

CHAPTER II

REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

In this chapter, the researcher has made an attempt to present the previous studies conducted in the area of In-Service Teacher Education. The review of related literature involves the systematic identification and analysis of documents containing information related to the research problem. The major purpose of reviewing the literature is to determine what has already been done that relates to your topic. This knowledge not only prevents the researcher from unintentionally duplicating another person's research, but it also gives him the understanding and insight needed to place the research topic within a logical framework (**Gay, Mills and Airasian, 2012**).

Another important purpose of reviewing the literature is to discover research strategies and specific data collection approaches that have or have not been productive in investigations of earlier topics. It may suggest approaches and procedures that previously had not been considered. Being familiar with previous research also facilitates interpretation of the present Study results (**Gay, Mills and Airasian, 2012**).

2.1 RESEARCH PERSPECTIVE IN TEACHER EDUCATION

Educational research in India is relatively a recent phenomenon of the post-independent period. The first Department of Education was started in 1917 in Calcutta University and the first degree solely based on dissertation was awarded by Bombay University in 1936 and the first Doctoral degree was awarded in 1943 by the same University. It is only after the independence, that most of the Universities introduced programmes in Education and researches in Education gradually picked momentum. However, research studies in the area of Teacher Education reflected a very slow progress which is evident as given below.

2.2 STATUS OF RESEARCH IN TEACHER EDUCATION.

The first effort to take up educational research was made by NCERT in the form of bringing out the 'Third Yearbook of Education' focusing on review of educational research including researches related to Teacher education in 1968. Most of the studies were dissertations submitted for Master's Degree of various universities. Later on, under the editorship of Prof. M.B. Buch, in 1974 the First Survey of Research in Education was brought out and later on three surveys were brought out in 1979, 1987 and 1991. By now the publications of surveys of researches from time to time had been institutionalized at NCERT level with the publications of the Fifth Survey carried out from 1988 to 1993 and work on the Sixth Survey covering the researches carried out from 1993 to 2000.

Analysis of the studies reviewed by various surveys in India points out that though there has been an increasing trend in the number of research studies conducted in relation to Teacher Education, the percentage of these research studies as compared to overall researches are less in number which is also evident in table no. 2.1.

2.3 RESEARCH STUDIES REPORTED IN TEACHER RELATED ISSUES:

Table 2.1

Details regarding Research Studies reported in Teacher related issues

| Sr No. | Surveys | Total Number of Researches in Education | Number and percentage of researches in Teacher Education |
|--------|---|---|--|
| 1. | First Survey of Research in Education (up to 1972) | 731 | 46 (6.30%) |
| 2. | Second Survey of Research in Education (1972 to 1978) | 839 | 62 (7.39%) |
| 3. | Third Survey of Research in Education (1978 to 1983) | 1481 | 121 (8.17 %) |
| 4. | Fourth Survey of Research in Education (1983 to 1988) | 1674 | 145 (8.66%) |
| 5. | Fifth Survey of Research in Education (1988 to 1992) | 1831 | 105 (5.74%) |

| | | | |
|----|---|-------------|--------------------|
| 6. | Sixth Survey of Research in Education (1993-2000) | 319 | 46 (14.42%) |
| | Total of 1 to 6 | 6875 | 525 (7.63%) |
| 7. | Districts Primary Education Programme (DPEP) Research Studies | 471 | 60 (12.73%) |
| 8. | Abstracts of Research Studies in Elementary Education (2003-2009) | 323 | 44(13.62%) |
| | Total of 1 to 8 | 7350 | 583 (7.93%) |

Source: (NCERT, 2010).

In addition to this, the Indian Educational Abstracts were published every six months by NCERT and total 1963 research studies have been reported in these abstracts.

Educational Consultant India Ltd. brought out two volumes on research studies carried out on DPEP interventions from 1994-2002. Four hundred and seventy-one (471) research studies have been reported in Districts Primary Education Programme (DPEP) and out of these studies, 60 studies were conducted on Teacher Education.

Abstracts of Research Studies were reported in Elementary Education (2003-2009) by Research, Evaluation and Studies Unit, technical Support Group for Sarva Shiksha Abhiyan, Ed.CIL (India) Ltd. (2010). Three hundred twenty-three (323) research studies have been reported; out of these studies only 44 studies were conducted on teacher related issues.

Thus, there has been a dearth of research in a very important area i.e. Teacher education. There is urgent need to review the existing system and assess the preparedness of our Institutions, Teachers and other functionaries towards meeting the challenges and goals of twenty-first century education. The present Study addresses these very concerns; it aims to study the organization and implementation of in-service training programmes conducted by the DIETs of Gujarat State.

Studies reviewed and presented herewith cover different types of research studies which can be classified as follows:

Studies related to In-Service Teacher Education Programme -

- Research studies conducted abroad
- Research studies conducted in India
- Research studies related to DIETs

2.4 RESEARCH STUDIES RELATED TO IN-SERVICE TRAINING PROGRAMMES

2.4.1 Research studies conducted Abroad

Fresko and Chaim (1985) found that after in-service training, there was high level of confidence in ability among the teachers to teach the curriculum. It was also found that there was corresponding increase in Mathematics skills after in-service training.

Bohan (1997) evaluated the impact of collaboration and Skills in in-service training for Northern Gila County Teachers. In this Study, it was found that majority of the teachers reported improvements in their beliefs, practices and skills after in-service training.

Teachers reported that they were more skilled after training. The overall results suggested that the six-month training provided in five sessions had a positive impact on a majority of teachers.

Chadwick (1999) conducted a Case Study of four elementary schools involved with a professional development programme in arts. The Study found that most of the variables within the programmes i.e. origin, operation and evidence of results were consistent among all four schools. A common philosophy of programme was understood by participants and administrators. There was a need for planning time between the arts coaches and the teachers. Advisory councils, parents, and the community were not generally aware of the operation of the programme. Evidence of results indicated that the integration of the arts increased students' positive attitude and efforts. Teachers' attitude indicated a favorable view toward the programme; most will continue to teach though the arts. Data collected through this Study suggested that the integration of the arts can be a powerful teaching tool for teachers and an interesting way for students

to learn. Informing parents and community about the existence and results of the programme may generate additional support. The development of additional form of the student's assessment would be beneficial.

Franks (2000) conducted a Study on the effectiveness of the "Trainer of Trainers" model for in-service science professional development programmes for elementary teachers participating in the Mathematics and Science Education Cooperative (MSEC). In this professional development model, a core group of teachers received professional development sessions taught by science education professors. The target population of this Study included approximately two hundred teachers in the MSEC programme who were teaching from Kindergarten to Grade - VI in five different elementary schools. Both qualitative and quantitative methods were used in data collection. Focus groups, interview, observation and survey instruments were the primary sources of data collection. Triangulation methods were used to establish validity and verification of data. Analysis was an ongoing process that included several levels of affinity groups, interrelationship diagrams, path diagrams and system influence diagrams. Interview and feedback surveys were also used to evaluate the problem under investigation. Teachers consider the State-Mandated Assessment Test to have the largest impact on the school curriculum and to be the primary reason why teachers could not find time for science teaching. Furthermore, they believed that the administration played a huge role in determining if science had taken a back seat at their respective schools.

Martinez (2000) conducted an analysis of embedding teacher leadership in professional development. This Study was an examination of how a teacher leadership role presenting professional development to colleagues was encouraged through a science education professional development programme. A qualitative methodology was used, involving fifteen science teachers. The primary data source was semi-structured interview. Secondary data sources were documents submitted to the programme by the teachers and observations of their physical classrooms. There were two major findings. First, after fulfilling the requirement of the National Science Foundation (NSF) grant, seven of the nine teachers with no prior experience presenting professional

development had presented additional professional development to colleagues. The most important attitude influencing this new capability were: an acceptance of the Microcosms philosophy and curriculum; and having a degree of comfort with the biological content. Six attributes of the Microcosms professional development programme were described which encouraged this teacher leader role. These second findings were that the fifteen science teachers considered the concept of “sharing knowledge with colleagues” to be a major quality of teacher leadership. A new definition of teacher leadership was offered.

