

CHAPTER 6

IN-SERVICE TEACHER PROFESSIONAL DEVELOPMENT

6.1 Introduction

Secondary Education (classes IX and X) is a crucial stage for children as it prepares them for higher education and also for the world of work. It is very essential to provide good quality education available, accessible and affordable to all our children in the age group of 14-16 years. To achieve this, there is a need to strengthen the secondary school education by providing opportunities to teachers for improving their professional capabilities/capacities. In majority of the schools, untrained teachers are handling secondary classes. Even the trained teachers are facing lot of challenges to handle classes at secondary stage of school education especially in science and mathematics.

During the XI Five Year Plan secondary education has been accorded relatively high priority in the development agenda of the country keeping in view the demographic profile and the need of a knowledge society and economy. In order to give concrete goal-oriented shape to the efforts, Government of India launched a comprehensive centrally sponsored scheme called 'Rashtriya Madhyamik Shiksha Abhiyan (RMSA)', in March 2009 with the objective to make good quality secondary education available, accessible and affordable to all young persons, irrespective of gender, socioeconomic condition, disability, geographical and other barriers. The present aim is to have a secondary school of acceptable norms and standards within 5 km of every habitation in the country, and similarly to have a higher secondary school within 8 km.

According to the Seventh All India Education Survey, 88 percent of habitations, serving a population of 92 percent have a secondary school within a distance of 5.0 km. Number of secondary and higher secondary schools and participation of students at these levels is continuously increasing. During the last three years 2004-05 to 2006-07, number of secondary and higher secondary schools increased from 1.5 lakh to 1.6 lakh. With the increase in enrolment and growth of institutions, the number of teachers has increased from 20.83 lakh to 22.22 lakh. The pupil teacher ratio has remained static during above period. At secondary stage, subject-wise teachers are required for improving the quality and pupil-teacher ratio (PTR) may be 30:1. States/UTs may follow the guidelines as per NCTE norms for recruitment of subject-wise teachers at secondary stage keeping in view the diversity and disparities in recruitment policy in different states/UTs.

6.1.1 Professional Development

Professional development is the enrichment training provided to teachers over a period of time to promote their development in all aspects of content and pedagogy. Professional development for teachers should be analogous to professional development of other professionals. Becoming an effective teacher is a continuous process that stretches from pre-service experiences to the end of the professional career. It is conceptually divided into pre-service and in-service teacher training. It is not simply a time-bound activity or series of events, but a continuous process. From this perspective, the conventionally divided in-service and pre-service activities should be viewed as seamless components of the same process. It is the tool by which policy makers' visions for change are disseminated and conveyed to teachers. The ultimate beneficiary of In-Service Teacher Professional Development (ITPD) is the student though the receiver is the teacher.

Professional development for teachers is more than training or classes as it functions as an agent for change in their classroom practices. The growth of a teacher's skill and understanding is developed through personal reflection, interactions with colleagues and mentoring which gives confidence by engaging with their practices and reaffirming their experiences. It could have a positive impact on teachers' pedagogical content knowledge as many teachers feel challenged with teaching of curricular subjects due to lack of previous experience with hands-on activities, lack of content knowledge, lack of interest to acquire the resources needed to create appropriate learning environments and lack of confidence.

In the last few years, major in-service professional development programmes have been conceptualised and implemented. DPEP and subsequently SSA have brought in the possibility of continuous capacity building exercise for teachers. We need to review and analyse participation of state level and national level organisations in these efforts and the extent to which meaningful progress in design and implementation of the professional development programmes were made, analyse the scope of participation and involvement of agencies working in the field of secondary education and the availability of capable pedagogues.

