability to relate and communicate with children and with each other.

Cultural diversity is one of our greatest gifts. To respect and do justice to others is also to respect and do justice to their respective cultures or communities. Cultures on the so-called periphery must receive as much attention as cultures in the centre. Ways of life other than one's own must be imaginatively and effectively presented as deserving of as much respect as one's own.

Individual differences are as important as cultural differences. Individual children frequently have capacities and skills which do not find adequate recognition in formal learning environments. Encouraging the development and nurturing of these skills and capacities would not only enhance the individual's life but also enrich the life of the community. Education has the responsibility of promoting and nourishing a wide range of capacities and skills in our children: the performing arts (music, dance, drama and so on), painting and crafts, and literary abilities (weaving stories, wielding language to portray different aspects of life, a flair for metaphorical and poetic expression, etc.). It is through such a diverse set of experiences that learners would be likely to appreciate diversity and learn to respect differences.

Knowledge is not a unitary concept. There are different kinds of knowledge as well as different ways of knowing. The idea that objectivity, which is a necessary constituent of knowledge, can be achieved only if knowledge is free from emotions (care, concern, and love) must be abandoned. One implication of this for education is that literary and artistic creativity is as much part

of a civilization's epistemic enterprise as is seeking knowledge through laboratory experiments or deductive reasoning. The former frequently enables us to see truth in a way that the paradigmatic scientific quest cannot.

Education needs to be seen as a liberating process. The process of education must free itself from the shackles of all kinds of exploitation and injustice (e.g., poverty, gender discrimination, caste and communal bias), which prevent our children and adult learners from being part of the process.

Philosophical questions such as the above have been relegated to a marginal position in contemporary discussions on education. In actual fact, the discipline of Philosophy of Education as an engagement for educators is now being regarded by many as an inward-looking scholastic activity. 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 for contemporary educational policy and practice. One of the consequences of this shift is to make education into a 'system' requiring management and control so as to make it more responsive to the political and economic demands of the modern industrial state. It is therefore crucial to provide prospective teachers with opportunities to engage with philosophical issues and concerns related to aims and values of education. Student-teachers and teacher practitioners 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 some educational values while marginalizing others.

4.3 Knowledge and Curriculum: Reconstructing Disciplinary Knowledge

Activities and processes in the education and professional development of teachers should help participants to understand that knowledge evolves from experience and is constructed through the active process of exchange of ideas, beliefs and reflection on issues. Participating teachers also understand that

knowledge is constructed through experiences in shared and collaborative contexts.

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 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 and meaningful ways it is essential that through simple observations and experiments, followed by discussion, several theoretical concepts learnt during general education in school and college be revisited and reconstructed.

Engagement with content can be designed to be part of investigative projects. 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?, How do fish survive without air? How is electricity generated? Similarly, various 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'. Reconstructing concepts helps teacher-trainee and teacher practitioners to appreciate the nature of subject knowledge and to link it with appropriate pedagogic processes that communicate meaningfully with children.

4.4 Developing the Self and One's Aspirations as a Teacher

Teacher-trainees need to be provided with learning spaces through a focused study of issues related to self and identity, human relationships, adult-child gaps, assumptions, beliefs and attitudes. In addition, through a workshop mode, student-

teachers and teacher practitioners can engage with their own childhood experiences, personal aspirations and aspirations to become a teacher, their views on issues of gender and identity, personal, familial and social conflict. While exploring the meaning of ethics and values, their understanding could be facilitated by self-expression through humour, art and music. They are prompted to observe and understand feelings of fear and trust and the influences of such feelings in personal and social attitude. They could explore their own attitudes towards competition and cooperation, analyze and observe the impact of competition in personal and social life, observe the role of listening, attention and empathy and explore the role of a teacher as communicator in establishing a relationship with children. Apart from focused study through a link with theory, dimensions of self can be explored through activities of drama, art, music and craft, which often provide non-judgmental and non-threatening learning environments.

4.5   *Human Rights and Rights of the Child,*

Awareness of human rights and the commitment to use this awareness as a means to inspire the young generation are necessary ingredients of any good teacher education programme. 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 the institutional context, extending to the social, national and global contexts. Teachers also need to be fully aware of children's rights and the implications these rights have for social change. It is often noticed that information about human rights and the rights of the child is imparted as topic. In the absence of the effort to contenxtualise such information it fails to inspire the young teacher trainee to develop a commitment. Future reforms in the teacher education syllabi must address this problem.

4.6 *Adolescence Education and Environmental Education*

The issues related to Adolescence Education and Environmental Education needs to be highlighted in the Foundation component. The Practices related to the above issues needs to the suitably integrated to practice Teaching.

4.7 *Teacher-Child Engagement: Pedagogic Theory and School Internship* 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 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. To enable student-teachers to draw theoretical insights, they would need to engage with projects involving listening to children's reading, observing and analyzing reading difficulties, observing and identifying mismatches between school language and home language, analyzing textbooks and other materials used in different subjects in terms of presentation, style and language used.

A pedagogy course on mathematics would focus on understanding the nature of children's mathematical thinking as much through theory as through direct observations of children's thinking and learning processes, examining the language of mathematics, engaging with research on children's learning in specific areas, examining errors, mathematics phobia and the hidden curriculum.

Pedagogic study of school subjects such as environmental education, history or geography could be based an 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 her context, disciplinary content and the pedagogical approach.

Pre-service teacher education programmes should provide sustained engagement with children in school situations, experiences of teaching children and observing them and regular teachers in classrooms. This can be staggered over the years, beginning with practicum activities of being with children, learning to relate and communicate with them, without having the burden of 'teaching' them. This can be followed by field assignments of observing children in naturalistic situations, at play, in school or in the classroom. Only after providing easy comfort of relating to children and getting to know them,

teacher-trainees are entrusted with the opportunity to engage with the process of teaching-learning.

While functioning as a regular teacher, the intern would get the opportunity to learn to set realistic goals in terms of children's 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 children's 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'.

4.8 Learning to Integrate Ideas, Experiences and Professional Skills

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 the 2/4 year programme in a manner that allows an easy flow of movement from experience to theory and theory to field experiences.

For instance, through a child-contact practicum student-teachers are given the opportunity at the beginning of the programme, to be with 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 of children, many of the experiences they have had with children during the child-contact practicum are consciously brought into the classroom discourse to draw interconnections, verify and evolve theory and help them articulate new ideas.

A back and forth movement between theory and the field could also be provided through inbuilt field-based units of study, in each theory course. For instance, student-teachers could study the major characteristics of India's pluralist make-up with the help of projects based on locally done field work or conduct field interviews while studying the issue of reservation as an egalitarian policy, to collate people's experiences of such a provision and examine policy and theory in the light of these Programmes carried out in curricular priorities like environmental awareness and adolescent education should be carried out in a similar manner.

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. Because the learner is central to such a process, learning becomes a search for meaning. The student teacher learns to articulate the connections she draws.

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.

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 years trainees undertake several such tasks, including analysis of school textbooks and alternative

materials, analysis of children's errors and observation of children's learning styles and strategies.

4.9 Establishing Teacher Learning Centres

Teacher Learning Centres are viewed as mechanisms for grounding the education of pre-service students within immediate classroom contexts, the wider societal context and learner diversity. The conceptual framework within which these centres will operate is given below:

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 children 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 her context; subject-content, learning materials and the process of learning; and the trainee herself as an aspiring professional.

TLC: *A Resource for Teacher-trainees, Teacher Practitioners and Teacher Educators*
A TLC would house diverse set of resources that would be required for teacher-trainees to engage with the 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 children 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 children's 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 children's 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 children's reasoning at different ages. TLCs could

provide opportunities for teacher-trainees to understand children's thinking through personal interviews and probing with individual children. Trainees could develop profiles of children from diverse contexts to help them appreciate their unique social, cultural and political environments.

TLC: A Platform for Developing a Repertoire of Skills
TLCs 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 children; create bulletin boards, story-poem folders and organize reading corners in classrooms. They would learn to use drama and art as a learning tool 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
TLCs 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 focused workshops they would examine adult-child gaps in communication, explore their own attitudes towards competition and cooperation, 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

TLC in a teacher education institute will provide the necessary space which could be commonly used for both pre-service and in-service teachers. Teacher education institutes that organize both programmes would need to coordinate 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 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. The DIET-TLC would provide the necessary structural space to (a) design the 'routine' in-service package of 20 days and provide hands-on training, which addresses classroom concerns and teachers' needs. (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-based institute 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 institute and schools.

The following chapter focuses on the issues and concerns of the evaluation of teacher-trainees.

Chapter V: Evaluating the Developing Teacher: Issues, Concerns and Alternative Framework

5.1 Introduction

It is envisioned that the proposed content and pedagogic approach of Initial Teacher Education would enable the student-teacher to engage deeply with children and their socio-cultural context, the school curriculum and textbooks, the process of learning and knowledge, their own psychological and professional skill development, the understanding of institutional arrangements and policy perspective and a school-based approach to pedagogy and curriculum. This engagement with a vast repertoire of conceptual and practical knowledge is expected to create several opportunities for trainees to reflect on issues and concerns, self and others and in the process enhance their understanding, develop conceptual clarity and new insights, hone their skills and grow as persons and teachers willing to take responsibility of their own and children's learning. The challenge before this new envisioning is to formulate an appropriate set of guidelines that will enable an objective assessment of the entire gamut of developing dimensions in each of the trainee-teachers. Accordingly, a major revamping of the evaluation system currently followed in teacher education programmes would be necessary.