Pomuti (2000) conducted a Study entitled ‘The Impact of Practice - Based Inquiry on In-service Teacher Education Model on Teachers' Understanding and Classroom Practices'. The Study revealed a very significant effect of teacher training on students' achievement. Two studies entitled 'The Professional Development in Reading Study' and 'The Middle School Mathematics Professional Development Impact Study' were reviewed and reported by Quaint, J. (2011). Both studies found that the programme had only a limited effect on teachers' knowledge and instruction and did not leave an abiding impact on student test scores.

Stewart (2000) studied the evaluation of professional development training for elementary teachers in urban and Native American schools using design technology and the learning cycles. The concerns included whether the participating teachers accepted Technology and Invention in Elementary Schools (TIES) methodologies as variable methods of instruction and what factors affected implementation over time. Participants included 32 teachers from urban schools in Ohio and from Native American schools in Arizona and New Mexico, who took part in the TIES training in the summer of 1998. The programme was evaluated using ex post facto and quasi experimental research design and included both qualitative and quantitative methods. Data were collected using the stages of concern questionnaire, the Shrigley Johnson Science Attitude scale, the science teaching efficiency beliefs instrument, the work environment scale, and various surveys. Through this Study, a new method for evaluating the stages of concern questionnaire was developed to determine if significant numbers of individuals shifted from preliminary stages of concern to higher order concerns over time and predicted in the research.

Sherrill (2001) studied the extent of probationary teachers' perceptions to which their pre-service and in-service education, respectively, influenced their recruitment to the teaching profession and their plans to continue a career in teaching. The result indicated that teachers' perceptions of their recruitment to the teaching profession and plans to continue a career in teaching were influenced by their pre-service education and in-service education after they assumed a classroom teaching position. Results showed that decisions to have career permanence in teaching were influenced by gender and by size of school district population. 14,815 probationary teachers in public classrooms in Missouri made up the population of this research project. Surveys were sent to a selected sample of 750 classroom teachers who made up this population. Twenty-four teachers supplied written comments. Twenty-two of those respondent commented that their pre-service education activities did not prepare them for classroom teaching. Twelve teachers were of the view that the school climate and current issues had its great impact on their recruitment to the teaching profession and their plans to continue a career in teaching. Some issues such as administration support, extracurricular duties, teaching in areas in which they were not trained and responsibilities other than classroom teaching (i.e. meeting which involved instructional planning related to students' special needs, after school duties, parent and community support) were emphasized a lot which ultimately contributed to their stress and job dissatisfaction.

Khad, Rubina (2002) conducted a study entitled 'Impact Assessment of an In-Service Teacher Training Programme in Bangladesh'. The objective of the Study was to monitor the impact of in-service teacher training in terms of teachers' attitudes, beliefs and students' attitudes. Data were collected through different techniques like individual interviews, focus group discussions and classroom observations. It was found that training was successful and had a positive impact on teachers as well as on students.

Karagiogi et al. (2006) conducted a Study to measure the perceptions of pre-primary and primary school teachers in Cyprus about the impact and efficacy of a particular ICT in-service training initiative. The findings revealed a significant impact of training on teachers' personal attitudes and skills. At the same time, the findings reflected that the professional practices developed by teachers did

not outline significant gains in students' learning and achievement. The study also suggested that for ICT professional development to impact school practices, there is a need for contextual factors such as access to resources, curriculum time and a change oriented environment to be taken into account.

Thurston et al. (2008) studied the 'Effects of Continuing Professional Development (CPD) on Group Work Practices in Scottish Primary Schools.' They found that the CPD initiative had a significant impact on pupils' attainment in science. It also revealed that CPD promoted effective discourse and pupil dialogue during science lessons. Moreover, significant correlations were found between teacher's evaluation of the impact of Continuing Professional Development upon pupil learning and increased attainment in science.

Hardman, Frank et al. (2009) conducted a Study aimed at investigation into the impact of a national, school-based teacher development programme on learning and teaching in Kenyan primary schools. The Study found that after training, teachers were more interactive with pupils in teaching and made greater use of group work. The Study also revealed that the biggest impact on classroom practices was observed in the case of those teachers who had undergone the most systematic in-service training. The Study entitled 'Provision of In-Service Training of Mathematics and Science Teachers in Botswana.

Ramatiapana, Kim Agatha (2009) conducted a Study investigating the perceptions of mathematics and science teachers in Botswana about in-service programme. The Study reported that there was no significant impact on the education system due to the current in-service programme; no follow-up activities to support the workshops and in-service programme were undertaken and skills acquired during the programme were insufficient to sustain the implementation of the strategies in future.

Ghani et al. (2009) conducted a Study on the effects of Teacher Training Programme on Teachers' Productivity in Caprivi Region, Namibia and found that a partial relationship positively existed between training of teachers and their organizational effectiveness. They also highlighted that only a few of the mentioned training programme skills actually contributed to the effectiveness of teachers.

Garet et al. (2010) conducted a Study in the USA entitled 'Middle School Mathematics Professional Development Impact Study'. The purpose of the Study was to test the impact of a professional development programme for a teacher that was designed to address the problem of low student achievement in topics in rational numbers. It was found that the professional development programme did not produce a statistically significant impact on teachers' knowledge of rational numbers. The professional development programme had a statistically significant impact on the frequency with which teachers engaged in activities that promoted student thinking and did not produce a statistically significant impact on student achievement.

Sabiha et al. (2010) in their Study, 'Teachers' Views on the Effectiveness of In-Service Courses on the New Curriculum in Turkey' evaluated the effectiveness of in-service courses conducted by the Ministry of National Education in order to inform teachers about the changes introduced by the new primary and secondary school curricula. Based on teachers' views of the INSET courses, the Study aimed to find out whether changes in curricula had entered the classrooms. Semi-structured interviews were conducted with primary and secondary schools during the 2007-2008 academic years and the data were analyzed based on the criteria of effective INSET identified in the literature. The INSET courses were found to be ineffective, mainly in terms of the quality of the instructors, teaching methods employed, duration of the courses and support after training.

Viadero, Debra (2010) reviewed different studies conducted in USA related to the impact of teacher training on student achievement. He reported findings of a study entitled 'The Middle School Mathematics Professional Development - Impact Study', which suggested that even intensive efforts to boost teachers' skills in their job may not lead to significant gains in student achievement. A similar conclusion was drawn in another study which studied the impact of training on improvement of teachers' instructional skills in early reading.

Abuhmaid, Atef (2011) conducted a Study entitled 'ICT Training Courses for Teacher Professional Development in Jordan', which focused on the

effectiveness of ICT training courses within the Jordanian education system. The findings revealed that ICT professional development courses for teachers were of considerable help to them in improving their ICT skills and knowledge. The report also highlighted the problems regarding the conduct and the nature of these courses, indicating that timing and modes of training follow-up, teachers' beliefs, school culture, workload, etc., appeared to impact the effectiveness of the training courses.

Hoque, Kazi Enamul et al. (2011) conducted a Study entitled 'Impact of Teachers' Professional Development on School Improvement in Bangladesh'. The main objective of the study was to examine the relationship between teachers' professional development activities and school improvement. The findings of the Study revealed that teachers' professional development activities have a significant impact on school improvement. The Study also reflected on the importance of teachers' collaboration in in-service training and classroom observation for school improvement.

Jamil et al. (2011) conducted a Study to find out the association of in-service training with the performance of secondary school teachers for the academic betterment of students at the secondary stage and its effect. The Study focused on some key aspects of training effectiveness like expertise in the subject matter, acquisition of latest knowledge, interaction with students, teaching methods, sources of information, and getting feedback from students. The study revealed that a significant correlation existed between in-service training and the performance of teachers. It was also found that some aspects under the study showed a comparatively better effect of training while some other aspects like expertise in subject matter, improvement in knowledge, sources of information did not show any significant effect of training on the performance of teachers and students.