6.2 Concerns

The main concerns that need to be looked into in the secondary education sector include:

1. Evolving a shared perspective on the purpose of in-service teacher professional development.

2. Evolving a mechanism/strategy by which effective programmes of continuous teacher professional development can be initiated for large number of teachers spread over a variety of areas and dealing with very different situations. Because each major centrally sponsored scheme namely SOPT, PMOST, DPEP and SSA used a different strategy for teacher training. The strategies remained traditional and they are ‘one-time affair’.
3. Maintaining the enthusiasm of personnel implementing the teacher professional development programmes.
4. Evolving a model for the continuous professional development for building the capacity of individuals who plan, implement and are engaged in this effort.
5. Ensuring that teachers who are involved in developing their professional capacities are motivated to contribute and to learn from these programmes so that they can implement these in their classrooms.
6. Identifying and developing appropriate themes, and interaction mechanisms, procedures, norms and logistics and acquiring appropriate learning resources.
7. Reviewing and analysing the systems for large scale professional development activities.
8. Identifying and evolving the possibility of the extent to use ICT in the trainings through cascade and other models.
9. Analysing the different aspects of in-service teacher professional development and exploring the possibilities that make teachers engage with diversity among the children (such as marginalised, children with special needs) with confidence and competence.

6.2.1 Aims

The aims of ITPD are to:

1. Enrich and update teachers’ knowledge in their discipline, pedagogy and other areas of school curriculum continuously.
2. Develop a culture of shared learning and accountability such that teachers are not mere recipients of training conceptualised in a top down manner

but are engaged with the task to develop their own and the group's knowledge.

3. Evolve a mechanism by which effective programmes of teacher professional development can be initiated for large number of teachers in vastly different areas and to deal with a range of diverse learners for inclusive education.
4. Research and reflect on the gaps in students' learning and their progress
5. Understand and update their knowledge on social issues
6. Apply Information Communication Technology (ICT) in their classrooms for better student learning.
7. Motivate and regenerate enthusiasm of teachers to inculcate interest in innovations.

The following strategies may be taken up for achieving the above aims:

1. Faculty of SCERTs, IASEs, CTEs and University Education Departments would be involved as master trainers and mentors for the following activities:
2. Development of a network among institutions and individuals of SCERTs/SIEs, IASEs and CTEs and University Education Departments.
3. Organisation of workshops for content and pedagogy enrichment.
4. Developing training capacity for action research projects and ICT applications (computer, radio and TV)
5. Development of a set of indicators and benchmarks to track in-service professional development of teachers and the institutions which organise them.
6. Development of short-term courses for continuous professional development and upload on the websites.
7. Devise open and distance learning (ODL) strategies for concurrent/perennial professional development.

The existing pre-service teacher education programmes are of not up to the expected quality in many parts of the country. They need to be more effective to provide pre-service teachers with sufficient understanding that could lead to reflective practice in the classrooms. As many state governments have recruited

untrained para-teachers/vidya volunteers in different kinds of formal schools and non-formal centres, it is necessary to take steps to design in-service teacher professional development programmes to address the needs of such teachers to bring quality in secondary education. Different strategies have to be adopted for different states/UTs regarding recruitment policy of teachers and training strategies e.g., most of the teachers in North eastern region and Sikkim are untrained. Para teachers are also appointed in many states/UTs.

6.3 Design

The design of in-service teacher professional development programmes would depend on the aims of the programme, given a vast variation in the context. Some general principles with regard to the content and pedagogical approach would need to be thought out during the designing and implementation across the programmes.

6.3.1 The Context

Professional development can succeed only in settings, or contexts, that support it. Probably the most critical part of that support must come from administrators. The outcome of every professional development initiative will depend ultimately on whether its administrators consider it important.

6.3.2 The Content/Curriculum

Curriculum is more than a list of topics to be covered by an educational programme. Curriculum is first of all a policy statement about a piece of education and secondly, an indication as to the ways in which that policy is to be realised through a programme of action. In practice, though, a curriculum is more than even this; it is useful to think of it as being much wider.

