A research study can never be carried out and considered complete if the researcher has not intensive and extensive knowledge of the field in which he/she is going to undertake research. For this purpose, researcher has to take advantage of the knowledge which has accumulated in the past as a result of constant human endeavour. Hence, a careful review of the research journals, books, dissertations, theses and other printed and non-printed sources of information on the problem to be investigated is one of the most important steps for planning and carrying out a useful investigation.

Review of the related literature, besides allowing the researcher to acquaint himself with current knowledge in the field or area in which he is going to conduct his research, serves the following specific purposes:

1. It enables the researcher to define the limits of the field. It helps the researcher to define and delimit his/her problem.
2. It makes the researcher up-to-date on the work which others have done and thus, to state the objectives clearly and concisely.
3. It gives the researcher an understanding of the research methodology which refers to the way the study is to be conducted.
4. It helps the researcher to know about the research tools and instruments which proved to be useful and promising in conducting previous studies.
5. It gives the researcher an insight about the statistical methods through which the validity of the results of the research is to be established.
6. It enables a researcher to acquaint herself with the recommendations of the previous researchers listed in their studies for carrying out further research.

Conclusively, it can be said that review of previous research studies plays a significant role in conducting any investigation because it acts as a base where the
roots of the problem under investigation lie. So, an attempt was made by the investigator to evolve historical perspective of teacher education as well as the present scenario of pre-service and in-service teacher training programmes throughout the globe. The researcher has made an effort to broadly classify the review of previous research studies into following two sections by keeping in view, the delimitations and scope of the present study:

1. Research Studies related to Pre-Service Teacher Education Programmes.
2. Research Studies related to Different Aspects of In-service Teacher Training Programmes.

2.1 RESEARCH STUDIES RELATED TO PRE-SERVICE TEACHER EDUCATION PROGRAMMES

A brief account of some important research studies pertaining to pre-service teacher education programmes is provided here under:

*Verma (1979)* in an evaluative study of teacher training found that the teacher training programme was a catalyst of change in the professional attitudes of teacher trainees. Further, teacher training programme was very effective for attitudinal change of those teacher trainees who had got pre-training teaching experience of one year or less.

*Sundararajan (1983)* studied the effect of pre-service training on the attitude of B. Ed. teacher trainees towards teaching profession. It was reported that pre-service training, generally improves the degree of favourableness towards teaching among the trainees.

*Gopalacharyulu (1984)* studied the relationship between certain psychosociological factors and achievements of student-teachers in the teacher training institutes of Andhra Pradesh and reported that both socio-economic status and caste influenced all three variables namely: theory achievement, practical achievement and total achievement of student-teachers. Attitude towards teaching profession and attitude towards training influenced theory achievement and total
achievement in a significant manner. Age and locality were found to have significant influence on the theory and total achievement of student-teachers.

Sayag (1984) conducted a study on teaching competence of pre-service and in-service teachers trained through different treatments of micro-teaching. It was found that peer feedback in the standard micro-teaching and peer-cum-audio tape feedback in the modified micro-teaching group produced equal effect, but superior to that of the college supervisor feedback in the traditional micro-teaching group, on the development of the general teaching competency as well as competencies in the selected teaching skills.

Pradhananga (1986) undertook an evaluative study of elementary teacher education curriculum of Nepal. It was reported that for making elementary teacher education more effective, preference should be given to field-needed orientation, teaching of professional courses in relation to actual classroom situation in school and linking theory courses with actual practice in pedagogy. It was also suggested that the objectives of elementary teacher education need to be changed.

Dogra (1986) studied the effect of training in concept development strategies upon classroom communication behaviour patterns and it was found that the student-teachers trained in the use of content analysis system (CAS) showed a significant increase in giving concrete examples, negative examples, amplifications and vivid categories. Simultaneously, they showed a decrease in the use of black-board, naming general examples, abstract examples and personal examples. Teachers trained in the analysis of content communication could better engage themselves in self-evaluation. The student-teachers trained in CAS presented the content by using different types of examples, by enlarging the focus of attrition, by relating or concentrating two or more things.

Ekbote (1987) studied the development of a strategy for integration of skills in teacher training. It was found that the integration strategy was effective in terms of the improvement it made in the student-teachers' performance in classroom teaching. Further, all the seven variables pertaining to student-teachers, viz.
qualification, previous teaching experience, availability of study time, academic achievement, skill comprehension, attitude towards teaching and micro-teaching influenced the improvement in classroom teaching performance through this strategy. Hence, the study provides a workable model for skill integration, which can be incorporated in practice teaching programme of any Indian teacher training institution.

Mani (1988) reported that B. Ed. programme in Gujrat state did not make any specific provision for higher secondary teachers with regard to methodology, as opined by teacher educators and higher secondary teachers. It was revealed that a specific training was needed in methodology, techniques of education, guidance and counseling etc.

Devi (1988) found that the teacher education programme was non-contributory to the teaching attitude of student-teachers but accounted for influencing their aesthetic values positively such as better social and health adjustment.

Srivastava (1989) in her evaluation of the impact of training found that training did not improve teaching efficiency, which in turn, influenced the attitude and aptitude of student-teachers.

Ramachandran (1991) found that regular teacher trainees had a more favourable attitude towards teaching than the correspondence course teacher trainees. The teacher trainees with PG degree were found to have better attitude than undergraduate teacher trainees.

Roy (1991) concluded that the elementary teacher education programme with the elements of community involvement, both in theory and practice, positively affected the change in attitude of the student-teachers towards community involvement. Previous teaching experience was found to have no role in changing the attitude of student-teachers.

Behera (1989) reported a high correlation between the average number of problems of male and female pupil-teachers of Orissa. The most crucial problems
of teacher trainees were health and physical development, future employment and living conditions.

*Reddy (1991)* suggested that qualified post-graduates in the concerned subjects with relevant degree of B. Ed. and M. Ed; with proper aptitude and attitude and having a minimum three years experience of teaching should be treated as eligible candidates while appointing teacher educators in DIETs. Teacher educators were strongly recommended to follow and implement the activity method and to stress equally on all the four components viz. knowledge, understanding, application and skills in order to bring quality into teacher education.

*Yadav (1992)* reported that all the dimensions of self-concept increased through teacher training except the feeling of inadequacy which decreased through this training programme. The teachers’ training was found to have significant influence on the self-concept, social maturity and attitude of teacher trainees towards teaching profession.

*Walia (1992)* found that the curriculum of secondary teacher education lacked uniformity and clear-cut definition. The majority of teacher education institutions had defective admission criteria. He recommended a four-year integrated teacher education programme in place of existing one-year B. Ed. programme.

*Hughes (1996)* studied the competence of traditional and non-traditional elementary student-teachers. It was revealed that non-traditional student-teachers achieved at higher level in the academic areas while traditional student-teachers did slightly better in teaching performance. It was reported that despite the differences in age, traditional and non-traditional student-teachers share common views on reason for entering into the teaching profession.

*Leeper (1996)* studied early steps towards the assimilation of the theory of multiple intelligences into the classroom practices by four case studies. This study generated principle, which can be applied to all staff development training
programmes in which teachers must have opportunities, following training, for peer coaching, time to plan and gather resources to support new initiative and time to reflect on their work.

*Jin (1996)* studied the effect of a pedagogy course and on-site reflective thinking seminars on outcomes of student-teachers with varied personality types. Reflective thinking practices were identified as making decisions on models of teaching, planning for instruction, monitoring and adjusting instruction. The experimental group received a series of reflective thinking seminars focused on deliberation of teaching dilemmas while the control group did not receive any treatment. The qualitative analysis of selected participants’ responses to the teaching dilemmas presented a relationship between locus of control and student teachers’ reflectivity. It was found that reflective thinking seminars could be an effective tool to promote reflective thinking practices among student-teachers.

*Grabis-Bunker (1997)* revealed that student-teachers relate to each other in status role stages. These stages change as time and events occur during the student-teachers’ teaching experience. The relationship stages are classroom teacher-student, supervising teacher-learner, senior teacher-junior teacher, off duty teacher, visiting teacher and classroom teacher-observer. The findings led to a number of suggestions for enhancing the professional relationship between co-operating teachers and student-teachers.