2.4.2 Research Studies conducted in India

SCERT (1980) conducted a Study to evaluate the in-service training programme for primary teachers in the selected government and aided teacher training institutions. The following conclusions were made: (i) 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. (ii) The participants felt that in-service training programme was good and helped in developing knowledge about new concepts. (iii) The participants felt motivated to implement most of the teaching strategies taught during the course. (iv) The participants felt that skills to be used during classroom teaching were not adequately practiced during the training programmes. (v) Adequate stress was laid on the learning of concepts in science rather than teaching of the concepts. (vi) 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.

Butala (1987) conducted a Study on in-service teachers training for B.Ed. colleges of Gujarat. The Study revealed there was no use of teaching aids (like audio -visual aids) during the training programmes. The Study found that there is a need of the proper assessment of in service training programmes. In-service training programmes were helpful for teachers for updating their knowledge related to content area and developing teaching skills. Special training programmes should be organized for the resource persons recommended in the Study.

Acharya (1989) studied the impact of PMOST. The objectives of the Study were to study the benefits derived by teacher participants. The teacher's perceptions regarding the modalities visualized by them were also studied. It included the study of innovative practices evolved by the resource faculty and the participating teachers for raising the organization of PMOST keeping in view physical and human resources. The tools used were questionnaire for the teachers and interview of the participants, resource persons and coordinator. Analysis of data was carried out quantitatively by applying frequency and percentage of response. Content analysis was done for qualitative data. The major findings were that teachers derived very little benefits in terms of awareness created,

perception of the expected role, motivation generated and competence acquired. No innovative practices were evolved during the programme. The teachers were satisfied with organization of PMOST.

Doraswamy et al. (1989) evaluated the PMOST in Karnataka. This training was limited to creating awareness about NPE 1986. Teachers did not appreciate the training addressing merely awareness objectives. The PMOST training programme was therefore reviewed and revised to include academic content and rechristened as Special Orientation Programme for Primary Teachers (SOPT). In the survey of teachers' opinion in Nagpur, Panchbhai (1990) reported indifference of 90 percent of the teachers in in-service training programme due to their negative attitude and lack of support from the school authorities. Gupta (2000) reported gains in knowledge and classroom performance in SOPT in Uttar Pradesh.

Bardoloi (1990) studied teacher education in Assam at Primary Level during the post-independence period with special reference to the curriculum and in-service training. Main objectives of the Study were: (i) To trace the historical development of primary teacher education in Assam. (ii) To find out the major drawbacks of present curriculum.

(iii) To analyze the problems faced by trainees and teacher educators, and (iv) To make suitable recommendations for solving the same. In the present Study the researcher used questionnaire, interview and observation as tools. The major findings of the study showed that despite the existence of 22 training centers to train lower primary teachers, there was still a backing of untrained lower primary teachers in Assam and the quality of entrants in these institutes was not up to the mark.

Nagpure, V. R. (1991) carried out a critical Study of the system of teacher education at the secondary level in Maharashtra. Investigator used survey method for data collection. Percentages were calculated for findings and conclusions. The major findings of the Study showed that a majority of students admitted had no experience. Innovative methods like a team teaching and models of teaching were rarely tried out in college of education and about 30 percent colleges of education running centers for vocational guidance, adult

education, population education, continuing education and distance education.

The SCERT, Andhra Pradesh (1991) undertook an evaluative study on APFEP. The findings revealed that the in-service training and three-day's follow-up courses were found not very useful by majority of the teachers. The participation and involvement of teachers in teacher center meetings was encouraging. The implementation of APFEP contributed in increasing pupil participation in teaching - learning process, increased enrolment rate, minimized dropout rate and reduced absenteeism in primary schools.

Pillai (1992) conducted a Study on the role of DIETs in promoting in-service education for primary school teachers. Study suggested that DIETs should provide compulsory in-service training programmes to all primary school teachers. There was a need to improve infrastructural facilities in DIETs so that in-service training programs can be strengthened.

Sharma (1992) found that INSET impact was higher for teachers in the age group 45-60 years or those with more than 15 years of experience. About 58 percent of the teachers could learn the concepts relating to the content covered in the training. Measurable changes in students' performance were reported in the case of about 75 percent of the teachers. Similar results were reported by Agarwal (1997), Eswaran (2009) and Kumar (2011).

Suthar (1992) studied the in-service education programmes for the secondary school teachers and principals organized by Extension Service Center, Faculty of Education and Psychology. The objectives of the Study were: (i) to trace the history of development of teacher education in general and in-service education in India as well as in the state of Gujarat. (ii) to survey and review the programme and activities organized by Extension Service Center of the Faculty of Education and Psychology, the M.S. University of Baroda, as a part of in-service and professional education of secondary school teachers and principals under its jurisdiction i.e. Baroda, Panchmahal Districts (iii) to offer some observations and suggestions useful for this Extension Service Center and other Extension Service Centers to organize their future programmes and activities. For the present study questionnaire was prepared for the collection of the data. The findings of the Study were: 1. The Extension Center is a great service

regarding the theories and practice in education. 2. It is a connecting link between the schools and department of education. 3. The department was rendering a valuable service to the teachers by keeping them in touch with new ideas and the dynamic methods of teaching. 4. Extension Center had contributed towards the improvement of secondary education.

UNICEF Sponsored Teacher Empowerment Project (1992) in Madhya Pradesh, Rajasthan, Maharashtra and Uttar Pradesh found that the programme improved the school environment and boosted teachers' morale and self-esteem, and improved their teaching which in turn boosted students' enrolment and attendance. Regional Institute of Education, Bhubaneswar organized a National Seminar on Quality Elementary Education and Constructivism (17-19 March, 2010). Eighty-two papers were contributed by educationists and pedagogics on the theme of the seminar. Three studies presented in this seminar evaluated the constructivist approach.

Walta, K. (1992) carried out an evaluation Study of secondary teacher education program. It was found that the curriculum of the secondary teacher education programme lacked uniformity and clear cut definition. The majority of teacher education institutions had late defective admission criteria and late admissions. A four-year teacher education program was preferred to the existing one year B.Ed. programme. Teacher training on all aspects was recommended.

Rao, K. N. (1994) conducted a Study on APPEP project that noticed transmission loss in in-service programmes which influenced the classroom practices adversely. The study suggested periodic follow - up after the training. The Uttar Pradesh Basic Education Project (UPBEP) undertook the programme of institutional capacity building with the objective of imparting training to teachers to adopt classroom practices that involved students in individual, small group and large group learning activities. The evaluation team observed that the large scale implementation of the in-service programme had an adverse effect on quality control, which requires continuous monitoring and evaluation.

Gafoor (1996) conducted a Study on functioning and work efficiency of the DIETs in promoting pre-service as well as in-service teacher education. In the case of in-service training programmes provided by DIETs, somewhat

satisfactory conditions were reported with regard to the training methods and number of participants. But unsatisfactory conditions were reported in the aspect of duration of courses, review of courses in each year, planning of in-service courses, evaluation of participants' works, evaluation of course effectiveness and follow up programmes. The study also reported that no DIET had conducted any study for assessing the effectiveness of in-service courses they had provided.

Govinda (1996) described importance of teacher education and professional development. The Study found that the teacher educators should help teachers to develop their insights into the practical theories which structure their practices. Professionalism could only be developed on an ongoing basis through experiences and experimentation. Training only helps one to feel more confident as a teacher. Teachers' professional development within and outside the classroom is a product of their reflectiveness and participation in educational opportunities which will enhance and extend their growth and development. In addition to this, professionalism among teachers is built through a support system from colleagues.

Aggarwal et al. (1997) evaluated the teacher training programmes of the first cycle under DPEP in Hisar and Sirsa districts. The major objectives of the study were (i) To evaluate primary teachers' training programmes of the first cycle organized under DPEP in the two districts and (ii) To offer suggestion for effective training, monitoring and evaluation performance developed by the researcher. The major findings were (1) Training programmes at Hisar II, Hansi I, Hansi and Kalawali were poorly organized. Seating arrangements were inadequate; physical amenities were lacking. (2) Lecture method was mainly used by master-trainers at Hisar, Hansi I and Hansi II. (3) Training programmes at Siwani and Dabwali were well organized. Participants were active, motivated and involved in meaningful group activities. (4) There were more than 40 participants at Hisar II, Hansi I and Hansi II centers.