The present system of evaluating the teacher-trainee is steeped in the rituals that govern most of the theoretical and practical components of teacher education programmes. Most of these rituals emanate from the behaviouristic approaches that view learning as tangible outcomes which are assumed to be linearly and simplistically related to pre-determined objectives. Moreover, the assessment measures tend to be excessively quantitative and often at the cost of understanding and estimating the qualitative development of a trainee-teacher. For instance, assessing the teaching performance of a trainee in terms of marks could serve the limited purpose of examination but fails to make an analytical statement about the trainee's developing capacities as a teacher. It is worth asking the question: What does it mean if a trainee

obtains seventy percent in practice teaching, or if two trainees obtain the same percentage? What does this tell us about the capacity of the teacher to communicate with children, to enable them to make conceptual advances in their understanding of specific subjects and to help them develop into harmonious human beings?

5.2 The Ritual of Evaluation: Pattern and Underlying Assumptions

A typical evaluation pattern followed by the bulk of teacher education programmes centres around student assignments for theory as well as practical courses. More often than not students are inundated with assignments to the tune of about 3 per course. Given 4 compulsory theory courses and 1 optional (in a typical BEd Programme), each student is expected to submit close to 15 assignments in a period of one academic year. This period is further reduced to a maximum of 7 working months, given the calendar schedules and the number of official days off. In addition, student-teachers in many programmes are expected to submit 3 assignments towards general tutorials (including a book review), a report on community work (involving 10 hours of field-based work), a report on peer evaluation and one on a single aspect of the school they visit regularly for practice teaching. To this is the added burden of formulating 40 lesson plans, 20 in each of the two school subjects opted by them during practice-teaching.

The burden of submitting assignments and lesson plans within a given time frame ensures that students remain incredibly busy through the entire BEd programme and all written submissions are reduced to rituals. The underlying assumption is that hard labour and practice will create 'trained' teachers. In fact the hallmark of current teacher training programmes is to keep trainees busy to such an extent that they are left with little time to think or reflect on and about what they are doing. For instance, lesson planning is taught during teacher training merely as a formal routine which, along with constant demands of submitting assignments socialises the young trainee into the profession without disturbing its underlying assumptions about

knowledge and curriculum. Left unaware of these assumptions and the consequences of the practices based on them, the student-teacher plays an active role in maintaining status-quo. An unrealistic busy schedule ensures that teacher-trainees 'learn well' the art of 'reproducing' information 'given' in textbooks.

Where individual teacher educators prompt trainees to go beyond the textbook and to engage with curriculum and pedagogy in reflective ways, stark contradictions inherent in the 'ritualized' nature of their training and unequal power equations between the teacher and the taught creates disillusionment and inertia. Such a regimen also ensures that teacher-trainees internalize this pattern in a manner that socializes them into behaving in mechanical and controlling ways when they become full teachers.

Most teacher-trainees are found spending hours on decorating assignment and lesson plan file covers with minimal time spent either on reference and library work or reflecting on what they write about. Assignments and lesson plans are usually treated as chores to fulfill ritualized formalities for internal assessment towards obtaining paper certification. The content of students' written submissions is routinely processed out of given texts and more recently, from materials available on the net. Written submissions have ceased to serve the purpose of adequate and timely feedback towards more rigorous training and reflection. The consistent pattern of 'inflated' internal assessment marks across a wide range of teacher education institutes and the wide disparity between internal assessment and annual examination performance of students bear testimony to the extent and nature of degradation of the current practice of evaluation.

The problem of evaluation measures used in current teacher education programmes is not merely one of over quantification but also one of lack of comprehensiveness in coverage. Apart from conceptual and pedagogical aspects, a pre-service teacher education programme needs to develop and further enhance certain attitudes, dispositions, habits and discerning capacities in a developing teacher. A teacher's attitude towards children, their needs and problems, dispositions of tolerance, ability to listen with empathy, habits of punctuality, a seeking mind, habits of

reading and independent learning, a self-questioning and critical mind are particularly important in making a reflective practitioner. The present evaluation protocol has no space for evaluating qualitative dimensions such as these.

Moreover, the intake of a new set of students each academic year tends to create a false sense of innovation and new zest. The design and practice of teacher education tends to either ghettoize faculty members into teaching the same courses year after year or makes them excessively possessive of the courses they teach. The near absence of reflection either in the manner in which teachers are trained or in the manner in which teacher educators function, given the ritualized nature and busy schedule of training programmes, leads to a routine continuation of the 'rituals' of teacher training and a false sense of having achieved professional standards in teaching.

5.3 Questioning Current Practices of Assessment

While a vast amount of international research literature questions the authenticity of behaviouristic and other positivist approaches to assessment adopted in schools, there exists, in comparison, precious little reflection on evaluation procedures adopted for assessing the developing teacher in teacher education programmes. International scholars across the globe for instance, have contested that the pure objectivity of assessment outcomes is an illusion. In their view classroom assessment techniques are essentially social processes that are vulnerable to bias and distortion. It is therefore more appropriate to embed assessment in the social reality of the classroom and allow the process to be meaningful to the learner.

Adult learners have a vast amount of life experiences and knowledge and are inclined to be pragmatic and goal-directed. Assessment of their learning will therefore need to be oriented to their own evaluation of themselves. Teacher educators will need to avoid disciplining and giving directions or loosely structure assessment activities. Hence, teacher education programmes will need to give student teachers greater control over the what, how, why, when and where of their learning.

Fresh perspectives on learning, based on constructivist, philosophical, and cross-cultural research perspectives, suggest that meaningful learning occurs when learners have a knowledge base that can be used with fluency to make sense of the world, solve problems, and make decisions. This redefinition of learning requires a collaborative classroom which is notable for its change in the roles of students (in this case, student-teacher) and teachers (in this case, teacher-educator). The collaborative classroom is characterized by shared knowledge among teachers and students, shared authority among teachers and students, teachers as mediators, and heterogeneous groups of students.

In the light of the above, the following would emerge as implications for teacher education: teaching instruction needs to be problem oriented and not discipline or theory oriented; approaches such as case studies, simulations, role-play and action research would be more appropriate for the professional development of teachers; emphasis of instruction should not be memorization of content but accomplishment of tasks, insights and competence; open-ended activities and questions could help bring out the vast experiences of the prospective teachers, as also their 'personal theories' about knowledge, learning and learners for scrutiny and analysis.

5.4 Rethinking the Purpose of Assessment

In the light of a renewed understanding of knowledge, learning and the learner and a new way of viewing the education of teachers, the following are suggested objectives of assessing teacher-trainees:

To estimate the trainees developing understanding of the process of child development and learning, major theoretical positions and principles and how the education of children is influenced by the social, economic and cultural contexts in which they grow.

To gauge the trainees understanding of the societal context of education; their capacity to critically examine inequities in society such as gender, caste, class and community and their

understanding of contemporary Indian issues and concerns of education, childhood, environment and development and capacity for interdisciplinary analysis of such issues.

To assess trainees understanding of philosophical and sociological frameworks and their developing capacity to examine and reflect on assumptions about human nature, knowledge and learning.

To gauge trainees developing understanding of the nature of children's thinking in mathematics and their thinking about natural and social phenomena and the role of language and other cognitive processes in developing such thinking.

To assess trainees understanding of how curriculum is designed and influenced by various considerations and ideological factors, how curriculum can be analysed and deconstructed.

To assess the trainees grasp of the school as a system, techniques and processes of school organisation and management, their understanding of educational theory and curriculum in the context of society, community and the provision of education.

To understand the different ways in which the developing teachers demonstrate their 'changing dispositions' towards children, education, and contemporary social concerns; to understand 'changes in conceptual thinking' about many of these concerns and the 'open-mindedness' to accept other view-points, multiple perspectives on a given issue and 'demonstrated tolerance of diverse opinions' and socializations; flexibility in thinking, capacity to solve problems, take initiative, view oneself from a distance and reflect.

To understand the trainee's developing professional skills such as the art of story-telling and the use of craft, music, theatrical skills/techniques in organizing group learning, involving maximum children, sustaining interest, relating to subject-matter organization and relevance, engaging learners in deeper reflections and self-questioning; interpersonal skills, skills to relate and communicate with children and each other as peers

and colleagues, scholastic skills of reading and collating information, analyzing content of subject-matter and sub-text, discerning logical threads in a given argument, skills to put together a logical argument, articulating differences in perspectives, organizing thought and writing cogently.