In a report published by *NCTE (2000)* on status of teacher education in Tamilnadu, it has been recommended that the criteria for admission to teacher education institutions be upgraded and the duration of the course should be lengthened for promoting professionalism among teacher trainees. The curriculum of teacher education institutions should be revised. Special efforts are required to prepare teachers in subject areas where there have been shortages of qualified teachers. Teacher education institutions involved in imparting pre-service training should be asked to organize programmes of in-service training of teachers on massive scale.
Kesrakar and Wakpainjan (2002) strongly advocated affective teacher education. It will have two-fold functions. On the one part, it will help to enhance teachers’ personality and equip them to face the challenges of 21st century. On the other hand, it will develop skills in human and interpersonal relations. This will ultimately have a positive impact on the students. Careful examination of the existing teacher education programme showed that it emphasizes knowledge and teaching skills, while affective part is largely neglected. While executing training programmes, focus of the training should not be only on skills or on knowledge, but it also needs to adopt a triple prolonged policy of emphasizing knowledge, process and values simultaneously.

Brookes (2002) conducted a case study on coaching/training for master teachers and its effect on student-teachers. The evaluation of training showed that the master teachers acquired new understandings. The interviews of both the master teachers and the student-teachers verified a behaviour change. The master teachers indeed used the new knowledge acquired in training with their student-teachers and the student-teachers reflected on their teaching.

Bawa (2002) indicated that demonstration lessons followed by discussion improve micro-level teaching competencies and macro-level teaching competencies better than conventional methods. They also helped in building more positive attitudes of pre-service science teachers towards teaching.

Yadav (2003) revealed that for improving the quality of teacher education, pre-service teacher education curriculum needs to be revised in the light of new concerns and issues emerged in the ‘National Curriculum Framework for School Education-2000’. The four years integrated pre-service teacher education programme need to be introduced on a wider scale for preparing professionally competent teachers. Besides this, a comprehensive policy to update the teachers on a continuous basis needs to be evolved. It should be need-based and target-oriented. Both cascade and distance modes need to be followed for this purpose. The mechanism of monitoring, evaluation and follow-up should be an integral part
of this policy for improving the quality of teacher education.

*Malhotra (2003)* revealed that there was little difference between non-formal and formal teacher education programme as both are more theory-oriented and less practical-based. The trainees were not trained to solve the learning problems of the children. The study proposed a four semester early childhood teacher education programme to develop competencies among teachers.

*Gill and Saini (2005)* conducted a study to find out the effect of teacher education on student-teachers’ attitude towards teaching profession. The results revealed that respondents developed a favourable attitude towards teaching profession after the completion of the programme of teacher education. However, qualification and marital status had no significant relationship with the change in attitude towards teaching profession.

*Chandrasekhar (2005)* reported that DIETs are ill-equipped and inadequate in various aspects of infrastructure, academic and co-academic facilities. The teacher educators were found to be concerned over the deteriorating standards and lack of dynamism in teacher education. Further, it was found that there is little correlation between theoretical and practical aspects of teacher training.

*Tiwari (2006)* conducted a study to evaluate the functioning of DIET in Ghazipur in Uttar Pradesh. The major findings of the study were:

- Pre-service teacher training department in DIET has not been involved in developing adequate study material and carrying out research works.
- Work experience department in DIET has been actively involved in developing TLM, chalk-making, improvisation of learning materials etc.
- In-service teacher training department of DIET has successfully conducted its tasks that are related to training, curriculum development, maintaining contacts with community, research works etc.
- DIET was found to complete all relevant tasks such as publication, community participation but, no studies have been undertaken by the DIET on the children belonging to SC, ST, minorities, disabled and slum areas.
• It has been suggested that adequate number of staff be provided in DIET for its appropriate functioning. The DIET faculty should be given intensive training at NCERT, NIEPA etc. The works of DIET should be evaluated at the interval of every three months.

Tyagi and Jain (2006) concluded that student-teachers were more able to assess themselves accurately with increased feedback information. The accuracy for self-assessment being the least before peer discussion stage, allowing peer discussion helps them to significantly improve their accuracy of self-assessment. Their accuracy further improves as model answers are discussed with them by the teacher educator.

Mishra (2007) designed a study to assess the attitude of trainee teachers towards teaching profession and to find out if the expressed attitude was influenced by trainee teacher’s characteristics like entrance test score. He found that attitude of trainee teachers had a strong positive relation with entrance test score and negative relation with academic score. Attitude of trainee teachers towards teaching is not influenced by gender, academic qualifications and geographical location.

Parmar et. al. (2008) revealed that the attitude of student-teachers towards teaching profession is positive and it did not vary in terms of their gender, educational level, residential background, employment status, marital status and cultural background. Further, it was reported that attitude of student-teachers towards teaching profession is positively correlated to the level of their teaching competency.

Sunitha (2008) indicated that there were no significant differences in the attitude of student-teachers towards teacher training at secondary level in relation to gender, educational qualifications and previous teaching experience. Further, she revealed that 50% student-teachers possessed higher positive attitude towards teacher training but it is not up to the expected level. It was reported that the teacher education programme is unable to achieve expected level of results.
Panwar (2009) revealed that no significant differences existed among rural-urban as well as science-arts stream B. Ed. student teachers’ attitude towards secondary teacher training programme. It was found that secondary teacher training programme is mostly lecture dominant and teacher educators do not use audio-visual aids in the classroom. It was further reported that almost all student teachers were aware about significance of lesson plans and practice teaching in developing professional competence and skills among student-teachers.

2.2 RESEARCH STUDIES RELATED TO DIFFERENT ASPECTS OF IN-SERVICE TEACHER TRAINING PROGRAMMES

Banerjee (1967) studied the training of primary teachers in India and revealed that there were weaknesses and shortcomings in the professional education of primary teachers and vigorous attempts are needed to put the programme on the right track. In the new age, the school teacher and the training institutions had to play a great role in changing the old patterns of education.

Mohanty, Giri and Mohanty (1976) studied the education television programmes telecasted during the in-service teacher training course. The major findings of the study were:

- A large majority of teacher-monitors expressed positive reactions towards all the TV programmes.
- On an average, 81 percent of TV sets used for in-service teacher training programmes functioned well.
- The software materials of all the programmes were appreciated by 68 to 94 percent of the respondents.
- Dubbing of TV programmes in regional language was not appreciated.
- Blackboard work was neglected in TV programmes.
- Students’ participation in the TV lessons was not up to the mark.
- The duration of 22.5 minutes for each lesson was not adequate.
• The work of teachers trained through the programme was not supervised by inspecting officers.

Sinha (1980) studied the impact of teacher education programme on the professional efficiency of the teachers. He revealed that in the sphere of professional efficiency, trained teachers were better than untrained teachers in the knowledge of the subjects, preparation for teaching, self-confidence, voice, pronunciation, facial expressions and in actual classroom teaching taken as a whole. The trained teachers were found to be better than the untrained teachers about the appropriateness of aims of teacher education programmes, its organization, use of devices, presentation, questioning, answering students’ questions, use of blackboard and other teaching aids, eliciting students’ cooperation/participation and effective closure. However, the two groups of teachers did not differ significantly in maintaining good interpersonal relations, guiding students’ participation in the activities of associations, committees, community life and co-curricular activities.

Mama (1980) in a study on the impact of in-service education on teachers in the state of Maharashtra indicated that no efforts were made to involve teachers in the planning, evaluation and follow-up of in-service programmes. The school teachers had no access to college libraries except when participating in in-service programmes. The in-service training programmes were run as week-end courses and there was not adequate communication between colleges of education and the secondary schools. The teachers were sometimes prevented from attending in-service programmes by the principals and the control of in-service programmes was in the hands of school principals. It was further reported that even the concept of in-service education was not clear to the teachers.

Jangira, Mattoo and Singh (1981) in a study of effect of training in teaching skills through micro-teaching on the skill competence and general teaching competence of in-service science teachers and pupil’s perceptions about teaching found that the means of teachers’ scores on the competence to use the
skills of probing questioning, reinforcement, stimulus variation, illustrating with examples and increasing pupil’s participation as well as gain in the teachers’ scores on general teaching competence before and after training in teaching skills using micro-teaching differed significantly. It implies that training in teaching skills using micro-teaching technique brought about significant improvement in the teaching skills competence and general teaching competence of science teachers. Pupil’s perception of the teaching of their respective teachers after training in teaching skills underwent a significant change in the desired direction.