Phalachandra (1997) conducted a Study on in-service training needs of primary school teachers and implemented an in-service training programme through interactive video technology. The technology adopted in the study was one-way video and two-way audio communication. The Study reported that the use of

mobile training strategy and school based in-service education of teachers did not require teachers to move away from their place of work. The centralized in-service training strategy was found to be ineffective when in-service training is to be provided for a large number of teachers. The Study also reported that 'cascade model' of in-service training, which was currently the pre-dominant modality, resulted in huge 'transmission loss' down the line from the experts at the national level to the resource persons at the level of different training venues. The participant teachers indicated that during training programmes, they found the training methods effective and informative.

Kishore (1998) studied the In-Service Training Preference of selected Primary Teachers after Two-Week In-Service Course to various training components. The objectives of the Study were: to expose primary teachers to equally - timed five training components through an in-service course of two-week duration, to study the preference of primary teachers for the selected training areas. Thirty teachers teaching at the primary level in various Central Schools for Tibetans were given a two-week in-service training by including following five areas: (a) Learning by Doing (b) Communication Skills (c) Teaching Aids (d) Teaching Strategies (e) Content Enrichment. The following conclusions were drawn from the present Study: (1) The primary teachers prefer most the learning-by-doing area for their in-service training. (2) The descending order of preference for in-service training components was as learning-by-doing; teaching aids; teaching strategies; communication skills; content enrichment. (3) As compared to the content learning, the primary teachers prefer training in learning-by-doing.

Rao, M. and Lakshminarayana (1998) conducted a Study on the impact of SOPT training programme on classroom practices in Andhra Pradesh. The academic awareness of the teachers and their classroom practices were observed before and after the training. Some of the major findings of the study were: (i) The SOPT training programme seemed to have an impact over the academic awareness of teachers. (ii) The SOPT training had impact on the classroom performance of teachers (iii) Almost all teachers were satisfied with the training material supplied, whereas they were not satisfied with transactional approaches used for imparting the training. Another similar study on the impact of SOPT training programme in Karnataka was carried out by Manjula Rao and

Viswanathappa (1998). The Study was conducted in Chickmagalore and Mangalore districts. It concluded that SOPT training had an impact over the academic awareness of teachers. There was considerable effect of SOPT training on the classroom performance of teachers.

Patel (1999) conducted a Study titled “A comparative study of In-service Training Programmes organized by two DIETs”. The Study led to the conclusion that there was no significant difference among the in-service training programmes of both the districts and it was observed that teacher trainees of the Dang district were more efficient than their counterparts from Valsad district. Majority of the teachers (i.e. 80%) of both the DIETs were having post graduate degree. The Study revealed that fifty-four percent of the teacher trainees were in the age of below 40 years whereas thirty-six percent teacher trainees were in the age of 40 years and above – training had to be designed accordingly.

Yadav (1999) studied Teachers’ perception on quality of in-service education programme and concluded that: (i) More than 60% teachers responded that the course content was comprehensible to them while 36.20 % teachers said it was comprehensible up to a large extent. (ii) 70 % teachers were satisfied with the availability and relevancy of the training modules whereas 25% teachers did not give any response. During focused group discussion, it was expressed by some teachers that modules on different subjects in one package did not fulfill the needs and also spoil the sequence and continuity. The package consisted of modules on mathematics, language and general education which was not relevant towards need based training. (iii) About 60 % teachers were satisfied up to some extent with the transactional approach followed during the programme while 37.80 % were satisfied up to a large extent. Mostly the same approach was used for transacting course content. (iv) More than 55% teachers expressed that the resource persons dealt with the assigned topics satisfactorily up to a large extent while 42% said that they could do justice only up to some extent. (v) Majority of the teachers i.e. 64.57% were satisfied with the management of the training programme up to some extent while 33.86% were satisfied up to a large extent. In discussion, teachers expressed that the organization of the training programme was not satisfactory.

Yadav (1999) studied quality of primary teachers in in-service training. The specific objectives of the study were (i) To identify problems affecting the quality of training.(ii) To ascertain participants' perceptions about the quality of training. (iii) To determine the quality of training in terms of gain in knowledge among the participants.Out of four DPEP district in Haryana, one district i.e. Hisar and its two blocks namelyBRC-1 and BRC - 11 were selected and all the 127 teachers participated in the trainingprogramme. Participants' perception scale, focus group discussion, interview schedule for resource persons and achievement test were developed as instruments for data collection. The major findings of the study were: (i) About fifty percent teachers expressed that the seminar room was not suitable and no separate rooms were availablefor group work. They also expressed that there were not adequate facilities of infrastructure, especially blackboard facility, toilet facility as well as library facility. (ii) Learning material was provided on the first day of training and no technological aids were used for transacting the curriculum. (iii) Around seventy percent teachers expressed their views about the course content that they had clarity about the objectivesup to extent and course content met the training needs comprehensible to some extent. (iv) The participating teachers stated that lecture method was mostly used in the trainingprogramme (98.4%). This was followed by lecture cum discussion (47.4%). Demonstration, field study, guided self-study and assignment were never used. (v) Theteachers felt that the competent resource persons should be employed during training programmes.

Chacko (2000) investigated about availability and utilization of educational media during in-service training imparted by Educational Technology faculty of DIETs in Kerala. Educational Technology faculties of eight DIETs and 400 primary school teachers who attended in-service training programme were selected for the study. Studyreported that the in-service training programmes, on the usage of technological equipment, were below expectation level. The Study suggested improving the quality of in-service training programmes on Educational Technology for primary teachers.

Patel (2000) studied the training needs of teachers and found that teachers required training for preparation of quality TLM while community members and the coordinators of BRC/CRC felt a need for developing desirable attitude and mind set among teachers. Thus, the effect of training needs to be observed in real life contexts through feedback from trainees and on the basis of differences between entry and exit-level behavioral. Moreover, the literature reviewed indicated more of the study done on teachers but not on the awareness about SSA programme among the teachers. In the present Study, investigator had reviewed sixteen studies regarding in-service training and four studies regarding SSA.

Yadav (2000) studied the impact of primary school teachers' in-service education on classroom transaction. The Study reported that there was the lack of academic support and incentives to teachers, insufficient facility for training, and use of inappropriate transactional methodologies. The Study found that due to these shortcomings, the efficiency and effectiveness of in-service training programmes got affected and ultimately it affected the performance of teachers and students.

Yadav (2000) studied the impact of in-service training of primary teachers in a block in Hisar district in Haryana using pre-test and post-test design on achievement of teachers and the observed classroom practices. The teachers showed higher achievement after the training. The transfer of training gains to classroom practice was only marginal.

Sathyanesan (2001) conducted a Study to assess the effectiveness of in-service training for teachers and headmasters by DIETs. The researcher used the sample of the Study

i.e. 784 school teachers, 210 headmasters and 36 DIET faculty members. The researcher collected data by the means of questionnaires, interviews and observation schedules. The Study revealed that the rate of teacher participation in the in-service programmes were not up to the expected level due to lack of administrative power to DIETs for giving compulsory directions to the school authorities, lack of motivation among teachers and lack of long - term planning.

Subramanian (2001) conducted a Study on the impact of DIETs on the work efficiency of primary school teachers of Kerala State. The Study was conducted among 400 primary school teachers. The Study assessed the work efficiency of teachers after undergoing in-service courses in DIETs with regard to content enrichment, class management, evaluation, and community participation. The Study reported in-service training programmes made positive impact on teacher work efficiency in schools.

Ramachandran (2002) conducted a Study for primary school teachers and difficulties faced by them in implementing the Integrated Education Programme for Disabled Children (IEDC) for the disabled children. The sample used for the study was 330 teachers and 50 primary schools were selected. Questionnaire and informal interview were adopted in the data collection. The study revealed teachers were found unable to identify the children with disabilities in their classroom. The Study also revealed that sufficient training was not provided to the primary school teachers.