In-service programmes have to be linked to pre-service programmes and also to be linked to the changes that are brought out in the school curriculum from time to time. We need to identify and analyse the curriculum of the in-service training programmes in terms of expectations, long-term plans, balance between conceptual and functional capacity building versus sharing of 'limitations', building capacity of teachers to learn and teach rather than directing them what they should or can do. This is needed because RMSA emphasizes the need for providing quality learning environment to children, as mentioned in National Curriculum Framework – 2005. It also emphasises on the diversity and plurality aspects of the country and emphasises multilingualism as a learning resource. There is a need to consider possibility of this and share experiences related to such efforts. NCF-2005 also recommends integrated and interdisciplinary

approach in teaching-learning. Keeping these in mind, designs are to be developed to select the content for the professional development programmes.

To be effective, professional development programmes should be based on curricular and instructional strategies that have a high probability of affecting students' ability to learn and in turn students' learning achievement (Joyce and Showers, 2002). In addition, professional development should:

1. enrich teachers' knowledge of the subjects being taught
2. sharpen teaching skills in the classroom
3. keep up with developments in the individual fields, and in education generally
4. generate and contribute new knowledge to the profession
5. increase the ability to monitor students' work, in order to provide constructive feedback to students and appropriately redirect teaching.

Professional development programmes should always address the identified gaps in student achievement. For example, it would not be useful to offer these to increase student performance in mathematics if students are doing well in mathematics but poorly in reading or writing. The content of professional development should centre on subject matter, pedagogical weaknesses within the organisation, measurement of student performance, and inquiry regarding professional questions that are relevant to the setting in which the professional development is delivered. By staying within this frame of reference, teacher professional development can focus on real issues and avoid providing information that may not benefit the participants. Most importantly, professional development should focus on instructional strategies that are proven to impact student performance. Moreover, professional development should be *delivered* using those strategies – which takes us to the process of professional development.

6.3.3 The Process

Professional development should be designed around research-documented practices that enable educators to develop the skills necessary to implement what they are learning (Joyce & Showers, 2002). These practices should also be applied to the improvement of teacher effectiveness through professional development.

The process of professional development should also be based on sound educational practice such as contextual teaching. Contextual teaching presents information in familiar contexts and in contexts in which the information is useful. It is effective because it takes advantage of the fact that learning occurs best when learners process new information or knowledge in such a way that it makes sense to them in their own frames of reference.

6.3.4 Models/Approaches for Professional Development of Teachers

In-service teacher professional development programs follow a wide variety of patterns ranging from programs based on single schools to those that involve the clustering of schools for mutual activities and support. The curricula and content varies from informally arranged programmes to highly structured programmes that complement the instruction given in pre-service teacher education courses. They include a variety of instructional delivery systems including print and non-print such as modules, radio support and multi-media kits. They are generally participatory in organisation and facilitation. Depending on the particular instructional needs, teacher professional development models/approaches can be divided into three broad categories.

6.3.4.1 Standardised teacher professional development

a) *Cascade Model*: This is a more centralised approach and is best used to disseminate information and skills among large teacher populations. This approach includes mostly the cascade model of scaled delivery through workshops and training sessions. This approach generally focuses on the exploration of new concepts and the demonstration and modeling of skills. In the cascade model, a small group of teachers are selected to receive intensive training and then they provide training to their peers i.e., they serve as ‘master teachers or champion teachers’. It has tremendous potential particularly with regard to support provision at school level. In this model, the training is a one-time event and in one location without on-going support, it rarely results in effective changes for teaching learning. Cascade training flows down through levels of less experienced trainers until it reaches the target group and in the process, the important information tends to be lost.

b) *Reflective Teaching Model (RTM)*: This model is used with a focus on reflection of teachers to help them implement reform teaching strategies. This model is grounded in the theories of constructivism. It recommends consistent, on-going sessions of joint planning, teaching and reflecting. It relies on a pair of teachers being able to model effective practice, share authority and reflect on

practice. Either member of the team (team may be of two teachers or a teacher and a teacher educator) may teach the lesson created during shared planning sessions or both may co-teach the lesson. Reflecting on one's own practices requires a form of deep thinking in which one poses questions and solve problems. This reflection is encouraged in the planning and debriefing phases of the RTM.