5.5 Evolving the Basis and Criteria of Assessing Student-teachers

Marks do not form the sole purpose of assessment. Marks however can be the end product of a long process of assessing student-teachers using qualitative indicators specific to each area of assessment, which may be graded. These qualitative indicators can be drawn for each area. For instance, for evaluating a written assignment, it is important to reflect on why we want to expose students to the activity involving writing on chosen themes and clearly articulated questions. This would help us to arrive at a clearly articulated set of criteria, such as, the capacity of students to: put together her thoughts in an organized manner, present logical arguments, utilize existing research findings and theoretical frameworks relevant to the theme to substantiate presented arguments and writing with clarity and precision. Similarly, quality indicators can be drawn up for evaluating a practicum course involving the observation of children.

5.6 Some Exemplars of Evaluation Basis and Criteria

5.6.1 Observing Children

Student-teachers would observe some children for a given set of hours in specific situations: both naturalistic and formal situations, such as the park or a school. The number of hours of observations, the method used for observing children, recording formats, data coding, analysis and interpretation would all constitute the basis of assessment. Within each of these the criteria for assessment will need to be spelt out. For instance, for an assignment on observing children during play, it would be necessary to make detailed notes on the games children play, their verbal and non-verbal responses, the their use of language,

how they interact with peers: older and younger children, the themes they choose to play with, use of role play, their use of rules of the 'game', evolving rules or taking them as given.

5.6.2 Observational Records and Report Writing

The first level of evaluation can be done of the records maintained by the student-teacher. The evaluation is done of the detailed analysis of the records undertaken by the concerned student herself in interaction with and the academic support of a faculty supervisor. The report submitted by the student will then need to be evaluated on a set of criteria that logically flows from the task at hand and the data gathered. This would include assessing the developing teacher's capacity to understand the observed children's cognitive, affective and moral understanding of rules, interaction patterns, their demonstrated and latent areas of conflict, methods of resolving conflict, dealing with resistance, difference of opinion, negotiating points and strategies etc. The student-teachers comments and reflections on the observations will demonstrate whether they attempt to understand the deeper layers of children's thinking during play.

In cases where reports merely present a description of events as they happened, this would reflect a very superfluous understanding of children that the student-teacher is able to arrive at given the vast opportunity of such close interaction and observation of children. Another set of criteria would include the student-teacher's capacity to interpret children's play within the theoretical frames that she has studied. For instance, she may be able to see that a child's play changes dramatically with age. Children tend to use a lot more egocentric speech or private speech rather than use language for mere communication in the early years. Gradually, changes in the pattern of language usage could indicate learners' developmental levels and hence provide invaluable insight for the teacher to develop appropriate strategies of teaching-learning.

5.6.3 School Contact Programme

A school contact practicum is expected to enable trainees to relate and communicate with children even before they have engaged with issues of curriculum and teaching. The purpose will be to analyse critically their preparation, choice of activities and materials, developments that take place in the classroom, their own and other classmates' interaction with children. They are also expected to reflect on issues regarding children's learning, their expressions, creativity, issues of discipline and control and the influence of varying socio-cultural contexts on their learning.

5.6.4 Planning for the School Contact

Assessment will need to address each of the areas including planning for the school contact. For instance, it would be essential to assess the trainee on the relevance of the theme chosen, choice of activities, relevance of materials and organization of time. Assessing the contact in real time would include organization of material, communication skills, ability to engage children, spontaneity in interaction with children and time management of the contact.

5.6.5 Post-Contact Discussions, Report Writing and Group Presentations

The next level of assessment would include an evaluation of the quality of post-contact discussions: insights gained during the contact, analyzing and interpreting the contact experience and articulating reflections on it. After the group discussions with the concerned faculty supervisor, students submit a written group report. The criteria to evaluate the report would include clarity of thought, organization and format of the report, analysis and reflection of the issues focused on and logical flow of the stated arguments.

In order to ensure that all members of a given group participate actively in the process, students are expected to make group presentations. These are assessed on their ability to identify and

articulate key elements of their report, clarity and organization of ideas, open-mindedness to critique, ability to substantiate presented arguments, including the ability to discern sweeping generalizations from substantive arguments, ability to reflect critically on their own experiences and analysis of the contact and the ability of the group in coordinating and co-operating with each other. Students are also assessed on the nature of questions they ask from the presenters, their orientation and capacity to articulate genuine and probing questions rather than superfluous ones for the sake of it.

5.7 The Psychological and Professional Development of the Teacher

A very important and radically new departure from traditional teacher education is the inclusion of courses, theory and practicum on the development of the self: a theoretical and experiential engagement with student's own self and the dynamics of identity formation; capacity to reflect on education as a relational process, requiring communication skills, social sensitivity, receptivity and reflexivity.

5.7.1 Self Evaluation

In order to assess any individual student's personal growth, it is imperative to be in continuous touch with students through interactive workshops. Therefore assessment can be done only by the faculty who has participated in the required workshops. As part of overall assessment, students should be asked to evaluate their own personal growth individually. Each student will give herself a grade on each criterion of personal growth. In addition the student will be expected to substantiate her own assessment of herself on a given criteria. Other assessment criteria would include regularity in attending the personal growth workshops such as number of workshops attended, punctuality in sessions and regularity in writing reports. Apart from this the nature of participation needs to be assessed in terms of willingness to share and reflect.

5.7.2 Criteria for Assessing Personal Growth

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, capacity to draw connections between various thought processes and experiences, 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.

5.8 Assessing a Repertoire of Skills

An effective teacher education programme must include courses that allow trainees to develop a variety of professional skills. A practicum course on story-telling and children's literature for instance, is expected to help trainees develop skills of telling stories, learning to appreciate and understand stories told by children, develop insight into what is 'good children's literature', learn to use stories as a medium to facilitate expression, imagination and the creative use of knowledge and reflect on issues of knowledge, its nature, relationship with stories.

Assessment of student-teachers would include their regularity and nature of participation in workshops, developing skills of creating bulletin boards using relevant themes and stories that have a specific purpose, for instance, play with language or facilitating conceptual development and clarity of ideas with regard to a social or scientific phenomenon. Students can also be assessed on the story folders they make: the 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 with children in a variety of

situations and developing a criteria for evaluating 'good' children's literature with substantive reflection on the why of such a criteria. Students can also be assessed on their developing skills of telling stories to children: selection of story according to a theme, appropriateness in terms of the age group of the children being addressed, the use of animation, voice, pitch, clarity, eye contact, the use of gestures, handling of a story book and the nature of children's involvement.

5.9 Understanding the Learner, Curricular and Pedagogic Issues and Concerns

Teacher-trainees need to explore curricular and pedagogic issues and the organization of learning through practicum courses that complement a theoretical engagement with curriculum studies. This would include the scrutiny of official documents on education such as curriculum frameworks and commission reports, observing teaching-learning and disciplinary practices in Indian classrooms, learning to reflect and construct curricular materials, evolving and systemising their understanding of new pedagogic practices in specific areas of sciences, languages, mathematics and social sciences.

5.9.1 Basis of Assessment: Suggested Tasks

Several well structured tasks would define such a practicum: observation of classrooms, visits to centres of innovation, document and text analysis, development of materials, block teaching and record keeping. It is expected that each student would develop a critical understanding of curricular materials and teaching practices in terms of their suitability for learning. Each of the following would become the basis of assessment: observations using the criteria of detailed records and focus on key elements; individual and group reports of their visits to innovative centres using the criteria of interpretive analysis used rather than a mere description of what they saw, reflections and the trainee's attempt to link with various pedagogic concepts and approaches; material development using the criteria of relevance, simplicity and adequacy, innovation, organization of material, time-frame of different activities, method of

introduction, transaction and reflecting on the experiences of children; journal using the criteria of ability to reflect on successes and failures of activities/materials, identifying reasons, linking with theory, reflective learning and identifying innovative approaches that work.

5.10 School Internship: Learning to Function as a Teacher

Given the fact that the traditional model of practice teaching would give way to a comprehensive school internship programme, it is envisioned that the trainee will have an intense and focused school experience. The programme would provide the necessary physical and psychological space to examine what is possible and to evolve innovations. While functioning as a regular teacher the intern gets the opportunity to examine her knowledge-base and translate her knowledge-base, pedagogic theory, understanding of children and her developing repertoire of skills into reflective classroom practice.

The existing concept of internship of teaching/ practice teaching needs to be reformulated. Field experiences/ Internship / school attachment observations and practicals need to be organized in a way that these are useful in evaluating teachers ability, support socialization within the profession, stimulates development of teaching skills, provide a protected field for experimentation, allow insights into new perspectives and enhances motivation to continue learning. During observation, field practice and practicals, the student- teachers may learn in variety of ways. These are: by reflecting upon their own teaching practices (introspection), by reading journals, books, magazines, by observing children /learners, by studying a case, by observing other professionals/peer at work, by undertaking skill development exercise, by working with hands etc. Internship should focus methodology of school improvement instead of 40 or 50 lessons. There is a need for longer duration school attachment programme (for example 5/6 months) in one year B.Ed programme. In four year/ five years integrated courses the period of internship needs to be spread over a period of 4/5 years instead of organizing it either in 3rd or 4th year.