Yadav (2002) conducted another Study on the impact of SMART - PT in Maharashtra. The training indicated impact on the teachers during classroom transaction. Yadav (2003, 2010) highlighted issues on teacher education in general and in-service education in particular.

Rao (2003) developed an in-service training programme for Navodaya Vidyalaya teachers in meeting student's emotional needs. The objectives of the Study were to identify the emotional needs of students, to develop an in-service training programme for teachers of Navodaya Vidyalaya in meeting students' emotional needs and to implement as well as study the effectiveness of developed programme. For the collection of data, the investigator used participants' observation schedule, unstructured interview, questionnaire and reaction scale. The obtained findings showed that teachers had hardly focused on the emotions of students in completing the 'abc' of curriculum. The designed intervention made a difference in the teacher's behavior as it focused on the knowledge and skills intended to bring desirable change in attitude. The teachers showed significant learning of the inputs of the intervention programme. Their behavior changed radically with students, as they were consciously utilizing the knowledge and skills provided in intervention programme.

Yadav (2003) conducted a Study to analyze the effectiveness of teacher support services in India. It was strongly suggested from the Study that for continuous enrichment of the teachers, there was a need of teacher training equipped with researchbased teaching learning materials, transactional methodology, use of modern teaching aids, adequate physical amenities, friendly school environment, good incentives, proper monitoring and evaluation techniques.

Caroline, D. & Choksi, A. (2004) conducted a Study on District Institute of Education and Training: A Comparative study in three Indian states. Total three states (Gujarat, Rajasthan and Madhya Pradesh) were selected as the sample of the study. The major objectives of the study were to analyze the pedagogical support, availability of teaching material, interaction with villagers. The investigator used field visit and interview schedule for data collection. Survey method was used to collect the data. The result of the study showed the need to recognize the specialized nature of elementary teaching as well as teacher education and recruit DIET staff as elementary teacher educators. It was also found that no follow up impact of training programs were taken up by DIETs, and there was no clear understanding about the role of DIET faculty in elementary education by the faculty themselves.

Panda et al. (2004) studied the perception of the lower primary teachers about science teaching at lower primary stage and their training needs. The major objectives of the study were to understand the perception of lower primary teachers about science teaching and to assess the training needs of lower primary teachers teaching science. The normative survey method was used to conduct the study. The investigators developed a questionnaire to assess the perception of lower primary teachers and their training needs for teaching science. Percentages were calculated to show the view and training needs of the respondents. The result of the study shows that majority of the teachers feels the inadequacy of basic training imparted to them to teach science topic at lower primary classes. 65% teachers complained about the lack of teaching aids. 82% teachers wanted specific short term training for making low cost teaching aid in science. Many of them opined that if teachers are provided with proper atmosphere, scientific temper can be developed among the students and science education at lower primary stage can be made more meaningful and life oriented.

Kumar, V. (2005) conducted study on in-service teacher training programmes under SSA in Kerala. The Study was conducted by involving primary school teachers including heads, teacher trainers, parents and experts. 788 teachers from Kollam, Thrissur and Palakkad districts were surveyed as a part of the study. Nine thrust areas viz., planning, management, subject, evaluation, computer, CE components, co- scholastic, action research, learning materials were placed before teachers for self- evaluation to state their views on the quality of training they received. The study reported that in general the quality of training maintained was only of average standard. The study also reported that in-service training on computer, action research; co-scholastic and continuous evaluation need much improvement. A training need analysis from teachers' perspective was also carried out in the study which found that more in-service training programmes are to be conducted on preparation of study materials, art, work experience, co-scholastic areas, participatory training, continuous evaluation and integration. The aggregate analysis also revealed an unhealthy trend that teachers make some changes in the training received while they face classroom situations. These changes are self-imposed, and adopted after discussing with colleagues and parents.

Raina (2005) conducted a Study on opinion of secondary school teachers on the effectiveness of in-service training programmes in enhancing their professional competencies. Investigator collected data and analyzed opinions of 320 teachers belonging to 43 secondary schools in Thiruvananthapuram district. The study revealed that the in-service training programmes are effective in terms of developing professional competencies of teachers. Fifty-one themes were listed in the questionnaire under the major areas viz., changes in the school curriculum, methods of evaluation, knowledge in Educational Technology, knowledge in Educational Psychology, class management, developing relationship with others, motivating teacher performance, developing teacher ethics, and enhancing job satisfaction. It was reported that in-service training programmes were not found to be effective in the areas viz., knowledge in Educational Technology, classroom management and enhancing job satisfaction.

Sharma (2006) reported that all the teachers were aware of in-service training programme under SSA in Himachal Pradesh and they were provided opportunities for participating in these training programmes. Teachers were generally deputed to training programme on the basis of their teaching experience and they received full cooperation from their heads of schools for attending these training programmes. It was further reported that selection of subject areas for training programmes was done on the basis of the needs of teachers and students. Resource persons involved in the training programmes 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 programmes to have practical utility in improving their teaching methods, understanding characteristics of children and preparing teaching learning materials. However, there was a lack of follow-up programme for ascertaining the impact of in-service training programme on teachers' competencies.

Chauhan, Sharma and Rawat (2008) studied in-service teacher training programmes under SSA in Sunni block of Shimla district. The Study highlighted the following ground realities related to teachers' training: (1) The training component had been found useful for the 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. (2) Training material was made available to 98 percent trainees when the training programmes were organized. (3) By and large, the training modules in the subjects of Hindi, Maths, EVS, CCE, general teacher training, co-curricular activities, physical and health education and gender issues were appropriate for the teachers and fulfilled their needs except modules on IED and Art Education. (4) The resource persons stressed mainly on lecture - cum - demonstration approach while communicating with the trainees instead of demonstration techniques, which were rarely used during the training programmes. (5) Majority of teachers in the sampled schools i.e. 84% were found to be teaching in the rural areas and 16 percent in the urban areas.

Arora (2010) conducted a Study entitled, "Effectiveness of Teacher Training in Quality Improvement of Elementary Education". The study led to the findings that there was no significant effect of training on the classroom deliberations of

primary school teachers. The DIETs, SCERTs and NCERT should give serious thought to the percolation of the benefits of teacher training to the classroom for the improvement of the quality of primary education.

Nayak (2010) studied the effect of Constructivist Approach on students' learning achievement in Mathematics at Primary level. The Study revealed that the constructivist learning approach can significantly improve student achievement in Mathematics as compared to using traditional expository teaching method. It also indicated that most of the students were satisfied and showed positive perception towards constructivist approach. The research on impact of in-service programme Special Orientation for Primary Teachers (SOPT) and in-service programmes under DPEP and SSA also indicated the need for continuous capacity building programmes for teachers. The researches in cognitive development, learning and the impact of Information and Communication Technology (ICT) had necessitated re-orientation of in-service teachers. The findings of the research studies and knowledge explosion further have implications for curricular material and its transaction in the classroom. To meet these challenges of knowledge explosion in content and pedagogy, the continuous training programmes are essential.

Viswanathappa (2010) entitled, "Impact and Implementation of the Learning Enhancement Programme for Quality Improvement of Primary Education" delimited the perception of the teachers and resource persons on the impact and implementation of the programme. The Study yielded suggestions for implementation and important aspects of learning which are affected through the Learning Enhancement Programme (LEP).

Soni (2011) studied the perception of scheduled caste teachers towards in-service training programme and its effects on classroom processes in Pali and Nagaur districts of Rajasthan. The Study comprised of 20 scheduled caste teachers selected from Pali and Nagaur district. Purposive sampling method was used in the Study. The interview and observation schedule were used as tools. The Study revealed that in-service training programmes need improvement in the context of content matter, selection of resource persons and transactional methodologies.