Split Model: This is similar to reflective teaching model. It consists of 6-8 day training at district/block level, then practicing the inputs received in the professional development programme two or three months in actual classroom situation, and a short follow-up training of two to three days at district/block level wherein the teachers share their experiences through reflective and open discussions. Reflective discussions include integration of theory and practice, integration of context and pedagogy etc.

The Education Commission (1964-66) recommended that in-service training for teachers should be organised by universities and teacher organisations to enable every teacher to receive two or three months of in-service training once in five years. The Report of the National Commission on Teachers (1983-85) gave the idea of Teachers' centres that could serve as meeting places where teaching experiences can be shared. It suggested that teachers could go to centres of learning on study leave. National Policy on Education (1986) stated that pre-service and in-service teacher education is inseparable for the professional development of teachers. The Acharya Ramamurthi review committee (1990) recommended that in-service and refresher courses should be related to the specific needs of teachers and that evaluation and follow-up should be part of the scheme.

Rashtriya Madhyamik Shiksha Abhiyan Framework states that in-service teachers and heads of schools will be trained for five days every year. It also states that subject-wise teachers are required to be deputed in every school. Besides, the specialised teachers for physical education, Art/Craft and culture are also required to be deputed. There is great regional disparity in the provision for secondary teacher training institutions in the country e.g., some of the north-eastern states have very less number of institutions for secondary level teacher training. Hence, careful state-level planning is necessary for ensuring adequate number of trained teachers and their continuous enrichment. Besides these training programmes, it is necessary to develop a mechanism whereby secondary school teachers can share their expertise and experiences and learn from one another, there by developing a learning community and culture.

6.3.4.2 Site-based teacher professional development

This includes intensive learning by groups of teachers in a school or region to promote profound and long-term changes in instructional methods. The site based approach may assume a variety of forms as given below:

Observation/Assessment model: In this model, teacher professional development provider, a master teacher in a school or a specialist working district-wide, observes teachers in their classrooms, assessing their instructional practices and providing structured feedback. Observation/assessment may be used as a support measure following workshops or periodically throughout the school year as a peer coaching form of TPD.

Open Lessons: In this model, teachers develop lessons and invite colleagues to observe the lesson and provide feedback in a post-observation session. The focus of this model is on ‘teacher behavior’.

Lesson Study: In this model, teachers collaboratively plan, develop or improve a lesson, field test the lesson, observe it, make changes and collect data to see the impact of the lesson on student learning. This approach focuses on ‘student actions’

Study Groups: Within ‘Study Groups’ teachers collaborate as a single large group or in smaller teams, to solve a common problem or create and implement a plan to attain a common goal. During the collaboration process they may use print-based resources, classroom materials and their experiences, as part of their approach to the problem. Variations of the Study Group approach occur in TDP workshops, in which teachers must plan an activity to take back to their school or create an action plan to address a particular school-based problem.

Inquiry/Action Research: In an inquiry/action research approach, teachers form teams based upon a common interest. They select an issue, investigate and research it, plan possible actions to remedy it, take action, observe and document results, reflect on outcomes and create an action plan to address this issue.

Mentoring: In this model, older or more experienced teachers guide and assist younger or novice teachers in all areas of teaching.

6.3.4.3 Self-directed teacher professional development

This includes independent learning, sometimes initiated at the learners’ discretion, using available resources that may include computers and internet. In this approach, teachers are involved in initiating and designing their own professional

development and would share materials and ideas as well as discuss challenges and solutions.