While planning internship programme in Teacher Education Institutions, the internship practices / practicals practiced in medical, legal, engineering and management profession needs to be studied. In organization of field activities in the areas of fieldwork with the community, work experience, arts and craft, health and physical education, the focus should be on development of managerial skills, organizational efficiency, leadership abilities, democratic attitudes and creative abilities. During school attachment / internship of teaching the student teachers will try to find relationship between theory and practice by practicing lessons and participation in other activities such as action research, rapport building with the society, maintaining school records participation in cultural programme, sports and athletics, observation, understanding a child, understanding how the child learns and a study of school management.

RIEs need to plan internships/school attachment programme in large number of schools particularly a cluster of schools. RIEs should nurture a cluster of schools located in a neighborhood beyond internship and take part in building school ethos, partnership in school improvement, school administration and all activities of the school in collaboration of the local community. RIEs are to obtain the approval of the Department of Education of the concerned state in this respect. The new concepts highlighted in NCF (2005) needs to be experimented in a cluster of schools.

Laboratory Type of Experiences through specially organised Demonstrations. In addition to observation based and field practice based experiences for developing professional competence particularly insights and understanding needs to be created in pre-service programme to provide laboratory type of experiences through specially organized demonstrations, use of new technological devices, systematically designed presentations under controlled conditions, etc., which could help them to view 'pedagogy ' as a domain of processes which is large and varied in epistemological sense.

5.10.1 Basis and Criteria

The internship programme would start with a systematic schedule of observing and reflecting on existing classroom practices and building rapport with regular teachers of the school. This would be followed by a schedule of four days a week of regular teaching in a chosen class. Interns would be expected to teach all subjects in a given primary class and one or two chosen subjects for teaching at the middle, secondary and higher secondary school level. Developing unit plans of teaching rather than lesson plans, using web-charts and resources other than school textbooks would be the essential focus of training and evaluation. The intern would be expected to develop resources for teaching-learning and collate these in a resource centre in the school where she works as an intern. The intern would maintain records of planned units of study and a regular daily diary/journal of her reflections.

5.10.2 Classroom Observations, Unit Plans, Reflective Journals

Observing the classroom practices of the intern would form an important feature of evaluation. Student-teachers can be assessed while they engage with learners in the classroom using the following criteria: interns' knowledge-base in a given subject area in terms of conceptual clarity, organization of material and use of 'information' in enabling conceptual development; the quality of student-teachers' oral and written communication, the culture of learning environment created; her choice of activities and materials in terms of relevance, developmental appropriateness and the challenges it poses for learners; the nature of her responses towards children in terms of appropriate feedback, personal attitudes and pedagogical orientations towards children's own language, their thoughts/ideas and knowledge and the attempts at providing space to include their experiences in the classroom; the student-teachers' skills and attitudes towards disciplinary issues and classroom management.

Each intern would be expected to keep a reflective journal that would help her to revisit her experiences in the classroom over the period of internship. The journal would include short

descriptions of how the class was conducted, how children responded, followed by analytical and reflective statements about her preparedness for the class, her responses to children's questions, her capacity to include children's sharing of their experiences, her 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, whether her reflections demonstrate self-questioning and self-learning, do they show her feelings of accomplishment, sense of joy, despair and frustration. Do her reflections demonstrate conceptual clarity in terms of her observations of children, their thinking and learning processes, analysis of errors in the light of research and theoretical literature? The intern can be evaluated on her own summative report of recorded reflections over a semester.

The unit plans prepared and submitted by the interns can be evaluated on the criteria of sources of chosen content, appropriateness of the activities and materials used, the organization of activities and evaluation in terms of time allocation and management; method of introducing an activity, process of involving learners, the use of various skills the links of classroom learning with follow up learning activities designed for students.

5.11 Learning to Evaluate Children

Interns would need to be evaluated on how they design the assessment of learning in children and their assessment of the curricula inputs provided to children. Both these will require giving a certain degree of freedom to the interns in terms of planning assessment. The format need not be rigidly defined as is done currently using the ATR format. Student-teachers can be given the freedom to design their own ways of assessing children's learning. Assessing children's potential to acquire skills, develop problem solving strategies in new and unfamiliar

situations is for instance, not possible through the static measures of assessment currently used in schools.

Trainees can be evaluated on the type of questions formulated by them in specific domain-areas. For instance, questions that break away from the tradition of assessing children's recall capacity should help assess children's developing capacities to think laterally, interconnect ideas and use given information to make logical inferences and substantive arguments about a particular issue. Trainees can also be evaluated on the variety in their design of 'test items' and approaches.

More importantly, trainees would be expected to view children's assessment as an aid to learning and not as an indicator of learning alone. The integration of assessment in teaching aims at ensuring learning. Assessment procedures and tools can be considered valid and useful in so far as they allow adaptation of teaching to student needs. The primary goal of classroom assessment is to determine how different learners respond to instruction, how different teaching processes enhance learning, and, on this basis, to assure the regulation and differentiation of teaching-learning activities. In addition, attempts need to be made to foster active student participation in learning by means of self-assessment and peer-assessment.

Chapter VI: In-service Education and Continuous Professional Development

6.1 Introduction and Rationale

The idea of in-service education for teachers was discussed in the Kothari Commission (1964-66) and in the Chattopadhyay Commission (1983-85) as important in order to enable teachers to renew their knowledge about teaching and the subjects they teach as well as to help to break the isolation of the teacher. All initiatives in curriculum, whether of the whole curriculum, special inputs in specific subject areas, or infusing new social concerns, have called or been implemented through the renewal or up-gradation in the knowledge and practice of teachers already in school. This includes both government initiatives as well as small and large interventions into government schools and non-formal/alternative schools by Non Government Agencies.

These concerns for the teacher as a professional as well as the teacher as the most important point for transformation in curriculum renewal 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 increasingly more financial support for these activities. Following the Kothari Commission report, in several states school clusters were created to forge inter-linkages between primary, middle and high school and provided a forum and structure of interactions between teachers and receiving professional inputs. Following the NPE 1986, in-service teacher education received support through central government funding for the establishment of Institutes of Advanced Studies in Education (IASE) to chosen University Departments of Education and District Institutes of Education and Training (DIET) in each district with a view to provide a space for the conduction of inservice courses for teachers of high school and elementary school. The DIETs in addition had the mandate to work towards universalising and renewing elementary

education through supporting innovations and strengthening field activity. The District Primary Education Programme (DPEP,1995-2003) across the country further set up the structures of the block and cluster resource centres with the explicit mandate to provide inservice training to primary school teachers in new, child-centred pedagogic methods and to provide school based support to teachers. The attempt has been to shift away from the idea of subject inspectors and inspectors of schools attached to the education administration office, towards the idea of a resource person attached to an academic resource and support centre. The Sarva Siksha Abhiyan (SSA, 2003) 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 for a and professional activities for teachers. All teachers are members of associations which have from time to time taken up academic activities and organised conventions and meeting to discuss professionally important developments. Teachers' involvements in textbook preparation and indeed even in the preparation of training modules etc. has grown over the years. Teacher themselves have opportunities to work in the block and cluster centres as well as to contribute to trainings as resource persons. They are also members of committees formulating policies in education. Several important networks of teachers, such as the KSSP, BGVS, BJVJ, TNSF have contributed to both academic self development as well as directly working with children both in and outside school. NGO initiatives such as the Hoshangabad Science Teaching Programme (HSTP) in Madhya Pradesh, the Uttarakhan Seva Nidhi of Uttaranchal, BVIER, Pune, and PRISM of the Homi Bhabha Centre in Mumbai, have developed and implemented models of teacher professional development and support in ways that directly impact the classroom. Furthermore, all agencies trying to reach out to children through special packages, whether to promote AIDS awareness or introduce technology into the classroom, heavily depend on providing related training to teachers to implement their programmes.

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 children's learning and provide educationally rich experiences to them. Micro-stories of success often seem to 'fail' when upscaled. 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 on '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 the teachers professional needs as a professional continue 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.

6.2 Aims of Programmes for Continuous Professional Development of Teachers

As a professional, teachers seek fora and avenues for their self development:

- to explore, reflect on and develop one's own practice
- to deepen one's knowledge of, and update oneself about one's academic discipline or other areas of school curriculum
- to research on and reflect on children and their education
- to understand and update oneself on education and social issues
- to prepare for other roles professionally linked to education/teaching, such as teacher education, curriculum development or counselling etc.
- to break out of ones isolation and share ones experiences and insights with others in the field, both teachers, academics working in the area of one's discipline, as well as intellectuals in the immediate and wider society

Education and curriculum planners also seek to provide avenues for the professional development of teachers as a part of curriculum reform and strengthening:

- to enable teachers to work towards prioritised goals in education such as universalisation and inclusion
- to influence social attitudes and generate greater commitment to constitutional values and overcoming discrimination in the classroom
- to transform existing practices towards more child friendly methods and methods suited to strengthening conceptual learning and understanding rather than rote learning.
- to 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, or population education, 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 personnel (para-teachers) in various kinds of non-formal centres, it becomes necessary to include the unaddressed needs of pre-service programmes through continued professional development.
- to prepare teachers to play enhanced roles in the education system, as resource persons, or head masters, etc.