Kotreshwaraswamy (2012) conducted a Study on the attitude of teachers towards in-service training programmes of SSA. The sample of the study consisted of 100 primary school teachers of Bangalore district in Karnataka. Data collected through the tool developed by Dr. Vishal Sood and Mrs. Arti Anand (2011). The study found that there was no significant difference between teachers belongs to rural and urban areas, male and female teachers, teaching experience of teachers and teachers' attitude towards in-service training programme under Sarva Shiksha Abhiyan. The study suggested that the teachers are needed to be trained to make them professionally competent areas suggested by NCTE (1998). It is suggested from the study that the resource persons should have mastery over the subject and the selection criteria of resource persons should be precise and fair.

Yadav (2012) studied the impact of in-service teacher training on classroom transaction. The Study revealed variations in terms of coverage and duration of INSET policy across the different states including Gujarat, Haryana and Tamil Nadu. It was observed from the study that the impact of INSET on classroom transaction depends on the quality and transactional inputs of the in-service training programmes. To enhance the quality of training and for making it more effective and useful for the teachers, a multi-aspects strategy should be developed. After in-service training programme, there should be continuous evaluation, feedback mechanism and post training help at school level. It was observed from the Study that results of in-service training programmes for teachers on classroom transaction varied from one State to another. The Study also gave emphasis on the role of different educational agencies at State and National level for improving training transactions and classroom learning.

Malik and Bhardwaj (2013) investigated the perception of elementary teachers from Punjab regarding the effectiveness of In-service training programmes about four categories viz. organization, contents, transaction and material (module) provided. For this purpose, 529 teachers were randomly selected from Jalandhar, Kapurthala, Ludhiana and Amritsar districts of Punjab state. Questionnaire related to perception of primary teachers towards effectiveness of in-service teacher education programmes was administered to the selected

school teachers. It was concluded from the Study that the organization and content of these programmes was effective, but teachers' role should be vital in defining the content of these programmes. Further, the transaction of content by the resource persons was good but transactional strategies like computerized instructions, brain storming and field trips need to be incorporated and opportunity for library works should be given. The quality of modules provided was good and they were supplied time to time.

Singh (2013) conducted a Study entitled "Elementary Education in Himachal Pradesh under Sarva Shiksha Abhiyan: An Evaluative Study". The findings of the Study reflected that all the elementary teachers of Himachal Pradesh had undergone 15 days' compulsory in-service training through SSA on general areas but a very few teachers had received training in content enrichment area. There was no proper mechanism for evaluation of various teacher training programmes. Most of the training programmes were theoretical whereas practical demonstration was rarely seen in these training programmes. It has also reported in many studies that most explored theme in the in-service training programme were learner centered approaches, objective based instructions, environment based approach, and teaching of mother tongue. Such training programmes should be made an integral part of the educational programme for teachers. It was concluded in many studies that in-service training programmes are compulsory for the professional development of teachers and quality of teaching. The in-service training programmes were not found to be need based as well as experience based and the field visits, practical aspects were not found to be included in the training.

Awasthi (2014) conducted a Study on in-service teacher training in primary education to enhance learning outcome of students. Systematic approaches in training are necessary for increasing the quality of learning outcome of students. It is Government's responsibility to make a policy, provide enough budgets to carry out in-service teacher training programme. Use of internet based training was also suggested as an alternating method of providing in-service training. Primary education is very important in life of an individual and was being neglected for a long time.

Mohanty (2014) carried out a Study on in-service training at elementary school level: impact on classroom practices. The major objective of the Study was to study the impact of in-service training program for the elementary school teachers of Odisha in terms of changes in classroom practices as a result of such training. The study comprised of all the elementary school teachers of Odisha who received in-service training organized by Sarva Shiksha Abhiyan - OPEPA. Investigator used a classroom observation schedule to study impact of in-service training program for elementary school teachers of Odisha. Descriptive survey research design was used for data collection. Simple percentage analysis technique was used and critical ratios were calculated. The major findings of the study showed that in-service training had positive effect in favor of trained teachers, on the skills of introducing the lesson, particularly with reference to the use of various techniques rather than stating topics directly. In-service training had a significant positive effect in favor of trained teachers in case of students' participation for seeking more elaboration on the lesson taught.

Iqbal (2016) studied the effectiveness of in-service programmes on ICT for primary teachers in MCD schools in Delhi. The Study comprised a sample of 400 trained teachers selected through purposive sampling technique. The data were collected by the means of questionnaire, observation schedule and interview schedule. These tools were developed by the investigator with the help of experts. The study revealed that training programme was unsuccessful because after the training, teachers were not using computer based teaching and learning techniques in their schools. It was found that teachers were not satisfied with the resource person. The Study suggested that stake holders should plan the training programmes on ICTs as per issues raised by the teachers.

Yadav et al. (2016) studied the evaluation of in-service training programmes of NCERT and found a total 238 in-service training programmes conducted for various stakeholders in the last three years (2012-15) by different constituent units of NCERT. The in-service teacher training programmes were found to have catered the needs of varied categories of participants i.e. teachers, headmasters, teacher educators, and key resource persons. Development and use of training materials can be considered as an important aspect for process of its development and the involvement the programmes. Out of 238 programmes,

only 89 programmes had shared the evaluation and follow-up mechanism adopted by them. Out of 89 training programmes, evaluation was done in 61 programmes through administration of an evaluation schedule designed at the department level.

2.4.3 Research Studies related to DIETs

DIET (1992) conducted an evaluation study of the residential in-service training programme for the primary teachers at DIET Baroda. The objectives of the Study were to evaluate the utility of residential in-service programme. It also aimed at developing the feeling of undergoing of full time activity. Increase in educational responsibility was also essential. The effect of in-service education on the quality of teaching was also found out by finding the difference in teaching. The views and suggestions of resource persons were also obtained. It was a survey in which the tools used were questionnaire and interview. The finding reflected that the programme was by the teachers and they were of the view that it may improve the quality of teaching and help in developing community living. Residential facilities were not sufficient in in-service training programmes. It was suggested that the programmes should be of one week and not three weeks. The resource persons felt that one hour was too short a time for a particular session; teachers should be given agenda in advance and the library should be improved.

NIEPA (1992) undertook a Study with a specific objective of identifying the strength and weakness of DIETs in Haryana. The emphasis was on identifying the strengths on which the future progress could be made by remedying the shortcoming. It was an attempt to assess the implementation process. Information on establishment of DIETs and activities was collected through interviews based on a detailed questionnaire developed for the DIETs. Study of the relevant documents from the MHRD and state records was also undertaken. The findings of the Study indicated that building, hostels and other civil works etc. needed immediate attention. The DIETs did not have sufficient space.

Lobo (1996) studied four DIETs with special reference to the functions of the DIET. For the study, investigator selected Malipuram, Kanur, Trisur and Palkkas DIETs. The main objective of his Study was to study the functions of DIET and its comparison with the opinions of the trained teachers. Teachers' opinion about the different programme of DIET, the effectiveness of the programme and use of gained knowledge in school situation were the focus of inquiry. Rating scale, questionnaire and interview were used as research tools. 240 trained teachers who had attended training programmes these four DIETs were selected as the sample. The finding showed that opinions of the teachers differ for the different works. According to DIET Guideline, more facilities were seen in the Mallpuram DIET than the Kanur DIET. There was no significant difference in the opinions of the male teachers and female teachers. The teacher's opinions showed that the practical branch of the DIET was weak in its work. The reason might be the less availability of infrastructure facility, programmes and negative attitude towards Minimum Level of Learning training.

Shajoin (1996) studied the training modalities of four DIET centers of Kerala and its impact on the primary school teachers. The major objectives of the Study were: (i) To find out the scores of the reaction of trained teachers from the four DIET centers of Kerala towards programme and to compare them. (ii) To find out whether there was any significant difference between male and female teacher's reactions as well as urban and rural DIET trained teacher's reactions towards the DIET programme. (iii) To assess the impact of the DIET training programmes on developing teacher effectiveness. (iv) To determine whether the types of schools from where the teachers were selected had any impact on their reaction scores towards the DIET programme. The Study was a descriptive survey. Random sampling method was used for selection of sample. Two tools were used for the study namely a rating scale to measure the reaction towards the DIET programme and teacher effectiveness scale.