*Mukhopadhyay (1981)* in an action research on alternative models of teacher training found that classroom teaching competence was not related to mobility, number of short-term courses attended, teaching experience and qualifications, but was related to age, change proneness, attitude towards teaching, teaching load and teacher status, though it was significantly related to satisfaction with teaching and rapport with the principal.

*SCERT (1981)* studied the evaluation of in-service training programmes for primary teachers in the selected government and aided teacher training institutions in Andhra Pradesh. On the basis of analysis and interpretation of data, following conclusions were drawn:

1. The key persons of the course felt that inadequate staff, lack of individual attention and unavailability of books were the main problems in training programmes.
2. The participants felt that in-service training programme was good and helped in developing knowledge about new concepts.
3. The participants felt motivated to implement most of the teaching strategies taught during the course.
4. The participants felt that skills to be used during classroom teaching were not adequately practiced during the training programme.
5. Adequate stress was laid on the learning of concepts in science rather than teaching of the concepts.
The laboratory techniques employed during the training programme were quite useful but it was not possible to implement many of the activities because of the heavy syllabus in the primary classes.

Sharma (1982) studied the progress and problems of teacher education in India. It was reported that methods of teaching and evaluation being used in training institutions were traditional. There was dire need for organizing refresher courses, short-term intensive courses in special subjects, practical training, workshops and professional conferences at both the levels i.e. primary and secondary level of teacher education programmes. The organization, content and methods of teacher education must be constantly improved.

Mouly and Reddy (1982) conducted a study to determine the degree of relationship between teachers’ age, sex, training, years of teaching and attitude towards teaching. Findings of the study revealed that although there were differences among the groups of teachers on the basis of sex, age, training and experience variables, but these differences were not statistically significant.

Gogate (1983) studied training of primary school teachers in the context of universal primary education. The objective of the study was to initiate a training programme for primary teachers, especially in view of the enlarged role they would have to assume when elementary education become universal for children in the age group of 6-14 years. It was reported that teachers, particularly from rural areas, got aware of social, cultural and economic needs of rural society, and understood that development was possible through education. The rural teachers were found to be aware that education was the main instrument of child development and that they had a social responsibility for achieving this development.

Bittala (1987) inquired critically into the in-service education programmes conducted by secondary teacher training colleges of Gujarat state. It was found that:
A majority of the teachers were not covered under any in-service programme. The in-service programmes were mainly conducted on school curriculum. The teachers were in favour of in-service training programmes being organized on working days only. The programmes of in-service education were planned by the advisory committee of the centre. The in-service programmes were not evaluated systematically. The quality of in-service programmes was rated fairly high by teacher participants. They felt that the programmes were related to their professional growth.

Kaur (1988) studied development of professional competency of social studies and mathematics teachers as related to process and structure variables of educational environment in government in-service training centers. It was found that in-service education and training of teachers had significantly contributed to the development of professional competency and the process and structure variables had a positive bearing on the product variables. Teaching competency had a positive correlation both with the process and structure variables. In-service education was useful in improving the skills of teachers and had a positive effect on their attitude towards teaching profession.

Mishra (1989) studied the teacher education programme at the primary level and concluded that:

- The teacher education curriculum did not specify the aims and objectives, although the objectives in terms of different content areas were specified.
- All teacher educators reported the need for more in-service training in all the areas of the syllabus.

Farrell (1989) suggested that in developing countries, a well-designed teacher’s manual accompanying a textbook set is very effective form of in-service
training for poorly trained teachers.

*Fullan (1990)* pinpointed that teachers are encouraged to apply what they have learnt from their in-service experiences. Actually, teachers should be encouraged to “try, evaluate, modify and try again”.

*Bordoloi (1990)* reported that despite the existence of twenty two training centers to train lower primary teachers, there was still a backlog of untrained lower primary teachers in Assam and quality of the entrants in these institutes was not up to the mark. Organization and evaluation of practice teaching was not scientific. Trained teachers did not get the chance to apply the techniques of teaching they learnt in the actual classroom situation as the curriculum of each class of the secondary school was found to be heavy and teachers were expected to complete their courses.

*Sadananthan (1990)* revealed that male and female teacher educators differed in the perception of their role as guide, educator and professional and educational technologist. The role expectations of the teacher educators were found to be more than their actual performance.

*Prasad (1990)* studied feedback on implementation of the Programme of Mass Orientation for School Teachers (PMOST). The results of the study were:

- The awareness with regard to the major thrusts and concerns of the theoretical perspectives of the NPE, the specific objectives of PMOST and its implementation, was reflected favourably among both elementary and secondary teachers.

- The teachers had also conceived their role as an implementer of the policy; their emerging role as a facilitator, a guide and co-partner in learning activities and their professional, social and leadership role as a teacher.

*Panchbhai (1990)* conducted a study entitled, “A Survey of Reactions of Primary and Secondary School Teachers of Western Nagpur regarding the Comprehensive In-Service Education Programme for the Guidance of the
Teachers under the National Education Policy”. The major findings of the study were:

- About 85 to 90% of the teachers from primary and secondary schools expressed the opinion that the attitude of teachers towards the in-service education programme had not changed due to the non-cooperation of the head of the institution, lack of motivational background, confirmed teachers’ lack of interest and lack of professional gain.

- Teachers were not found to be genuinely interested in in-service education programmes. It was recommended that in-service education must be made compulsory and teachers should be motivated to participate in these programmes by making the programmes more interesting.

_Nagpure (1991)_ revealed that innovative methods like team teaching and models of teaching are rarely practiced in colleges of education. It was further concluded that few colleges of education have established centers for vocational guidance, adult and population education and continuing/distance education.

_Sirohi (1991)_ attempted to assess the mass orientation of teachers of Meerut region and concluded that the training did not reach anywhere near the teachers’ expectations. The amount of material included in the modules was felt to be too large to implement in the schools. ‘Old wine in the new bottles’ was the expression of many of the teachers regarding the programme.

_Vyas (1991)_ conducted a study to find out the effect of the Programme of Mass Orientation of School Teachers (PMOST) and reported that the performance of the teachers trained through PMOST was found to be better than those who were not trained under PMOST in the areas of child-centered teaching, motivation and enquiry skills, use of mass media, cooperation in school, organizational and co-curricular activities, efforts for the education of the deprived groups and education for national integration. However, the performance of the teachers trained under PMOST was lower than their untrained counterparts in the area of continuous and comprehensive evaluation.
Sharma (1992) in a study on “Impact of In-Service Education on Professional Efficiency of Teachers” reported that most of the teachers got their concepts (in their concerned subjects) clear through in-service education, received useful reference material and opportunity to discuss their subjects’ syllabus in training programmes. More than 75% of the teachers were found to have a change in their attitude due to in-service education whereas; only 35% of the teachers adopted new methods of teaching after in-service training. However, regarding the defects of in-service education courses, the maximum number of teachers listed common defects such as unsuitability of time, lack of incentives, lack of reference material, lack of expertise and lack of follow-up action.

Das (1992) revealed that the training programmes were effective for both rural and urban teachers regarding the development of attitude. Teaching experience was found to be only factor that develop proper attitude towards teaching profession.

Sijde (1992) observed the effect of a short in-service teacher training programme on pupils’ perceptions of classroom climate. Two conditions were compared: in the first condition, the teachers participated in the training programme at the beginning of the school year; in the second condition, the teachers participated in the month of January. It appeared from the results that pupils did not perceive a difference between teachers in the first condition and teachers in the second with respect to the topics which were the focus of training (classroom management and instruction). However, a difference in the perception of the teacher-pupil relationship was found in favour of the teachers in the first condition.

De Groot (1995) suggested that in-service education would be more effective if teachers took responsibility for defining their professional needs and got actively involved in the development and implementation of in-service teacher education programmes. In-service education must be a process with a clear and direct relationship to what teachers do on a day-to-day basis. In-service education
programmes must continually offer new information that has practical applications for the teachers.

Kidd (1995) studied the effect of standard-based mathematics in-service training for teachers of deaf and second language learners. It was found that the teachers’ perceptions of teaching mathematics become more non-traditional after three weeks programme and that some aspects of non-traditional teaching were evident in some of the teacher-observed lessons. These teachers were judged to be in a state of change with regard to their mathematics teaching. They have experienced exposure to new information; they had changed their beliefs and were possibly in the process of changing their practices.