6.3 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 context. However, some general principles would need to be kept in mind during the design and implementation across various programmes. These would necessarily relate to the teacher as a professional and the content and pedagogic approach to be followed:

6.3.1 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 teacher group concerned, regarding whether they need such a programme and why they are to attend it. The principal of choice of programmes to attend based on teachers own assessment of what she or he 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, compromises on this 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 cognise 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.

6.3.2 Addressing Teachers as Learners

- Teachers are adults, and have already formed a working professional identity and already has 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 content and approach, how trainings are announced, and how they are implemented. Programmes must build on and strengthen the teachers 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 her autonomy will be unsustainable in the long run, providing very little psychological motivation for teacher to internalise what they have been told into their practice.
- As adults and professionals, teachers are critical observers of the contents of in-service activities and the extent to which they learn from these 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 trainings lead to cynicism and training fatigue.

6.4 Seeking Various Routes towards Teachers' Continuous Professional Development: Types of In-service Programmes

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

6.5 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 take over the year. For example, a DIET could design and offer courses in specific topics such as 'teaching fractions', 'developing secular attitudes among children', 'aids education' etc. Some of these could be of a short duration, say 4 to 5 days, while other 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, organising and managing group activities etc. 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. Mass

trainings cannot and do not have any impact on teachers practice and are a waste of resources and time.

6.6 The Use of Distance Media

It should be noted that on the use of TV and radio as ways of training teachers, there is little evidence that this has impact. Nevertheless, these 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 providing the necessary platform for the same.

6.7 Sabbatical for Study and Research

Teachers could be provided with the option of taking a year off (paid or unpaid), in order 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 a sabbatical could also be linked up with an appropriate mentor on the site to guide the teacher during this period. Small research projects 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.

6.8 Professional Conferences and Meetings

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

6.9 Professional Fora, Resource Rooms and Materials

Providing professional fora such as meeting 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 of the teaching profession. 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 networks such as BGVS, TNSF, etc., and participation in such activities should be encouraged as a valid form of in-service development of teachers.

Teachers could also be encouraged to form subject groups at the block level, which could be provided with support to plan for the development of the teaching of the subject in the block through a variety of ways - seminars for teachers, trainings, *melas*, children's clubs, etc. These could be given an official status and space at the concerned block resource centre and have linkages with the DIET. 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 district education institute, e.g. DIET could support a few university faculty fellowships, to enable interested people from the university to come and spend upto 4 to 5 months undertaking activities with teachers and children.

6.10 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 utilise their services during the period of their stay.

Teachers could also be provided with short term fellowships and funding support (based on proposals) to either come to the DIET or carry out specific activities for the school children and teachers in their own district. This 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, etc. In the long term, in every DIET, 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. For such fellowships, instead of the regular norms of PG degree in education, etc., even DEd and BEd graduates who have experience and established track records of being excellent, innovative and reflective teachers could be considered.

6.11 Implementation of Continuous Professional Development: Critical Aspects

6.11.1 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 memos which are issued to teachers to attend these trainings, without giving teachers any choice in the matter. Finally there is no coordination between these agencies, nor does the education department have any mechanisms for coordinating 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 inspectors, CRPs or HMs. 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 etc., would need to be worked out by these agencies providing training, and this need not fall as a mass responsibility of the concerned CRP, as is currently happening. Allocation of funds and training dates, training time, etc. would need to be made more decentralised and based on individual teachers' preferences, thus doing away with the current model of mass trainings based on the one-size-fits-all design. Further training dates allocations could also include time spent in other professional activities such as seminars and conferences, etc. Systems that would enable teachers to avail of long term courses, sabbaticals, etc., would also need to be evolved. Mechanisms for keeping track of trainings and professional activities of teachers would need to be evolved and put into place at the blocks and clusters.

6.12 Sites and Agencies

By opening up the method of organising and providing trainings on the lines suggested above, many more 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 of not only teachers, but also other institutions. The following could be additionally considered:

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.

Colleges of pre-service teacher education could all include extension activities which would also enable their own students and faculty to keep in touch with active teachers. They could

also provide special services to their alumni, continuing to mentor and keep track of their developments.

Schools, under the leadership of interested principals and able to support additional adjunct faculty, could, themselves could 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.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 HM.

6.13 Impact

The expectation that ideas that are received at workshops will be directly taken into the classroom for practice is misplaced. Often *direct support in the site* of the classroom/school is required in order to motivate and 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 and these also need to be addressed. Pre-test, post-test ways of assessing training impact are invalid and pointless. Never-the-less, 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 cut indicators for short term and long term impact need to be conceptualised along with the design, and subsequently monitored for also. 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 it requires continuous involvement of supporting agencies, to sustain impact on the ground. Programmes and agencies such as the SCERTs and DIETs need to be alert to this requirement and willing to invest in the long term in such involvement.

Chapter VII: Systemic Reform in Teacher Education

7.1 Management of Teacher Education

'Education' is in the concurrent list as per the Constitutional amendment of 1976. Accordingly, though teacher education is the responsibility of the State/UT Governments, Central Government has the responsibility to maintain quality and standards, including those of teaching profession at all levels and to promote excellence in teacher education. Management of the Teacher Education System involves multiple tasks. Some of these are as follows:

7.1.1 Development of Management Information System (MIS) on Teacher Education

Development of a comprehensive data base on teacher education institutions and programmes, pertaining to information on curricula and syllabi at different levels of teacher preparation, nature of curriculum revision, profiles of teachers: untrained, under qualified, mis-qualified and unemployed trained teachers, need for professionally qualified teachers in various school subjects across States/UTs at the elementary, secondary and senior secondary level, budgetary and infrastructural provision for teacher education in different states, the use of ICT and the nature of linkages between professional education of teachers, the system of school education and higher education would help in policy planning and decision making.

7.1.2 System of Accreditation for Institutions of Teacher Education

There is need to introduce a process of institutional accreditation for ensuring the quality of pre-service and in-service continuous professional education of teachers. Mechanisms for performance evaluation of Teacher Education Institutions and collective monitoring could be worked out in collaboration with the National Assessment and Accreditation Council (NAAC). In particular, private and self-financing teacher education institutions need to

be brought under scrutiny in order to control the increasing commercialization and unregulated growth of 'teacher education shops'.

7.1.3 Formulation of State-Level Policy for Initial Teacher Preparation and Continuous Professional Development

State-Level Policy for Teacher Education needs to be formulated jointly by the State Departments of Education, SCERTs, CTEs, IASEs, DIETs and University-based Departments of Education. A set of criteria and parameters need to be laid out for the periodic review of curricula and syllabi of pre-service teacher education courses at different levels. Linkage between teacher education institutions and a cluster of schools, design methodology and pedagogic approach of in-service and continuous professional development programmes, the use of ICT, co-ordination, monitoring, networking and sustaining linkages will need to be worked out.

7.1.4 Promoting Innovations in Teacher Education[§]

Innovative practices in the education of teachers have been initiated in India since the time of pre-independence. Many of these were successfully carried out and have left a rich legacy to learn from. The key innovations include Gijubhai Badheka's (1920) set of innovative pre- primary schools at Bhavnagar in Gujarat, established under the auspicious of the Daxinamurti Institute. In 1921 Rabindranath Tagore established the Shantiniketan in West Bengal and in 1937 Mahatama Gandhi launched the scheme of Basic Education for the primary stage of education, in Wardha, Maharashtra.

Some of the key innovations practiced in teacher education across the country during the post-independence era also offer many points of departure from conventional teacher education programmes. The Vedchichi programme of Teacher Education started in 1968 at Gandhi Vidyapeeth is based on Gandhian

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[§] Part of this section is based on the Position Paper on Teacher Education for Curriculum Renewal, National Focus Group, NCERT, 2005.

principles of self-help and self-reliance. Subjects are not taught as independent disciplines, but are woven into specifically designed activities or projects of 5 to 15 days duration. These projects are located in the surrounding rural areas, thus enabling direct contact with the community. The main features of this programme are: learning through participation in activities; self-directed learning followed by group work and group discussions; independent analysis of a problem by student-teachers and the practice of self-motivated learning based on experiences.

Teacher training has always been a very important part of the Hoshangabad Science Teaching Programme (HSTP, 1982), based in Madha Pradesh. Every teacher is required to undergo residential training for three weeks each summer for three years. These yearly sessions are interspersed with monthly meetings and follow-up programmes in individual schools. The basic philosophy was that every teacher should have done every experiment that children were required to do so that they could have first hand experience of the skills and difficulties every experiment involved; to have engaged in discussions with their peers on the outcome of the experiments so that they could guide similar discussions with their students; and also had a chance to provide feedback on the feasibility of what was being attempted so that the curriculum could be modified accordingly, if necessary. This meant that the teachers worked in groups of four as would their students in the classroom; that they were provided the same kit of materials as their students would use and go through the same processes as their students would undergo. Particularly in the early years of the programme this meant that curriculum development was not only the domain of the subject experts but that teachers through the training programmes, and later through experiences with students, played a significant role in determining the final shape of the curriculum. Thus the teachers owned the curriculum they helped develop.