The major findings of the Study were: (i) Among the four DIET centers, the Malappuram DIET center had the highest mean score, while the Kannur DIET center had the lowest mean scores. (ii) There was a significant difference between the male and female DIET trained teacher's reaction toward DIET

programme. The mean scores of the female DIET trained teachers were higher than the mean scores of male trained teachers. (iii) There was no significant difference between the urban and rural DIET trained teachers' reaction as well as the Aided and Government schoolteachers' reactions towards DIET programme. (iv) The reaction of the DIET trained teachers towards the DIET programmes was independent of the type of the programme attended by them. (v) Ninety-nine percent of the teachers who participated in the study appreciated various programmes conducted by DIET. (vi) The teachers felt that the programme had helped them to acquire necessary knowledge regarding the content and methodology of teaching different subjects.

Chandra, P. (1997) studied the in-service training needs of primary school teachers and implemented an in-service training programme through interactive video technology. The technology adopted one-way video and two-way audio communication. The Study reported that the use of mobile training strategy and schoolbased in-service education of teachers did not require teachers to move away from their place of work. The centralized in-service training strategy was found to be ineffective when in-service training is to be provided to a large number of teachers. The study also reported that 'cascade model' of in-service training, which was currently the pre-dominant modality, resulted in huge 'transmission loss' down the line from the experts at the national level to the resource persons at the level of different training venues. The Study reported that the interactive video technology in in-service training programme assured coverage of 44 maximum number of teachers during a same training cycle with same message and avoidance of 'dilution' in quality of training delivery. The participant teachers indicated that the training methods adopted during the training programmes were effective and informative.

Mayadevi (1997) studied about the role of DIETs in promoting qualitative improvement of teaching in primary schools in Kerala. The in-service teachers reported that the trained instructional methods were more theoretical and not practical in real classroom situations. Time consuming and wide syllabus were the main constraints felt by the teachers for implementing the instructional methods.

Gafoor et al. (1998) studied the availability and utility of physical facilities of DIETs. The study was conducted to know the existing physical infrastructure of DIETs and availability as well as utility of the library facilities, laboratory facilities, computer facilities and audio-visual facilities. The study was carried out by a very elaborate questionnaire given to seven northern DIETs of Kerala. The obtained data were analyzed mainly through percentage analysis and qualitative analysis.

The major findings were (i) Out of three DPEP DIETs, only one DIET had more than required ten acres of land and among four Non-DPEP DIETs, two DIETs had more than ten acres of land. (ii) All DIETs had one general library. (iii) In accordance with the Guidelines (1989), DIETs should have five laboratories, but all DIETs had only one laboratory each. (iv) Each DIET is expected to have one computer room, but they were only available in Kozhikode and Palakkad DIETs. (v) Suggestion of Guideline for having an audio-visual room in each DIET was only satisfied by Palakkad and Thrissur DIETs.

Mehta (1998) evaluated in-service teacher training. The major objectives of the Study were: (i) To obtain feedback about the usefulness of in-service teacher training programmes planned and organized by SCERT and conducted by DIETs. (ii) To ascertain its impact on classroom teaching in primary school. Observation and direct interview schedules were designed to collect data. The major findings were (1) 39% of the teachers felt that the in-service training developed skills to use new teaching methods for Hindi; 55% of teachers opined that training aimed to make teaching-learning interesting for children, while 22% said that it aimed to improve pronunciation of Hindi words/language. (2) The perception about transmission loss due to Cascade III model was between 50-60%. The course was of six days' duration and made use of training package developed by SCERT. (3) Teachers trained were provided with a package each, which was to be used by them after the training in their schools for reference purpose. 48% teachers were using this package frequently, 42% teachers were using this package sometimes, while 10% teachers used it rarely. (4) The Study highlighted that 64% master trainers had good command on the subject. (5) 80% teachers felt that all master trainers were good. (6) With reference to six days'

duration of training, 46% of teachers had opined that the duration was adequate while 54% felt that it was inadequate. Most of the teachers felt that the training should be longer than 8 to 10 days. (7) 61% teachers felt that in-service teachers training had helped in increasing their knowledge of Hindi language. 58% felt that training had helped in improving their knowledge about new teaching methods. Awareness of new teaching methods such as group-interaction and play-way methods and activity based teaching was high among teachers (over 80%) but their preference for actually using these methods in their classes was low (below 50%).

Mehta (1999) made critical study of working of DIET in Gujarat. The objectives of the study were: (1) to study the training programmes and other programmes with special reference to the DIETs of Gujarat State. (2) To study the opinions of teachers regarding the training programmes. (3) To study the opinions of the resource persons regarding the training programmes. (4) To study the opinions of the lecturers regarding the working of DIET. (5) To study infrastructure facilities of the DIETs of the Gujarat state (6) To study the difficulties in administrations of the DIET. For the collection of the data, researcher made three questionnaires for teachers, lecturers and for the resource persons. The major findings of the study were: (1) According to guideline, the infrastructure facilities should be increased. (2) Most of the teachers believed that training programmes were useful for them. (3) Due to more training programmes, less attention was paid on the preparation of the programmes by the lecturers of DIET.

Yadav (1999) studied quality of primary teachers' in-service training. The specific objectives of the study were (i) To assess the adequacy of various training input measures. (ii) To identify problems affecting the quality of training. (iii) To ascertain participants' perceptions about the quality of training. (iv) To determine the quality of training in terms of gain in knowledge among the participants. Out of four DPEP district in Harayana, one district Hissar was selected on the basis of easy accessibility to the venue of the training. From Hissar district, two blocks namely BRC-1 and 11, were selected and all the 127 teachers who participated in the training programme. Participants' perception

scale, focus group discussion, interview schedule for resource persons and achievement test were developed as instruments for data collection. The major findings of the Study were: (i) About fifty percent teachers expressed the view that the seminar room was not suitable and there were no separate rooms for group work. They also expressed that there were not adequate facilities of infrastructure, especially blackboard facility, toilet facility, and library facility. (ii) Learning material was provided on the first day of training and no technological aids were used for transacting the curriculum. (iii) Around seventy percent teachers expressed their views that they had clarity about the objectives up to extent and the course content met the training needs comprehensible to some extent. (iv) 98.40 % participating teachers stated that the lecture method was mostly used in the training programme. This was followed by lecture cum discussion (47.40 %). Demonstration, field study, guided self-study and assignment were never used. (v) The teachers felt that the same resource person should not deal with modules related to different subjects. Competent resource persons should be employed during the training programmes.

Swaminathan et al. (2002) conducted a study on the staff development programme for BRCs personnel in Pudukkottai DIET. The major objective of the Study was to find out the reaction of the BRCs supervisors and teacher educators in terms of (i) The objectives of the programme (ii) Allotment of time to theory and practical sessions with reference to the handling of instruments, viz., radio / cassette recorder, Over Head Projector (O.H.P.) and Television (T.V) / Video Cassette Recorder (VCR), (iii) The language and speed of the presenters (iv) Interaction of participants (v) Infrastructure facilities at the training Center. The tools used for the data collection were an Evaluation Performa and a question paper.

The major findings were (i) All the participants unanimously responded that the objectives of the programme meant for capacity building of BRC personnel were clear and the programme met the objectives. (ii) With reference to question on whether the participants understood the handling of a Radio / Cassette recorder, O.H.P., TV/VCR and whether they understood the method of using the same in the class, all of the participants unanimously answered positively.

They had no problem in using the instruments in the class. They had only problem in the mechanical part. (iii) They were able to understand the language of the presenters and the speed of the presenters was moderate. (iv) A large number of the participants (87 %) expressed that their queries were answered then and there. (v) All the participants pointed out that the seating arrangement was convenient, there was enough light in the room, there was no external noise disturbing the programme and there was enough ventilation in the class.