Moran (1995) conducted a case study of an action research based staff development effort. One purpose of the study was to determine which training experiences assisted teachers to become innovation users. It was found that an active, congenial and supportive setting assisted teachers to learn. Increase students’ motivation and higher achievement encouraged teachers to continue with innovations beyond initial use. Innovation use was hindered by: lack of time and energy, resistance from colleagues, lack of support from administrators and lack of materials. The teachers who participated fully in action research, particularly in observation, reflection and collaboration, did better in some of the other innovations, which included expert assistance, characterized those reaching the highest levels of use.

Stewart (1995) studied staff development programme to field test the instructional design materials and assessment tools as a part of an in-service programme. The information yielded from interviews, questionnaire and observation of training sessions supported the impact of staff development efforts. General classroom teachers and trainers indicated the need for a more comprehensive summarizing of emerging training needs. The results of the study suggested that a guide to decision making in the form of a manual assists and supports training efforts.
Weil (1995) studied the impact of collegial peer coaching teacher training programme upon Palm Beach County teachers' sense of self-efficacy. No empirical evidences existed regarding the effects of collegial peer coaching on teacher behaviours. The results of the study indicated that teachers' sense of self-efficacy increased significantly by collegial peer coaching.

Wilson (1995) found that problem solving demonstration classroom allowed the teachers who have participated in training programme to address their personal needs and to have multiple opportunities for professional practices used in searching, creating and sharing problems.

Taber (1996) investigated the impact of training on teachers to participate in professional resource opportunities. The trained teachers believed that they had become better teachers and felt better equipped in their professional growth with regard to classroom assessment.

Sapp (1996) studied teacher perception of the components of effective in-service training in fine arts and their relationship to the implementation of curriculum improvement innovations. The study revealed three factors viz. choice to participate, suitability of schedule and intrinsic incentive as related to implementation of curriculum innovations.

Kellman (1997) studied the relationship between teachers' qualifications, years of teaching, in-service training and student achievement on the common entrance examination in Barbados. It was revealed that a significant positive linear relationship exists between teacher's qualifications and students' achievement. Teachers who possessed teacher's certificate with the bachelor degree were found to have significantly influenced their students' academic achievement. However, no statistically significant relationship was found between the teacher's years of teaching as well as in-service training and students' achievement.

Burgess (1997) assessed the professional development needs of elementary teachers implementing inclusion of children with disabilities in general education classrooms. Data were collected from 325 elementary teachers randomly assigned
to the sample using a 65 items survey questionnaire designed for this study. The factors found to be of most significance were: level of experience, working with students having disabilities and current stage of involvement with an inclusive programme. Conclusions of the study revealed the need for professional development based on professional growth stage relevant to present working conditions and events.

Costello (1997) studied teachers’ perceptions and the transfer of skills resulting from their participation in the instructional team support and considered questions regarding teachers’ attitudes towards students with learning problems, transfer of instructional strategies into the classroom for non-referred students and the general perceptions held by regular education teachers. The findings of the study indicated that classroom teachers are increasing their teaching abilities to solve the learning problems of the students and are applying this knowledge to the needs of all the children in the class.

Scigliano (1997) studied the factors influencing the transfer of skills learned in technology training and skills application by teachers in 4th to 8th grade classrooms. It was revealed that there is considerable agreement among teachers that as their personal computer skills increased, so does their use of computers in instruction. Teachers indicated evidence of increased comfort with computers with a moderate shift in attitude towards computer use in instruction as a result of training. Teachers valued the training, but did not feel it was a primary factor in determining if they transferred the skill into practice, thereby suggesting that integrating training needs to be carefully designed around instructional improvement.

Bohan (1997) evaluated the impact of collaboration skills and in-service training for Northern Zila County teachers. The in-service training focused on collaborative consultation models and techniques for best practices in instruction. It was revealed that a majority of the teachers reported improvements in their beliefs, practices and skills by using adaptations with students having special
needs in the classroom. Most of the teachers were observed to use adaptation practices in their classrooms more frequently after training. Teachers reported that they were more skilled with making adaptation after training. The overall results suggested that six months training provided in five sessions had a positive impact for a majority of the teachers.

Robinson (1997) studied the perceptions of the need for training in competencies among pre-service and in-service teachers. It was found that in-service regular education teachers possessed more knowledge than the pre-service regular education teachers as they plan individualized programmes for students with disabilities in inclusive settings. However, both groups were not sure of their ability to apply the knowledge to actual delivery of services. Experience in working with the disabled students increased the skill level of regular teachers, which in turn, enables the teachers to render more appropriate educational services. Adopting the belief that knowledge of students with disabilities fosters positive attitudes, staff development programmes need to include seminars addressing students with disabilities. Implications for research on teacher education include the need of both quantitative and qualitative studies to examine the nature of the experiences provided for the student-teachers on campus and during school experience as well as the impact, these programmes have on the student-teachers.

Park (1997) studied a training strategy for primary Sunday teachers. The purpose of the study was to help Church teachers become more confident and capable through teacher training. He found a noticeable difference between treatment group and control group in all the areas measured. The curriculum was judged as satisfactory and the overall impact of the programme on the trainees and the Christian education programme was considered positive.

Graham (1998) studied the preparation of teachers for multi-age classrooms at the primary level. The purpose of the study was to describe and discuss the results of research about the relationship between multi-age teacher
training and teachers’ stage of concern. The professionalism of teachers’ work and the improvement of the professional education of teachers were the crucial external conditions addressed. The data for this study were drawn from the teaching staff of primary schools. It was found that the intensity of management, consequence and collaboration stages increased significantly for teachers after their multi-age training. Changes at the awareness, informational, personal and refocusing stages were not significant. These results indicated that multi-age teacher training appeared to significantly reduce teachers’ ‘self’ concerns while increasing ‘task’ and ‘impact’ concerns.

Wight-Stanley (1998) studied teachers’ behaviour in the process component of traditional in-service programme to examine factors that helped to improve the effectiveness of their classroom instruction. A second objective was to examine the factors influencing teacher’s judgments of these behaviours. It was reported that teacher-identified positive workshop behaviours included teacher interaction with in and out of small groups, active participation by teachers in the selection of workshop topics, teachers taking the lead in their own learning before, during and after workshops, engaging in hands-on practice, peer coaching, meeting with grade level colleagues, receiving new and practical knowledge through presenter’s lecture and working on personal change. Analysis of these behaviours revealed that teachers gain significantly, as adult learners, controlling learning content, focusing on application of learnt knowledge, displaying independence and equality in their workshop interactions as a result of in-service training.

Smith (1998) developed an in-service programme that adhered to the effective staff development components and used in-service programme to teach nine in-service teachers about integrating world wide web (www) into their classroom instruction. A multiple baseline design across schools and participants was used to assess the effects of in-service programme on the percentage of computer use by students and teachers during the instructional day. during the baseline and intervention phases. It was revealed that in-service programme
increased the percentage of time computers were used during classroom instruction.

*Ananda (1998)* studied the impact of in-service programme on teachers' sense of efficacy and teachers' perceptions of their work environment. It was found that urban teachers reported more teaching efficacy than rural teachers whereas; rural teachers reflected more positive attitudes towards resource adequacy. Trained teachers belonging to rural areas reflected more positive attitude towards resource adequacy.

*Sentif (1998)* studied the implementation of staff development training to determine the relationship between teachers' perceptions of effectiveness of training activities and variables of training structure, administrative factors, incentive and training components. In addition, the study investigated the relationship between these factors and the variable of teaching experience and grade level taught. It was revealed that there is a significant relationship between training effectiveness, defined as transfer of learning (training) to classroom implementation and the independent variables of training structure, administrative factors, incentive and training components. A significant independent relationship was also found between training effectiveness and training components, the strongest indicators of which was the degree to which the training was of a hands-on nature. Furthermore, there were significant differences between the criterion variable of training effectiveness and the independent variables according to both grades taught and the years of experience of the teachers.

*Walqui (1998)* studied in-service professional growth of teachers of English language learners. The study revealed that those teachers who entered the profession with well-developed professional vision, a strong sense of 'self' was developed among them most. The study suggested the central importance of teacher's knowledge of 'self' in teaching of English.