The BElEd programme (1994), offered in select undergraduate colleges of the University of Delhi, is designed to integrate the study of subject knowledge, human development, pedagogic knowledge and self-knowledge. The main aim of the BElEd is to

prepare reflective practitioners who are socially sensitive. It is an attempt to replace an unquestioning and meek teacher with one who can critically reflect on the 'received' curriculum and 'prescribed' knowledge. It prepares students to move beyond mere textbook knowledge. The BEIEd students attempt to initiate their own inquiry, examine ideas in all their complexity and deal with ambiguity. The aim is to develop in students a mental flexibility needed to critically examine and synthesize knowledge from various sources and deal with the complex challenges of classroom teaching. Student-teachers learn to engage with issues of subject content, reflect on appropriate methods of assessment and attempt to evolve pedagogy in consonance with the needs of the learner. There is a special emphasis on understanding the nature of the child, the adult-child relationship and its dynamics within the classroom. Students engage with issues of politics of education within the classroom as they reflect on the best ways of facilitating children's and their own learning.

This course is also designed to develop an understanding of contemporary Indian realities through a study of key historical, political, social, cultural and economic issues. Students observe and analyse gender inequities in the process of schooling and develop intervention strategies. The longer duration of the programme offers students critical psychological space to explore and define their own approaches to educational issues as they are in regular contact with the school setting over the four years. Students visit institutions engaged in innovative practice in elementary education, in order to broaden their horizons. They undertake research projects with the aim to further develop the process of reflective enquiry through classroom-based research. Through specially designed colloquia students learn specific professional skills like using theatre, art, crafts, story telling and music in education and creating a resource centre in schools.

The Anweshana (1997) experience is a participatory teacher education programme (Bed enriched) offered in Banasthali Vidyapeeth, Rajasthan. Anweshna operates on the belief that there is need for and possibility of providing opportunities to all student-teachers to truly participate and learn in their unique ways. Student-teachers learn to evolve curriculum and its

transaction modes. Organisationally, such an integrative, experiential approach facilitates greater rigour and personal involvement of the participants.

Innovations in formal teacher education programmes have been envisioned to integrate subject knowledge with professional development as per recommendations of the Education Commission (1964-66) and the Chhatopadhyaya Commission (1983-85). This serves the objective of achieving not only qualified professional school teachers but contributes to the development of a professional cadre of teacher educators, researchers and other practitioners leading to the possibility of developing wider academic support base for school education.

In the light of the several innovations in the education of teachers, the current one-year B.Ed model needs to be restructured to include a minimum of 6 months placement in schools as fully functioning teachers with an adequate quality time for interaction with faculty of Departments of Education. Innovations could be perceived in terms of reforms such as the introduction of long duration school internship programme, linking foundation courses to school practice, integration between content and pedagogy and innovations in pedagogic approaches. Another innovation could be to locate Teacher Education Departments in the Colleges of Liberal Sciences and Arts to allow students to opt for developing teaching as a professional career. The existing practice of Education Departments in Colleges of General Education to impart academic programmes in the shape of B.A. (Education) and (B.A. Hons) in Education in some states needs to be substituted by stage specific professional teacher education courses of elementary and secondary education, following integrated content cum methodology approach. Such a model would provide economic viability, wherein the services of faculty specialised in different subject content areas belonging to other departments could be fruitfully utilised in order to make teacher education a truly multi-disciplinary enterprise.

7.2 Breaking the Isolation between Teacher Education Institutions, Centres of Higher Learning and Schools

Teacher Education Institutions have typically operated in an insular manner, with virtually no interaction with other faculties even within Universities. Elementary Teacher Education institutions, in particular, have remained severely isolated from centres of higher learning as well as from schools. Traditional isolation from centres of higher learning have created teachers who merely learn to implement a given curricula. Teachers are neither viewed as agents of change nor are they seen as generators of knowledge. Isolation from schools on the other hand, has taken teachers away from the real challenges of the classroom: the learning child and the societal context. As a result, teachers are not trained to view learners and the process of learning within 'real' contexts. Teacher education institutes tend to 'use' schools for 'practice teaching' arrangements for student-teachers.

A cluster of schools in close physical proximity, a teacher education institute, such as DIET and where possible a university-based centre of higher may be brought together in the form of a school complex with adequate provisioning of academic support. The CTEs/DIETs, SCERTs and BRCs can be involved in identifying clusters of schools. The involvement of and partnership with a University-based institute of higher education can serve as a catalyst in the process of forging individual support and mentoring links between the school, the classroom and teacher education institutions. Experience indicates that annual programmes of faculty development for teacher educators are essential to sustain a culture of sharing, exchange of ideas and develop a vibrant and self-learning community of teacher educators.

7.3 Periodic Revision of Teacher Education and Professional Development Programmes

A curriculum group for the periodic revision of teacher education programmes in each state may be constituted with

representations from University Education Departments, SCERT, CTEs, IASEs, DIETs and the schoolteachers. Other Institutions such as the NCERT and IGNOU may be involved. The group may formulate models of pre-service programmes that cater to the needs of teacher education needs specific to local contexts and the different stages of education, such as ECCE, elementary, secondary and senior secondary. Innovative in-service professional development of teachers in the form of a 'split' model may be formulated. These may consist of short periods of professional interactions followed by application of knowledge and skill in their own school and classroom situation subsequently followed by further interaction where teachers could share their experiences through self-reflection and open discussion. The 'split' model may include discussions in workshop settings, on-site support in classrooms, peer feedback, self-reflection and observation of select best practices. There is also need to develop in-service programmes in specific areas of physical education, aesthetic subjects, yoga, art and craft and the use of ICT.

7.4 Development of Study Materials

Quality study materials need to be developed for student-teachers, teacher practitioners and teacher educators on subject-content, pedagogic approaches and integration between content and pedagogy with examples drawn from different school subjects. Curriculum materials need to be accompanied by appropriate sets of anthologies of readings within the Indian context, on various relevant courses of teacher education. Materials particularly need to address issues which lack a contextualized knowledge-base, such as connectivity between theoretical concepts and teaching-learning processes; areas of enquiry within emerging and evolving interdisciplinary knowledge and epistemology, critical frameworks to analyse social, political and humanitarian issues from multiple perspectives, methods and processes of child observation, the writing of reflective journals and other reflective practices.

7.5 Development of a Separate Cadre of Teacher Educators

In different states at the post of lecturers and readers of DIETs/ CTEs/ IASEs are interchangeable with inspectors and administrators of the departments of school education. There is a critical need for developing a separate cadre for teacher educators, especially at the elementary stage, in view of the fact that most teacher educators in DIETs are trained in secondary education.

7.6 Coordination, Collective Monitoring and Networking

Appropriate mechanisms will need to be formulated for the co-ordination and collective monitoring of various programmes and activities of SCERT, DIETs, CTEs, University and College Departments, IASEs, PTTIs, private and self financed teacher training institutions, BRCs, and CRCs. Representatives from these institutions, Directorate of Education, school teachers, university academics and teacher educators need to come together through such mechanisms. The idea of setting up professional bodies that undertake research and other knowledge generation activities in disciplinary areas of mathematics, languages, social sciences, sciences, curriculum and pedagogic studies should be mooted with the intense involvement of universities and research institutions. School teachers, teacher educators and university academics should be encouraged to become members of such professional bodies, so as to promote a culture of research, academic exchange and dissemination of new ideas. The NCTE itself needs to develop its capacity to undertake tasks of academic support, research in teacher education and periodic renewal of teacher education curricula. Coordination with other national level agencies like NCERT, NAAC and the Distant Education Council will help develop professional networks of organizations engaged in similar work.

Availability and use of computers and e-linking of the schools located in a cluster with a teacher training institutions for changing the ethos of school and teacher training institutions need to be explored. There is a need to develop electronic linkages between national, state and district level resource

institutions and teacher training institutions for promoting sharing of information and video conferencing. Networking arrangements need to be created between IASEs/ CTEs/ DIETs with University Departments of Education on the one hand and Teacher Education Departments and other departments in Colleges of General Education on the other.

7.7 Education of Teacher Educators

The M.Ed. programme is the dominant post-graduate course in education offered by Indian Universities. The recipients have already been initiated into rudiments of education, its practices and their management. The course draws a very large variety of clientele, fresh graduates from different disciplinary backgrounds with a BEd, experienced teachers, functionaries working in various education departments and sometime education officers working in other sectors. Due to the heterogeneous clientele and also due to shifting demands of various jobs related to education, there is a wide range of academic and professional needs to which the Med course needs to cater. The products of M.Ed. (general) course have been employed by Boards, Councils of Secondary and Higher Secondary Education, Directorates of Education, Inspectorates, Schools affiliated to CBSE, Kendriya Vidyalaya Sangathan, Navodaya Vidyalaya Samitis and SCERTs, as curriculum experts, evaluation experts, population education experts, inspectors, sub-inspectors of primary and secondary schools, education officers, head masters, school principals, statistical officers and planning officers. All these personnel may however, not posses professional expertise and the required knowledge-base in curriculum formulation, evaluation, educational planning, management, supervision and educational administration.