6.4 Plan of Action for Professional Development of In-Service Teachers and Teacher Educators

S.No.	Programmes and Activities	Nodal Agency	Modalities
1.	Orientation of Resource Persons (RPs) at National level	NCERT and other Experts (National Level)	Face to Face mode: Five (05) days
2.	Professional Development of Master Trainers/KRPs	NCERT Resource Persons (RPs) (National Level)	<ol style="list-style-type: none"> 1. Face to Face mode: Ten (10) days training in two phases for content and pedagogy enrichment and for national, social and systemic concerns. 2. Open Distance Learning mode.
3.	Continuous Professional Development of Teachers	Master Trainers/KRPs SCERTs/SIEs/ CTEs/IASEs / University Education Departments	<ol style="list-style-type: none"> 1. Face to Face mode: Ten (10) days training for all secondary teachers for content and pedagogy enrichment and for national, social and systemic concerns. 2. Open Distance Learning mode. 3. Using ICT 4. Mentoring 5. Study Groups

4.	Monitoring and Feedback	SCERTs/ SIEs/ CTEs/IASEs / University Education Departments SRG DRG	States to formulate
5.	Induction Training for newly recruited teachers	State to decide the duration	States to work out modalities as per need.
6.	Deputing untrained teachers for getting professional degree	State level	States to work out modalities. Applicable only to the concerned states/UTs where untrained teachers are made permanent. States/UTs to develop a plan for next two years for untrained teachers to obtain professional degree.
7.	Programme Evaluation	Involving National/ State level institutions (State level)	Will be seen as an ongoing and continuous process as a part of managing quality interventions in respective states/UTs.

8.	Impact studies	Involving National/State level institutions (State Level)	Will be seen as an ongoing and continuous process as a part of managing quality interventions in respective states/UTs.

6.4.1 The Proposed Model for Continuous In-Service Teacher Professional Development

The proposed model of continuous professional development takes into account the context, content and the process and the essence of the models described earlier. The context, content and the process will be taken care in the training packages. This model envisages duration of in-service professional development for secondary teachers may be of 10 (ten) days per year in two phases (split model, 7+3 days). Out of these ten days, seven days will be for content and pedagogy enrichment and for training on national, social and systemic concerns and three days for sharing the experiences after implementing the inputs of these programmes in real classroom situations for three to four months.

Content Areas	: Language (English and Other Indian Languages), Mathematics, Science and Social Science
Areas of Concern	: Environment, Gender, Peace, Inclusiveness, Pre-vocational skills and Examination Reforms

Resource persons (RPs) at national level will be oriented on the content and the national, social and systemic concerns by the experts identified for this purpose. RPs of national will train Master trainers at regional level in the five regions. Master trainers will be drawn from SCERTs/SIEs, IASEs, CTEs, other reputed teacher training institutions and University departments. Master trainers will train the secondary school teachers at district level. The master trainers will also act as mentors through out to provide continuous professional support to the teachers at district level. The ITPD programmes will be monitored continuously and feedback will be obtained from teachers for further improvement.

6.4.2 Induction Programmes for the newly recruited teachers

Induction programmes for newly recruited teachers may be organised by the states/UTs. States/UTs may involve directorates of school education /SCERTs/SIEs/Teacher Training Institutes for organising these programmes. It is however, proposed to have a 12 days induction programme (split model, 6+6 days) for the new teachers. Face to face or videoconferencing modes may be used for organising such induction programmes. The State Resource Group (SRG) members may be involved as resource persons in these programmes. In addition to these, self instructional materials for secondary school teachers may also be developed by NCERT in collaboration with other organisations which could be uploaded on the state/UT website for free download by the teachers. It should be made mandatory for the States/UTs to organise induction programmes to the newly recruited secondary school teachers.

6.4.3 Deputing Untrained Teachers for procuring professional degree

Some States/UTs have absorbed untrained teachers into the system. Such states/UT have to take steps to depute the untrained teachers who are made permanent in the system to acquire professional degree in teaching within a time frame of two years. States/UTs should strictly follow NCTE norms for recruiting teachers at secondary level and there should not be any untrained teacher for teaching secondary level students from the academic year 2011-12.

6.4.4 Programme Evaluation

Programme evaluation studies may be taken up by states/UTs to know the implementation of In-service Teacher Professional Development programmes. States/UTs may involve national level organisations and external agencies in the state for this purpose.

6.4.5 Impact Studies

States and Union Territories can take up impact studies for assessing the In-service Teacher Professional Development (ITPD) programmes in the classrooms and on the learning achievement of children of classes IX and X.