*Koch (1998)* studied the effect of an in-service programme on the teachers' knowledge of general school law. This study was deliberately designed to
determine which factors are more deterministic in enhancing teachers’ knowledge. In general, it was found that teachers did not have sufficient knowledge of school law, and factors such as amount and level of education, status and position were positively correlated with increased knowledge. Factors such as years of teaching, gender, race and ethnicity were not correlated with higher level of knowledge. The most significant finding, however, was that when teachers had participated in several in-service training experiences, typically workshops and when combined with other mentioned factors, their knowledge of school law was significantly higher.

In a survey report on ‘Teacher Education in Himachal Pradesh’ published by NCTE (1998), it was reported that only two units of pre-service and in-service training, out of seven conceptualized units existed in the DIETs. There is hardly any use of innovative practices such as role playing, simulation, microteaching, team teaching etc. in any of the DIETs. Non-availability of expert teachers in educational technology, inadequate accommodation, lack of infrastructure and funds are the main constraints in effective utilization of educational technology in teacher education programmes. There was no participation of teacher educators of DIETs in curriculum planning and development. Seminar was found to be the most preferred way of training student-teachers in DIETs and no demonstrations schools were attached to the DIETs for organizing practice teaching. There is no mechanism for faculty development in DIETs due to overload of pre-service and in-service teacher training programmes. Research/innovation area was the weakest area of the DIETs. The other major problems reported were: shortage of accommodation, lack of trained staff and resource persons, low rate of honorarium to experts, non-availability of teaching aids and modules, communication gap and lack of coordination between DIETs and Directorate of Primary Education which created obstacles in smooth functioning of DIETs. Regarding status and functioning of SCERT, it was reported that SCERT has no provision of hostel for participants of in-service teacher training programmes. There is no specific policy
for recruiting SCERT faculty and there is inadequate teaching space hall, low rate of honourarium for resource persons, lack of interest among participants and low turn over of participants in in-service training programmes. Further, the Council has not given due attention to research activities.

*Doherty (1998)* studied professional development for Boston teachers. The purpose of this study was to analyze teachers’ perceptions of the effectiveness of professional development opportunities which were being provided to teachers in the ‘school-to-career’ programmes in Boston. The results of the study indicated that although teachers offer a generally positive assessment of their professional development opportunities, they also raised several concerns, expressed a variety of needs, and identified a number of obstacles regarding ‘school-to-career’ and professional development. It was also found that the process of bringing about actual change in classroom practices is slow.

*NCTE (1998)* in its report on current status, issues and future projections of ‘Teacher Education in Haryana’ revealed and suggested that:

- Comprehensive and continuous evaluation is not done in pre-service training programmes. The resource unit of every training institution should help and work in this direction.
- There is no follow-up of any educational programme which should be a special and compulsory feature in training programmes.
- Teachers and teacher educators should be provided with opportunities to participate in curriculum designing, preparation of instructional material, action research, use of technology and media in teaching-learning process etc.
- The heads of each training institution and schools must be oriented for providing better leadership to the institution.

*Panda (1998)* concluded that assessment of training needs is a key determinant and first step of the effectiveness of an in-service training programme. Training needs, which are generally expressed in terms of knowledge, skills and attitudes,
depend on the nature and performance of the job. Hence, the need assessment will help to link training to needs and goals of the schools. It has been observed that topics of immediate concern to practitioners have greater impact and more effectiveness in classroom practices. A combination of different techniques viz. questionnaire, classroom observation, interview with teachers, discussion etc. may help in obtaining reliable data about training needs of in-service teachers and those needs will vary in different contexts.

Stafford (1998) reported that all three groups surveyed expressed a need for in-service training, with the coordinators and state officials seeing more needs than the teachers. The teachers rated three items among their highest needs: practical ways of motivating students, knowledge about other schools and community resources for referral, and methods for raising students’ self-concept. Recommendations were made for more in-service training activities and incentives for part-time teachers to attend more training sessions.

In a study conducted by DPEP, Chamba (1999), it was concluded that teachers’ training course did not reflect the trainees’ needs appropriately. It is therefore, desirable that the needs of teachers may be assessed before administering any training programme. Though, a lot of training courses for in-service teachers have been organized in the district, it was felt that teachers’ training courses had not taken care of the teachers’ training needs appropriately.

Saha (1999) revealed that majority of teachers at primary stage use blackboard in the classrooms and apply question-answer strategy to teach. They have close relationship with their students and most of the teachers believed that there is much difference between trained and untrained teachers.

In a survey conducted by NCTE (1999) on status of teacher education in Bihar, it was recommended that for effective implementation of curriculum, improvement in the quality and content of teacher training, orientation, re-orientation and recurrent training to teachers is of great significance that requires attention. The report indicated that the institutional support for in-service
education programmes was inadequate. So, it was suggested that in-service training should be replaced by a comprehensive programme of in-service education.

*Yadav (2000)* reported that the teachers gained the knowledge in mathematics, language and general awareness after undergoing in-service training programme. The relationship between their gain of training and their classroom observation score was found significant. The gain of training was not completely utilized by the teachers in the classrooms.

*Koul and Sharma (2000)* conducted evaluation of DIETs of Himachal Pradesh and reported that the objectives of in-service training programmes were relevant to the needs and problems of teaching. In these training programmes, lecture method is mostly used to impart training to in-service teachers as well as pre-service trainees. Further, it was revealed that the training programmes were organized on three areas viz. content related aspects, pedagogy and technology related aspects and management related aspects.

*Chandrasekhar (2001)* reported that DIETs are ill-equipped and inadequate in the following aspects; laboratory, modern gadgets, buildings and technical staff, lighting facility, reading room, drinking water facility, staff and furniture in the hostels, teaching-learning materials and sports and games materials. The teacher educators have expressed the lack of dynamism in the in-service programmes as well as indicated little correlation between theoretical and practical aspects of training.

*Balasubramanian and Sivakumar (2001)* studied awareness and practice of innovative teaching methods among primary school teachers of two blocks in Villupuram district of Tamilnadu. The study was aimed at finding the level of the use of innovative teaching methods in primary schools by secondary grade teachers. Both men and women teachers were found to be equal in using innovative teaching methods in primary schools. No gender differences were found regarding the innovative teaching methods in primary schools.
In a report of *NCTE (2001)* on ‘Teacher Education in Andhra Pradesh’, the following major findings were revealed:

- The training institutions for primary and secondary teachers have been isolated from the main stream of academic life of universities and daily problems of schools.
- The quality of training has considerably eroded.
- The teacher training programmes were ritualistic and as such, they were not helping the teachers in their effective performance in the classroom teaching.
- There was no accountability of teachers for attending training programmes.

In a document published by *NCTE (2001)* on status of ‘Teacher Education in Assam’, it was reported that:

- Teacher education institutions are lacking in basic facilities, staff, equipments etc.
- DIETs are lacking in sufficient number of faculties and no guidance and support system is extended to them by the state level authorities.
- SCERT was also facing the problem of shortage of faculty and no provision was there for upgradation of the skills and competencies of teacher educators working over there.
- It was suggested that the training programmes should be regularly evaluated, monitored and follow-up should be conducted at frequent intervals.

*Gafoor and Aiyashabi (2001)* examined the existing service conditions of DIET teachers with regard to their mode of selection, special achievements after entering the DIETs and other service conditions and problems faced by them. The results of the study revealed that in all the DIETs, the teaching posts are filled by deputing teachers from the government schools only and it was felt that consideration should be given for the efficient outside candidates to strengthen the human
resource at the DIETs. Only a few DIET teachers showed their interest to acquire higher educational and professional qualifications. DIETs are supposed to serve as the resource centres of the districts. But, this status would not be attained till the DIETs have more efficient teacher educators who are competent to do works such as action research. With the help of different educational agencies, steps should be taken to give them more training, to strengthen library facilities and to ensure its proper use by the DIET staff. It was further revealed that a lot of problems existed in the DIETs and need to be rectified at the earliest. Methods of evaluation of the work efficiency of the DIET teachers should be strengthened. It was suggested that constant interactions between DIETs and other higher educational institutions such as NCERT, SCERT, IASE, RIE and universities should be there.