Also, there are newer and shifting concerns in education in respect of its nature, process, and management. A generalized programme of post-graduate studies in education such as the MEd needs to respond to such wide ranging needs in order to suitably equip people for specific responsibilities. Currently the system tends to place MEd programmes with different specializations in a hierarchical order. This has led to unhealthy

competition amongst different stages of school education and crystalised further the already low status of elementary school teachers as they stay in the lowest wrung of the ladder.

There is also need to remove present anomalies and confusion arising out of the existence of two parallel post-graduate programmes in education i.e. 2 year M.A. in Education (which is considered as a liberal discipline oriented academic course) and 1 year M.Ed programme (which is considered as a professional course) and their equivalence. This is necessary because in actual course design and content the liberal and professional courses do not differ on any sound academic rationale. There is need instead to diversify specializations at the post-graduate level into areas of curriculum and pedagogic studies in mathematics, languages, social sciences and sciences. Students should be encouraged to pursue electives in education at the undergraduate levels, after which they could pursue post-graduate studies in a chosen discipline, along with the option of specializing in a select curriculum and pedagogic study course. Undergraduate students need to be provided with a variety of routes to pursue studies in education. This would include the pursuit of four year integrated models of elementary and secondary teacher education, electives in educational studies, followed by a range of post-graduate studies in the social sciences (including educational studies), 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 a diverse set of options such as teacher education, research, curriculum development and specialized pedagogy.

7.8 Structural and Operational Issues of Teacher Education and Continuous Professional Development

- Teacher education programmes should be redesigned to respond to the school curriculum renewal process and in accordance with the state and regional context in which they are situated.

- The Curricula Areas presented should form the basic framework for redesigning teacher education programmes at the pre-primary, elementary, secondary and senior secondary stages of education across states and districts through a proposed linkage between SCERT/DIETs with University-based institutions.

- Teacher education programmes should ideally be of 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 with a 6 months to a year of school internship.

- Integrated model for teacher education could comprise of core components that would be common to all teacher education programmes (pre-primary, elementary and secondary) followed by specialization of professional development specific to the stage of education.

- 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.

- 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.

- High-level consultative arrangements between NCERT and NCTE on building linkages between teacher education and school curriculum design and its processes of renewa, including the development of curriculum materialsl would need to be developed.

- A nation-wide review of teacher education curriculum in the light of the school curriculum renewal exercise would need to be undertaken. This could be initiated by NCERT in collaboration with NCTE.

- Nation-wide seminars and workshops could be held to initiate discussions and possible strategies for operationalising the institution of redesigned teacher education and development.

7.9 Models for Pre-service Programmes

Diversified Pre-Service Teacher Education Programmes

- There is a need to encourage flexibility rather than uniformity across Teacher Education Institutions so far as the conduct of pre-service teacher education programmes are concerned. **All RIEs need not formulate same type of courses in form, content and delivery but go in for innovative models for pre-service courses based on availability of infrastructure and equipments, strength of the faculty and needs of the region**.

Suggestive Models

Model: 1

One Year B.Ed. Programme followed by long-duration School Attachment Programme / Internship (5-6 months)

While dispensing with 2 years B.Ed programme, RIEs could provide innovative inputs **for strengthening the 'process' of One-year B.Ed programme in the areas of Early Childhood Care and Elementary Education or Secondary Education followed by long duration school attachment programme.** The innovative inputs could be in the form of reconceptualised foundation components, linking theory/ foundation components to practice, integration between content and pedagogy, increasing the number of working days (as perceived by Kothari Commission: 1964-66) and 5-6 months reconceptualised school attachment programme or internship of teaching. There is a need to initiate reforms in the 'process' and 'delivery' of teachers training.

Alternative Model

Alternatively the teacher training institutions could develop **one year pre-service teacher education programme in a way that it could cater the needs of teacher education at different levels such as ECCE, elementary education, secondary education and senior secondary education simultaneously.** The teacher training institutions could consider a teacher education programmes that **enable a common core structure and content which all student-teachers may go through and gradually specialize in different levels of school education such as ECCE and primary education or secondary education or senior secondary education as optional.** The concepts and issues that are common to the teaching profession may be seen as a generic under for Foundation Course (based both in education foundation and pedagogy foundation), while the specific concepts and issues relevant to a particular level of school education may be grouped under 'optional'. While following content-cum-methodology approach the issues related integration needs to be sorted out.

Model: 2 - Four Years Integrated Interdisciplinary Pre-service Teacher Education Programmes

Integrated long duration pre-service Teacher Education programmes produce better teachers by "catching them young" and nurturing them for longer duration. Long duration training provides space for learning, internalization, conceptualization and experimentation. Quality pre-service programme has demonstrative value in the context deteriorating teacher education scenario. The existing 4 years programme needs to be redesigned by initiating reforms in the 'process' and 'delivery' of the of training.

Concerned Teacher Education Institutions may opt one or two programmes, which are relevant to different levels of school education

- Bachelor of Elementary Education
- Bachelor of Arts in Language Studies and Education

- Bachelor of Arts in Social Science and Education
- Bachelor of Science in Science and mathematics Education
- Bachelor of Arts and Aesthetic Education

Model: 3 - Five years Integrated Undergraduate and Post-Graduate Programme

Instead of model 2

Five years Integrated Post-graduate Programme leading to Master of Arts in Education (M.A Ed), Master of Science in Education (MSc Ed) in the pattern of 5 years integrated courses offered by IITs, Indian Law Universities and National Institutes of Science and Technology with the option to opt out at the end of 4 years courses mentioned under model 2. Five years integrated programme was recommended by Chattopadhaya Commission also.

Initiating Reforms in the 'process' and 'delivery' of Pre-service Courses

New perspectives of Foundation Component and linking theory to Practices

The foundation component may focus on Education policies, concerns and pedagogy prescribed by National Curriculum Framework (2005), changing approaches to evaluation, modalities of intensive interaction with the community, social realities and complexities under which the school function, integration between theory and practices, student competencies and teacher competencies, social goals and values enshrined in Indian constitution, competency in curriculum/ textbook development and curriculum transaction, impact of culture and cultural interactions on schooling, professional ethics and commitment of the teachers, all round development of the child, human rights, rights of the child, national values/ methodology of value education, environmental education, inclusive education, language and communication skills, and adolescence education.

There is a need to build a new perspective of foundation component/theory around the concepts such as (i) the needs of different types of the learners; (ii) the roles, responsibilities, commitment and accountability of the teachers, (iii) needs of the community and (iv) the schooling process along with the factors contributing to these variables drawn from different cognate disciplines and concerns highlighted in

Para 1 in a way that these concepts could be linked to practices. The foundation component of teacher education curriculum should help the student-teachers to confront the challenges of theorizing education. A systematic exercise needs to be undertaken to identify fundamental concepts, which can be drawn from cognate disciplines, with a view to:

- o Highlight the connectivity among these concepts linked to teaching – learning processes and practices.
  - o Focus on distinct nature of 'education' as an area of study with its emerging and evolving interdisciplinary knowledge base and its epistemology.

Substantive dimensions of the course in education are theory or foundations, which are derived primarily from cognate disciplines, viz., Philosophy, Sociology, Psychology Management etc; and each discipline offers different theories and ideological perspective. These, when viewed in perspective of education brings to surface intellectual and conceptual tension. Literature in education which can resolve such tension by presenting 'education perspective' based articulation is not available. Such literature needs to be visualized, developed operationalised in educational perspective context through all stages.

Use of narratives based on research and documentation, project reports, reviews, case studies, success stories/innovations, experiential records, panel discussion on issues highlighted in Para 1 such as Education Policies, National Curriculum Frameworks, constitutional provisions for education, etc. should be the regular feature for carrying out **participatory interactive processes wherein group reflection, critical thinking and meaning making will be encouraged**. Introducing these features could reorganize considerable part of theory classes. **Remaining part of theory classes could be devoted to provide fundamental concepts and conceptual inputs facilitating transition from theory to `practices'.** The gap between theory and practices in teacher education may be reduced by organizing seminars, tutorials, interactive analysis, dialogue sessions on practice, reflective practicum etc. In theory papers, there is a need to provide opportunity to reflect critically on issues in terms of their political social, economic and moral aspects. It should highlight acceptance of multiple views on social issues and commitment to democratic forms of interaction. **A critical framework could help teachers to see social issues from different perspectives and how such issues are connected to their lives and for setting the goals of schooling.** Critical reflection on essential qualities of an effective teacher could make the teacher more aware of the core essential qualities of an effective teacher such as empathy, self-concept, compassion, tolerance, flexibility, love for children, aptitude for teaching, love for teaching profession etc. **It is important for teachers to learn the methodology of how they can get (back) in touch with their core qualities and how they can stimulate these qualities in students. This will lead to a deeper involvement in the learning process among teachers as well as students. The inclusion of appropriate content knowledge about essential qualities of a good teacher in relevant theory papers and practice of**

affective domain related traits in school situation for a longer duration could help promote these traits in student-teachers. The teacher education programme needs to allow the space wherein a teachers personality could be developed as someone who is reflective, introspective and capable of analyzing his or her own life and the process of education at school so that after becoming a teacher, he becomes an agent of change.