Following conclusions and recommendations were made in a report published by NCTE (2001) on the status of ‘Teacher Education in Kerala’:

- There is a dire need to strengthen teacher education institutions in Kerala especially in terms of classrooms, libraries, laboratories etc.
- Greater attention is required to revamp the process and procedure of practice teaching.
- Quality of in-service education was found to be ineffective and below standards. The basic reason for this was found to be the lack of interest among the teachers.
- The evaluation of training at the end of the programme was not appropriate and conducted as a ritual.
- There is a need to do a follow-up of the training programme.
- In-service training should be made compulsory for all teachers for their next promotion or grade.
- SCERT should be strengthened by appointing qualified persons in various faculties so that it can provide academic guidance and leadership to DIETs, CTEs and IASEs.
Arora and others (2001) studied the functioning of the branches of DIETs. In most of the states, only two functions namely: pre-service teacher education and in-service education of teachers were being performed by these institutions. The number of DIETs, where research and development activities have been initiated, was quite small and the academic and professional background of the faculty members was quite satisfactory. It was also observed that the number of vacant positions in a large number of DIETs was more than 50 percent of the sanctioned strength.

Chauhan (2002) expressed that the development of teacher education should be a continuous process. It is not only got established quickly but has also diversified into different programmes, each with a well differentiated form and structure. Diversification of teacher education programmes took place across different stages of education such as: pre-school, primary, secondary and higher secondary. Teacher education emerged in specific areas of specialization like: science education, mathematics education, special education, art education, physical education, language teaching and learning and so on. As a result of these developments, teacher education has today become a significant component of our educational system with a large scale network of various institutions and an area of academic specialization. Further, it was recommended that there is a need for paradigm shift in teacher education model which has delayed its effectiveness in meeting the demands of the society and the needs of the schools.

Purwar (2002) held that re-structuring and re-organization of teacher education may be more effective if scheme envisages setting up of DIET in each district to provide academic and resource support to elementary education teachers and non-formal and adult education instructors. It also envisages establishment of IASEs to organize in-service and pre-service teacher education programmes, conduct fundamental and applied research, programmes for training of elementary teacher educators and provide academic guidance to DIETs.
Compton (2002) examined teachers’ need perceptions for professional development according to their career phases, school setting and gender. A teacher’s gender affects the perceived need for these activities: (i) attending a workshop on documenting student progress; (ii) having opportunities to connect with other teachers; (iii) receiving support for reflection; (iv) learning to link standards for learning with assessment; (v) crafting new methods for instruction; (vi) having assistance with locating and selecting materials and supplies; (vii) attending a workshop on working with gifted and special children and; (viii) learning current research and best practices.

Kishore, Singh and Ray (2002) while working out weightages of training components for primary teachers consequent to an interactive training exposure found that most preferred approaches to classroom instruction are the concept attainment and learning by doing approach for in-service training of urban primary teachers. It was suggested that about 30% of the time should be spent on these approaches in training programmes and evolutionary and communicative aspects need to be built up into these approaches.

Newman (2002) examined the impact of professional portfolios on experienced teachers’ professional development. The findings of the study provided evidence that through constructing a portfolio, an experienced teacher’s professional development is positively impacted. The study revealed that the participants were able to be active in their own learning by examining their practice in context through reflection and dialogue. It was recommended that both teachers and administrators should work together to develop professional portfolios as a form of professional development. The study suggested that all above said factors are critical elements that need to be taken into consideration if professional portfolios are to be successful as a tool for enhancing teachers’ professional learning and development.

Roberts (2002) in a study on professional development of teachers at an African-centered public school found that teachers had an uncritical habit of mind.
rarely questioning their practice or the schooling process and remained resistant to the concept of the African-centered education. This study challenged traditional approaches to teacher professional development in urban schools serving black children and offers insight into African-centered teacher education.

_Aba (2002)_ concluded that teacher-oriented in-service teacher education programme is more effective in adoption and implementation of innovation, which is basically closed in nature as compared to school-oriented in-service teacher education programme. A strong positive relation was found between teachers' attitude towards any innovation and their teaching competency.

_Sharma (2002)_ has stressed the need for teachers to continuously improve and grow as professionals. Professional development is one aspect of life-long learning and is essential for those involved in higher education. The teachers have to understand the need to continuously learn whether this be done formally or informally. The assumption is that to keep pace with change, teachers must change and develop their practice in reflective and constructive ways.

_Gopalan (2003)_ opined that quality in pedagogy largely depends on the professional competence of teachers. In the years to come, teacher education programmes have to be more and more subject-specific. Teacher education institutions have to offer more specific programmes separately to prepare teachers in the areas of science, social sciences, languages, physical education and vocational streams. Such subject-specific teacher education will provide greater scope and appropriate opportunities to delineate and discern suitable theoretical inputs and conceptualization in relation to practices in education. They will facilitate the process of bringing theory and practice together. At present, there is hardly any coordination between in-service and pre-service teacher education programmes. To be effective, these two categories of programmes should supplement and complement each other. Teachers need to continuously enrich their competencies and enhance their professional performance.

_Dhawan (2003)_ found that the DIETs are actively engaged in organizing in-
service teacher training programmes in a regular manner, though the academic and technical support from SCERT has been minimally used. It was found that there was lack of discussion in in-service training programmes. The major problems regarding in-service training as felt by primary school teachers were related to planning, availability of supplementary learning materials and resource persons and lack of participatory approach. It was further indicated that transfer effect of in-service training on attitude of primary school teachers towards teaching and teacher-student relationship is appreciable, more markedly in case of female teachers.

Batane and Tshepo (2004) found that teachers are not satisfied with the training that they are given. The study recommended a more systematic approach to teacher training in the schools so that more teachers can be involved and benefited from the training.

Duggal (2004) undertook an evaluative study of in-service teacher education programmes by DIETs of NCR, Delhi and found that:

- The actual target group, in terms of number of teachers trained, had never been met by any of the DIETs in any year with one-two exceptions.
- In all the programmes observed, none of teachers admitted to attend any pre-programme meetings with the coordinators whereas; only eleven, out of eighty resource persons stated to have attended such meetings before the commencement of these programmes, to discuss about schedule and content design for INSET programmes.
- Majority of teachers responded that their respective head masters/mistresses nominated them on mandatory basis.
- Most of the coordinators revealed that good rapport with the resource persons, apart from the experience in elementary education were the prime considerations given before engaging the resource persons for INSET programmes.
The range of time spent on academic activities in one-week programmes was 42.73 percent to 50.49 percent. In the three-week orientation programmes, the time spent on academic activities was nearly one third of the total time set for the programmes.

It was observed that in 58.08 percent sessions, lecture method had been adopted. In the rest of the sessions, resource persons had used discussion, demonstration and activity methods. These sessions were more appreciated by the teachers, as these sessions afforded ample scope to the teachers to participate actively.

In most of the programmes, the main emphasis was laid on content enrichment while pedagogy was quite neglected in both the types of programmes.

The rapport among all the three groups viz. the participant teachers, the coordinators and the resource persons was quite good.

The content transacted in the INSET programmes was need based and useful to some extent only, as per the responses of majority of the teachers.

New teaching methods and techniques like child-centered education, teaching with low cost teaching aids etc. were dealt within only few sessions.

The majority of teachers were not convinced that their attitudes were attempted to be changed through the INSET programmes.

One of the main objectives of INSET programmes i.e. skill development was dealt in a very limited fashion.

Most of participant teachers of the INSET programmes believed that the ‘learnt-content’ in the INSET programmes was usable in the real classroom situations to some extent only. The main reason being large number of students in the classes, they teach.
• No tests of the ‘learnt-content’ or questionnaire for the evaluation of the effectiveness of programmes were administered on participant teachers.

• The main problems according to majority of the coordinators in organizing INSET programmes were: (a) lack of ministerial staff, (b) no resource agencies from national level/state level or any university for that matter offered any help.

• The incentives – TA and DA and the certificate for participation in the programmes were not enough to motivate the assistant teachers.

• The coordinators expressed their helplessness of not being able to undertake field interaction and follow-up activities due to scarcity of time and resources.