Educational research is viewed with epistemological premises. Which are not valid presently even in basic sciences. Which are not valid presently even in basic sciences. Educational themes like teaching, learning, curriculum, educational perspectives etc. are not even included for serious discussion and study at B.Ed level. Some of them do find place in papers like Philosophy and Psychology in the context of different 'isms', great educators and psychological theories. But these concepts are not discussed in culture specific contexts.

Institution of a discussion forum as has been done at NIE-Thursday Forum, would be an excellent programme at each RIE, which may provide a forum where the issues and conceptual problems may be discussed. It will also break the barrier between education faculty and science, social science and language faculties at RIEs Educational problems and programmes at RIEs needs to be viewed, examined and conceptualized in a wider perspective of educational reconstruction and contribution of education as sub-system to development process 'in general. Such discussions will lead to greater clarity about educational programmes and activities when viewed at micro and macro levels. It is through such discussion forum at each RIE, discourse on education would get shaped and strengthened. Operational details of such a forum could be worked out. It should be a good idea to identify two faculty members, one from Science or Social Sciences and another from Education with requisite profile who can help the colleagues to understand education widely and organise such forum jointly.

Content-cum-methodology approach

There is a need for a planned effort to integrate content and methodology. Then again, mere content and methodology integration is not adequate. **Various interventions like activity based strategies, reading materials, ICT, multimedia, demonstrations, experimentations, peace and other values, remedial instruction, and continuous and comprehensive evaluation etc. also needs to be meaningfully integrated to content cum methodology approach.** In RIEs the faculty dealing with contents and pedagogy should interact frequently where the issues like integration between content and pedagogy may be discussed. The teachers of D.M.School needs to be encouraged to participate in such discussion.

Instead of focusing on general methodology (as done in B.Ed colleges such as heuristic method, deductive method, inductive method, problem solving method, etc) there is a need to focus on methodology appropriate for multigrade situation, methodology for multi-level teaching, methodology of handling children with learning difficulties,

methodologies of integrated physically challenged children to regulate classroom, institutional design for teaching science, mathematics and languages or to rural children, methodology of handling the gifted or talented children etc.

Teacher Education Institutions as Post-graduate Centres offering PG Programmes and Research activities

Post-Graduate Courses

- In M.Ed. Programme for Teacher Educators efforts need to be made to blend theory and practices, and academic issues and professionalism..
- Specialized M.Ed. Programmes in Science Education, Language Education, Social Sciences Education and Mathematics Education are interdisciplinary programmes.
- In M,Ed. Progrmame the focus should be on building a theory of education and opportunities need to be provided to practice the concepts in schools supported by action research approach..
- RIEs need to open the doors to students who have done their Masters in Sciences, Social Sciences, Languages or Mathematics to join the M.Ed programme. This programme could be of two years duration and sandwiched with a research component such as an M.Ed with an M.Phil. This would allow students who are Masters in science or Humanities to gain entry into Education and specializing in a particular area not through only B.Ed.

RIEs may opt any of the following one-year model:

- Master of Education (MEd) in Elementary education/Secondary Education for preparing Teacher Educators for Elementary and Secondary Teacher Education Institutions
- Master of Education in Educational Management/Administration (For a variety of roles)
- M.Ed Programme in Science Education/Language Education, Mathematics./ Education,/Social Studies Education,
- M.Ed Programme in Educational Research and Evaluation
- M.Ed programme in Computer Education and Technology
- M.Ed programme in Curriculum Studies/ Textbook Development
- M.Ed. in Child Development

Postgraduate Diploma/Certificate Courses:

Depending on the facilities available and faculty strength RIEs may consider the introduction of the following Post-graduate Diploma / Certificate Courses in addition to PG/M.Ed. Programmes:

1. Guidance and Counseling
2. Comparative Education
3. Early Childhood Care and Education (ECCE)
4. School Safety and Health Education
5. Information and Communications Technology
6. Inclusive Education
7. School Management Studies
8. Rural Education Studies
9. Policy Studies
10. Psychology and Child Development
11. Teaching of English
12. Teaching Second Language
13. Education of ST Children
14. Curriculum / Text book development
15. Community Education
16. Legal Education / Educational Legislation and Acts
17. Education for Deprived Children
18. Cognitive Learning and Pedagogy
19. Education for Peace
20. Human Rights and International Understanding
21. Environmental Education
22. Crisis and Disaster Management
23. Action Research
24. Gender Studies

Research Programmes including Ph.D.

- The concept and the methodology of educational research needs to be reexamined. At present the methodology of educational research is viewed with epistemological premises derived from basic sciences, which are not even presently valid in basic sciences. Educational 'process' is completely different from laboratory process of testing the impact of and interaction between the variables. There is a need to reformulate the rational conceptualization of educational research.
- RIEs to take up multi-centric, multidisciplinary collaborative researches with funding from the national and international agencies
- Research studies need to be planned for gaining insights into the impact of the various programmes to be introduced by RIEs. Tracer studies of the students who have passed out of the RIEs with a control sample can focus on, career patterns, positions held etc.
- There is a need for replacement of academic type of research by policy research problem solving research and evaluative research.
- RIEs should engage in research centering issues facing education in general and teacher education in particular
- There should be provisions of research fellowships in RIEs to facilitate innovations and experimentations.

- The research agenda of RIEs needs to be integrated at the national level with ERIC functioning as a bilateral process
- RIEs need to take up policy research and evaluation studies in collaboration with the states
- Doctoral, Postdoctoral and independent researches need to be promoted at faculty and student levels
- Steps need to be initiated for publication and dissemination of research findings.

Following Research Programmes including Ph.D. may be introduced in the RIEs

- Two Years Master in Education (M.Ed) Sanwiched with a research component such as M.Phil.

- Master of Philosophy (M. Phil)

- Doctor of Philosophy (Ph. D)

7.10 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 children's learning strategies, error analysis and children's 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 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 reconceptualising in-service training of teachers. The objective should be to develop professional development programmes that are rooted in classroom realities and directly address teacher's 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. Coordinators of BRCs and CRCs be trained by SCERT-DIET to assess teachers' needs for support to function as reflective practitioners.

Teacher Education Institutions needs to formulate extensive range of in-service programmes and short-term professional development courses

Split up Model

- In-service training programme for school teachers should not be organized at one stretch. Split-up model could be followed for organizing in-service training of schoolteachers. The split-up model may consist of short period training followed by application of knowledge and skills gained during the training in their own school situation and a follow-up training session, wherein the teachers could share their experiences through reflective and open discussions. During these reflective discussions link between theory and practice and integration of different elements like learning materials, TV programmes, `reading materials, child-centered joyful learning approaches, remedial instructions, enrichment lessons, continuous comprehensive evaluation etc. with content-cum-methodology approach could be attempted.
- In-service training Type of Activities could comprise a variety of activities in addition to contact lectures and discussion during face to face services and may include practice in schools, projects and other assignment for the teaches in their classroom. Teachers training and teachers' day-to-day classroom works needs to be integrated.

Short-term Courses

- The RIE needs to plan short-term courses for teachers/teacher educators for 6/8 weeks through multi-modal approach including face-to-face contact programme home based study, distance mode component utilizing EDUSAT, and tele-conferencing facilities. Necessary technical staff needs to be provided for the purpose.
- RIEs should develop multiple short-term courses from different areas where training opportunities are limited such as strategies to handle multi-grade situation, use of ICT in teachers training, Yoga, art education, aesthetic education. physical education, research methodology etc.

Transaction of In-service Programmes

The in-service training methodology should focus on activity-based training approaches and IT/ ET integration to training transactions. The transaction of training for teacher educators should also focus on teacher/ audio/ video demonstration of skills/ competencies/ interventions/ strategies followed by group discussion/ group reflection; seminar reading/ panel discussion; Brain storming group session/ reflective, discussion on operationalisation of interventions/ strategies; practical work on development of evaluation tools/ diagnostic tools; development of materials/ guidelines, activity sheets, interventions, teaching aids through participatory/ activity based group work; undertaking case studies; dissemination of success stories/ innovations; library work cum self-study methodologies of individualized instruction, working in small groups, cooperative learning , teaching large sized classes, multi-level teaching, and visits to schools and analysis of problems following section research approach. There is a need for social sensitivity training by which trainees gets opportunity to develop sensitivity to socio-cultural, economic and political issues confronting the emerging Indian society.

The demand for in-service programmes , organized by RIEs are very poor, Therefore while formulating in-service and short-term courses RIEs need to take into account both regional and state needs. RIEs need to develop state-specific in-service programmes based on need analysis.

Training materials needs to be developed well in advance and should be send to the participants at least 15 days before the commencement of the programme.

In-service programmes needs to be designed in a way that it caters the needs of IASEs, CTEs, SCERTs, DIETs, PTTIs and BRCs.

- High-level consultative arrangements between NCERT and NCTE on building linkages between teacher education and school curriculum design and its processes of renewal, including the development of curriculum materialsl would need to be developed.
- A nation-wide review of teacher education curriculum in the light of the school curriculum renewal exercise would need to be undertaken. This could be initiated by NCERT in collaboration with NCTE.
- Nation-wide seminars and workshops could be held to initiate discussions and possible strategies for operationalising the institution of redesigned teacher education and development.