Arora (2004) summarized that the DIETs primarily meant for in-service education of elementary school teachers, have proved inadequate for the task entrusted to them. The in-service education of teachers in majority of states has remained tied to the availability of central assistance. The states, by and large, make meager provision for teachers’ in-service education in their budgets. The in-service education so far has been imparted to teachers as part of some scheme or project starting from the scheme of extension services department and then under PMOST, SOPT, centrally sponsored scheme of restructuring and reorganization of teacher education during the 7th to 9th five year plans. DPEP and now under SSA. The educational system has not yet internalized it as an essential component of the implementation strategy of school curriculum independent of a project or scheme. In-service education, by and large, has been characterized by adhocism as it has been neither institutionalized nor professionalized. In spite of the frequent articulation of the need and importance of in-service education, the details of formal training policy have not been worked out yet. that is, no policy has been formally adopted with regard to the duration of training, time interval between one training and the next one, credits or incentives that may accrue to a teacher as a result of participation in in-service education programmes, content, process.
monitoring, evaluation of training etc. The NCTE, the statutory body set up to regulate the system of teacher education in the country, is mostly pre-occupied with the pre-service teacher education programmes and so far, it has not initiated concerted efforts to evolve a policy appropriate for the in-service education of teachers. Hence, there is an urgent need to formulate a policy statement along with an implementable action plan for teachers’ in-service education.

Sharma (2005) in a study on primary school teachers under DPEP in Rajasthan reported that primary school teachers lack in professional attitude to a large extent and they do not plan and prepare themselves before going to actual classroom. Further, they have been provided with teachers’ guide and only 40 percent of the teachers believed that this reference book is helpful in solving real classroom problems and on the contrary, 60% teachers have denied this fact on a whole.

Pandey (2005) in a study on “Organization, supervision and evaluation of in-service training programmes for primary school teachers” indicated that:

- In-service programmes are organized according to their objectives and teachers are equipped with best techniques of classroom management in these programmes.

- Training programmes are flexible, interesting, well-ordered and in accordance with prescribed curriculum and duration.

- Teachers were found to have positive attitude towards training programmes and felt that these programmes helped them in solving their teaching problems as well as their professional upliftment. However, they do not take these programmes seriously.

- Knowledge gained in training programmes has not been used by the teachers in real classrooms.

- Lack of interest among teachers, more work load, lengthy syllabus, inappropriate teacher-pupil ratio etc. were found to be the major causes for non-use of technology in real teaching.
• Grant of Rs. 500/- provided to primary school teachers for development of teaching-learning materials has been appropriately used by only 31% of the teachers which needs urgent attention of the concerned government authorities.

• The training programmes were not appropriately supervised by the concerned authorities and their supervision has only been considered to be a formality by primary education officers.

*Dutta (2005)* suggested that educational institutions should promote different programmes for the professional growth of teachers and expand links with international educational and research institutions for the benefits of students and faculty.

*Doss (2005)* conducted a study on in-service teacher education and found that:

• The most important encouraging factors for teachers to participate in in-service teacher training programme were learning innovative methods (1st rank), improving professional competence (2nd rank), updating information (3rd rank), interaction with experts (4th rank) and witnessing demonstration classes (5th rank). On the other hand, the factors like: theory-oriented but not practical-oriented classes (1st rank), no direct help to improve school classes (2nd rank), in-service training has no weightage for promotion (3rd rank), no incentives for any special training (4th rank) and no immediate benefit to teachers (5th rank) were perceived as most discouraging factors for ensuring participation in in-service training programmes by the teachers.

• Regarding the least important encouraging factors in attending in-service training programmes, the teachers ranked: increasing school results (1st rank), watching educational broadcast (2nd rank), changing teachers' behaviour (3rd rank), offering free book kits (4th rank) and promoting study skills (5th rank) in order of their preference. On the contrary, the factors viz. media not properly used (1st rank), no provision of residential in-service
training (2\textsuperscript{nd} rank), training programmes have no specific syllabus (3\textsuperscript{rd} rank), monotonous teaching of resource persons (4\textsuperscript{th} rank) and unwillingness of heads to depute teachers to in-service training (5\textsuperscript{th} rank) were perceived as least important discouraging factors for ensuring teachers’ participation in in-service training programmes.

- The teachers perceived participant-centered approach (1\textsuperscript{st} rank), framing of need-based syllabus (2\textsuperscript{nd} rank), posting of highly motivated teacher educators (3\textsuperscript{rd} rank), identification of course needs (4\textsuperscript{th} rank) and increase of out-of-pocket allowance for participating teachers (5\textsuperscript{th} rank) as the most important factors for successful organization of in-service teacher education programmes.

- The resource persons opined that participant-centered approach (1\textsuperscript{st} rank), peer teaching (2\textsuperscript{nd} rank), course content should be a judicious blend of prescribed training content and methodology (3\textsuperscript{rd} rank), identification of training needs only by experienced and practicing teachers (4\textsuperscript{th} rank) and using innovative modes like teleconferencing for in-service training (5\textsuperscript{th} rank) were the most important factors for successful organization of in-service teacher education programmes.

- The degree of correlation between teachers’ views and resource persons’ views regarding ways and means to successful organization of in-service teacher education programmes was found to be -0.33 which is very low in negative direction. Hence, it was suggested that the coordinator of in-service teacher education programmes should consider the views of the practicing teachers and experienced resource persons in the conduct of training for the teachers in order to create a better organizational climate where teachers on the training can develop their proficiency in classroom transaction.

Igbalajobi (2006) reported that the teachers needed extra training in curriculum management, academic assessment and behaviour management.
Female teachers indicated significantly higher needs for training than male teachers.

*Sharma (2006)* indicated that all teachers were aware of in-service training programmes under Sarva Shiksha Abhiyan in Himachal Pradesh and they have been provided opportunities for participating in them. Teachers were generally deputed to training programmes on the basis of their teaching experience and they receive full cooperation from their school heads for attending these programmes. Selection of subject areas for training programmes was done on the basis of the needs of teachers and students. Teachers were found to be satisfied with the resource persons involved in training programmes and they were provided with teaching-learning materials in training programmes. Furthermore, it was concluded that teachers had a positive attitude towards in-service training programmes and they perceived that such programmes have practical utility in improving their teaching methods, understanding the children characteristics and preparing teaching-learning materials. However, there is lack of follow-up programme for ascertaining the impact of in-service training programmes on teachers’ competencies.

*Gnanadevan (2006)* conducted a study to find out the attitude of higher secondary school teachers towards educational innovations. He reported that the attitude of higher secondary school teachers towards educational innovations is highly favourable. Further, higher secondary school teachers do not differ significantly in their attitude towards educational innovations with respect to sex, type of school, location of school and subjects taught.

*Pathania (2007)* conducted a study to find out the utility of orientation programmes for developing teaching and research capabilities of teachers. Majority of teachers expressed that orientation programmes were more useful in updating their knowledge, improving their teaching methods, solving classroom problems and developing professional competence. These programmes provided exposure to improve teaching skills through teaching interactions among
participants and resource persons.

Sari (2007) examined the impact of an INSET programme on regular classroom teachers’ attitude towards deaf students educated in regular primary schools. In this research project, a quantitative research approach was used involving randomized allocation of subjects to groups. The results indicated that the teachers in the experimental group increased their knowledge about deafness and that their attitudes were significantly more positive. In particular, the teachers’ attitudes changed in relation to classroom management and knowledge about the education of deaf students in inclusive settings.

Sood and Gihar (2007) have expressed an urgent need to improve training programmes in higher education. They recommended that UGC should encourage more and more refresher and orientation courses for teachers of higher education on a wider scale. The faculty members who participate actively in various training programmes should be given proper incentives by the institutions. In private institutions also, it should be compulsory for the teachers to participate in the training courses.

Goswami (2007) suggested that teacher educators should be trained to use the technological innovations to make their teaching more suitable in the modern context and they should avoid traditional methods like lecturing and dictating notes. The teacher educators should undertake action research and train the student teachers in the same. In-service training courses for secondary teachers should be arranged by secondary teacher education institutions apart from pre-service training. For imparting quality teacher education, teacher education institutions should have adequate infrastructural facilities including library, laboratory, classrooms etc. NCTE and affiliating university should regularly monitor and inspect teacher education institutions.

Pandey and Deb (2008) concluded that unmarried women teachers have significantly favourable professional attitude in comparison to married women teachers. Further, for both married and unmarried women teachers, age, teaching
experience and educational qualifications do not create any significant difference in their professional attitude.

*Maheshwari* (2008) suggested that the curriculum for teacher education should be developed with coordinated efforts of UGC, NCTE, NCERT and other field level agencies and institutions. Evaluation and monitoring should be an integral part of teacher education both at pre-service and in-service training programmes to know the strengths, weaknesses and outcomes of the programmes. She further revealed that innovations and experimentation are largely not encouraged in teacher education programmes. These should be promoted for improving the quality of teacher education programmes.

*Pawar and Mouly* (2008) reported that in-service training is very essential for teachers of even higher education for constant improvement of teaching skills. They revealed that the considerable amount of interaction between resource persons and participants in in-service training programmes is ineffective/poor. It was suggested that teacher training should be made mandatory for all the teachers including private institutions and there should be more interactive sessions for making teacher training highly useful and effective.

*Sharma and Rawat* (2008) studied an in-service teacher training programme under SSA in Sunni educational block of district Shimla and highlighted the following ground realities related to teachers’ training:

- The training component has been judged useful for teachers to a large extent in the areas of use of TLM in classroom situations, activity based teaching and child-centered approach followed by subject enrichment.
- Training material was made available to 98 percent trainees/participants as and when the training programmes were organized.
- By and large, the training modules in the subjects of Hindi, Maths, EVS, CCE, general teacher training, co-curricular activities, physical and health education, gender sensitization were appropriate for teachers and fulfilled their needs except modules on IED and art education.
• The resource persons stressed mainly on lecture-cum-discussion approach while communicating with the trainees instead of demonstration techniques, which were rarely used during the training programmes.

• Majority of the teachers in the sampled schools i.e. 84% were found teaching in rural areas and 16% in urban areas.

• Majority of the teachers serving at primary level in the selected schools are not possessing higher academic qualifications. However, 94% teachers possessed the desired professional educational qualification.

Ramatlapana (2009) concluded that teaching is a field that is dynamic, with innovation necessitating upgrading of skills and education of teachers for the successful implementation of reforms. The behaviour and attitudes of teachers towards teaching and learning and their knowledge banks are the result of the impact of in-service training. This study investigated the perceptions of mathematics and science teachers in Botswana towards in-service provision by the department of mathematics and science education - in-service training unit (DMSE-INSTU), whose mandate is to improve the quality of teaching by supporting teachers through training programmes that enable them to take ownership of their professional development. Data were collected from a sample of 42 teachers, using structured interviews with open-ended questions which were analyzed qualitatively. The findings showed that teachers’ concerns included the lack of impact of current in-service training programmes on the education system, no regular follow-up activities to support the teachers during off time workshops and insufficient skills acquired to sustain the implementation of the strategies solicited by the workshops.

Kumar (2009) reported that the major factors in order of priority that encouraged primary school teachers to participate in in-service teacher training programmes include: (i) learning innovative methods of teaching; (ii) updating information about subject matter; (iii) improving professional competence; (iv) solving educational problems and; (v) enhancing classroom management skills and
competencies. Further, the major factors in order of preference that discouraged primary school teachers to attend in-service training programmes were: (i) maximum use of lecture method in training programmes; (ii) training needs of teachers are not properly assessed; (iii) training programmes have no specific syllabus; (iv) experts/resource persons are not highly qualified and; (v) media are not properly used for providing training. In addition to this, it was reported that the most important training needs of primary school teachers include: (i) new knowledge and information about subject matter should be provided; (ii) more training should be provided on development and use of necessary audio-visual materials in teaching-learning process; (iii) training should be imparted in various methods and techniques of students’ evaluation; (iv) more emphasis should be laid on training of new teaching-learning methods and techniques and; (v) training should be mainly imparted on making classroom teaching more activity-based and joyful.

Kimdi (2009) found that male and female elementary school teachers did not differ significantly from each other with respect to their overall attitude towards in-service teacher training programmes. Less experienced teachers and average experienced teachers did not differ significantly from each other with respect to their overall attitude towards in-service training programmes. Average experienced teachers and highly experienced teachers differed significantly from each other with regard to their overall attitude towards in-service training programmes. The teachers with average experience have achieved significantly higher mean attitude score in comparison to mean attitude score of highly experienced teachers. There was no significant mean difference in overall attitude scores of less experienced and highly experienced teachers towards in-service teacher training programmes. Less experienced teachers and average experienced teachers did not differ significantly from each other with regard to their attitude towards significance and utility of in-service training programmes. Average experienced teachers possessed significantly better attitude towards significance and utility of in-service training
programmes in comparison to highly experienced elementary school teachers. Similarly, less experienced teachers and highly experienced teachers differed significantly from each other with respect to their attitude towards significance and utility of in-service training programmes. The teachers with less experience have achieved significantly higher mean attitude score in comparison to mean attitude score of highly experienced teachers. The three groups of elementary school teachers having different teaching experience did not differ from each other with regard to their attitude towards nature and ways of providing training during in-service training programmes.

Sabu (2010) reported that secondary school teachers who have not attended any in-service training programmes have high teaching competence and teachers who attended fifteen training programmes have low teaching competence. Secondary school teachers below 30 years of age have high teaching competence whereas teachers within age group of 41-50 years have low teaching competence. No significant gender-wise as well as institution-wise differences in teaching competence of secondary school teachers were observed.

Rana (2010) studied the “Impact of In-Service Training Programmes on Teaching Effectiveness and Role Commitment among Secondary School Teachers” and concluded that:

- Less trained secondary school teachers who have attended one to three training programmes were found to be significantly more committed towards their profession in comparison to both moderately trained (who have attended 4 to 7 training programmes) as well as highly trained secondary school teachers (who have attended 8 or higher number of training programmes). Similarly, moderately trained secondary school teachers were significantly more committed towards their profession as compared to highly trained teachers.

- Moderately trained teachers were reported to possess significantly better teaching effectiveness in comparison to less trained teachers. However, no
significant differences in teaching effectiveness were observed among highly trained, moderately trained as well as less trained secondary school teachers.

2.3 AN OVERVIEW

The aforesaid discussion of certain significant research studies undertaken in the area of both pre-service as well as in-service teacher training programmes clearly reflects that professional development of teachers is of vital importance in improving professional knowledge, skills and competencies of the teachers. However, some detailed and in-depth studies undertaken in recent years have shown that the quality of pre-service and in-service teacher training programmes in our country is deteriorating and that the professional commitment and overall competence of teachers leave much to be desired. Hence, unless and until, the quality of teacher training programmes is enhanced, the quality of school education cannot be improved. Furthermore, the research studies conducted in the field of in-service education of teachers point out certain gaps related to effect of in-service teacher training programmes on classroom competencies and attitude of teachers towards teaching and students. Although, there were very few studies which had been carried out to find out the effect of in-service teacher training programmes on teaching competency, teacher effectiveness or role commitment of teachers but no empirical evidences with regard to effect of in-service teacher training programmes on attitude of teachers towards teaching were arrived in the way of researcher during the course of review of previous research studies. In addition to this, the research studies have shown that there is difference of opinion as well as lack of coordination between resource persons, personnel of implementing agencies and teachers regarding the organization, monitoring, evaluation and usefulness of such programmes. So, the need emerges to conduct present investigation pertaining to ascertaining the views of different functionaries working in the field of in-service teacher training programmes organized under SSA in Himachal Pradesh. Further, in order to find out whether large scale
investment made in human resources through in-service teacher training programmes is bearing some fruitful results or it is merely wastage of time, money and energy; there is an emergent need for immediate attention of researchers to undertake area-specific studies in the field of in-service teacher training programmes.

The above critical issues provided a rationale for selection of the present research problem and accorded a base to formulate certain hypotheses for verification which are given under:

2.4 HYPOTHESES OF THE STUDY

The following hypotheses were formulated for the present study:

1. There will be no significant difference in the attitude of upper primary school teachers towards teaching and teacher-student relationship in relation to their level of participation in in-service teacher training programmes.

2. There will be no significant gender-wise difference in the attitude of upper primary school teachers towards teaching and teacher-student relationship.

3. Level of participation in in-service teacher training programmes and gender will not interact significantly with regard to attitude of upper primary school teachers towards teaching and teacher-student relationship.

4. There will be no significant difference in the attitude of primary school teachers towards teaching and teacher-student relationship in relation to their level of participation in in-service teacher training programmes.

5. There will be no significant gender-wise difference in the attitude of primary school teachers towards teaching and teacher-student relationship.

6. Level of participation in in-service teacher training programmes and gender will not interact significantly with regard to attitude of primary school teachers towards teaching and teacher-student relationship.