GCERT, Gandhinagar (2003) undertook a case study of DIET Rajkot, Junagadh, Bhuj, Jamnagar, Bhavnagar, Patan, Surat, Vadodara, Amreli, Kathlal, Gandhinagar, Ahmedabad, Santrampur, Surendranagar and Idar. Findings revealed that all the DIETs were having insufficient academic staff. Majority of the DIETs were having well equipped furniture facilities. Majority of the DIETs had fully functional computer laboratory. Monitoring system in majority of the DIETs was not established and no Performa for such matter was developed. Pre-service trainees were having high academic achievement in the board examination. All the DIETs were publishing good quality modules and teaching material for in-service as well as pre-service trainees.

Prahalada (2003) conducted a Study on in-service training programmes under District Institute of Education and Training (DIETs). It was observed from the Study that transactional methodology was shifted from course transaction and conventional to modern and activity based, yet these skills and methods were not used by the teachers in their classroom situation. Most of the administrator and organizers were interested only in spending money to exhibit annual performance quantitatively and were not concerned about the quality of in-service training programmes. It was also reported by the researcher that the follow-up work and evaluation of in-service training programmes were lacking. From the study, the researcher concluded that there was a need of more research to bring out the actual outcomes of in-service training.

Duggal (2005) studied the arrangement for in-service education of the assistant teachers at DIETs. The major focus of the Study was three-week orientation programme organized with the aim of making the assistant teachers aware of the nuisance of school practices. The idiosyncrasies of a subject were found to be

dealt within the one-week theme-based programmes. The major findings of the study were: (1) The target group i.e. the number of assistant teachers to be trained in in-service programme was quite large. (2) Most of the assistant teachers stated that the intimation about the schedule of the in-service training programmes was not provided to them well in advance due to poor co-ordination among the coordinators of these programmes and the management of schools. (3) Majority of teachers and resource persons told that the guidelines for the organization of in-service training programmes and their monitoring were not followed by the co-coordinators of in-service training programmes in terms of assessment and prioritization of the training needs, selection of resource persons etc. which in turn, demotivated the teachers to participate in in-service training programmes.

Patel (2007): conducted a Study entitled, "A Study of in-service training programs conducted by DIETs of Gujarat State" The study comprised a sample 450 trained teachers selected through random sampling technique. The data gathering tools viz. questionnaire, observation schedule, interview schedule and checklist were used. These tools were developed by the investigator with the help of experts. The data were computed with the help of frequencies, percentages and Chi-square. Some of the data of questionnaire were also analyzed through content analysis techniques. The data were collected by investigator himself. The study revealed that Seventy-seven percent of the teachers felt that the time allotted for in-service training programs was adequate and duration of in-service training programs was also enough to enable fulfillment of the objectives of in-service training programs. Majority of the teachers (seven eight percent) responded that the in-service training programs were able to cope with the new trends of education. Most of the teachers (seventy-three percent) responded that same resource persons were invited by DIETs for different in-service training programs. The study suggested that Time and place of in-service training programs should be feasible to school programs and teachers. The DIETs should have invited trained and qualified resource persons, having effective skills of presentation. Effective organization and planning should be done before starting the in-service training programs. Training should be given to prepare the low

cost teaching aids and teaching aids from the locally available materials. Less time should be consumed for the inaugural and valedictory sessions.

Trivedi, B. (2007) conducted a Study on an investigation into the present status and working of DIETs of Gujarat. This Study was a survey as well as a case study. Data form, questionnaire and interview schedule were used for data collection. The major objectives of the study were to study the present facilities, its usability and to obtain suggestions for smooth functioning of DIETs. The major findings of the study showed that majority of the DIETs did not have adequate land as per the guideline set up by the MHRD. Majority of the DIETs had construction as per the guideline which was a very good sign in context to guideline. Majority of the DIETs had good infrastructural facilities excluding special rooms. There was a lack of proper infrastructural maintenance fund in DIET. There was a deficit in academic staff of the DIET. All the DIET faculties were overburdened. Almost one third of the DIETs did not have separate science laboratory facility. Some of the DIETs were rarely using the facility of experiment sets during their pre-service or in-service training programmes. Usability of the science charts in pre-service and in-service training was very satisfactory. There was no availability of sufficient reference material in the psychology laboratory, as well as the available material was not used very frequently. DIETs were neither having large numbers of charts nor using the available charts up to the functional level.

Azim Premji Foundation Report (2010) conducted a Study on the status of DIETs in India reflected that most of the DIETs which were visualized as Teacher Training and Curriculum Development Institutions, have failed to live-up their roles. The performance of DIETs across the country had been not satisfactory. The poor educational achievement among students in Government schools was telling example. The report also identified some problems faced by these institutions: poor infrastructure, disturbing number of vacancies, personal issues related to faculty and staff, dysfunctional programme.

Azim Premji Foundation Research Report (2014-15) conducted a Study on In - Service Teacher Trainings of SSA: What Works and How; the data was collected by critically engaging with 3 phases and 8 processes of ISTT. Analysis

was made all through the way as ISTT unrolled from its first to the last process. The members from SSA, SCERT, DIET and partner organizations were involved in the ConceptualizationPhase i.e. the reviews and planning for ISTT. They deliberated on previous years' training plans, modules, resource persons, teachers' feedback and CRCCs' school observation reports etc. to make goals for trainings in the State. Analysis of secondarydata showed that annual plans were a mechanical exercise with no forward or backward linkages. There was a realization that several aspects were lacking in ISTTs that neededto be taken care of; and these were in the areas of training, process of transaction, resources, space, resource persons, time frame and logistics.

2.5 IMPLICATIONS OF THE REVIEW FOR THE PRESENT STUDY

The review of literature was done above in three categories, indicate that in-service training programs were studied by researchers both in India and abroad.

In the present Study, the researcher has reviewed total eighty-eight studies conducted from 1980 to 2016. The studies reviewed by the researcher focus on In-Service Teacher Training Programmes (ISTTP) and their effects on both teachers and students. The researcher has reviewed twenty studies conducted abroad and sixty-six studies conducted in India. Out of these sixty-six studies conducted in India, fifty studies wererelated to in-service training programmes conducted by different institutions whereas sixteen studies have their focus on different aspects of DIETs.

The studies conducted abroad revealed the following - Franks (2000) tried to find out the effectiveness of the "Trainer of Trainers" model for in-service science professionaldevelopment programmes for elementary teachers; Stewart (2000) studied the evaluation of professional development training for elementary teachers; Sherrill (2001) studied the extent of probationary teachers' perceptions regarding their pre- service and in-service education; Khad (2002) carried out an impact assessment of an in-service teacher training programme; Karagiogi et al. (2006) studied the perceptions of pre-primary and primary school teachers about the ICT in-service training; Ramatiapana (2009)

conducted a study investigating the perceptions of mathematics and science teachers about in-service programmes; Viadero, D. (2010) studied the impact of teacher training on student achievement; Jamil et al. (2011) studied the association of in-service training with performance of school teachers and Hoque, et al.(2011) conducted a study to examine the relationship between teachers' professional development activities and school improvement.

With respect to the studies conducted in India - SCERT (1980) conducted a study to evaluate the in-service training programmes for primary teachers in the selected government and aided teacher training institutions; Butala (1987) conducted a study on in-service training programmes for teachers' training colleges of Gujarat State; Bardoloi (1990) studied teacher education in Assam at Primary Level during the post- independence period with special reference to the curriculum and in-service training; Pillai (1992) conducted a study on the role of DIETs in promoting in-service education for primary school teachers; Walta, K. (1992) carried out an evaluation study of secondary teacher education program; Gafoor (1996) studied about functioning and work efficiency of the DIETs in promoting pre-service and in-service teacher education; Patel (1999) made a comparative study of in-service training programmes organized by two DIETs; Patel (2000) studied the training needs of teachers; Yadav (2000) studied the impact of primary school teachers' in-service education on classroom transaction; Sathyanesan (2001) conducted a study to assess the effectiveness of in-service training programmes for teachers and headmasters by DIETs; Subramanian (2001) conducted a study on the impact of DIETs on the work efficiency of primary school teachers of Kerala State; Caroline, D. & Choksi, A. (2004) conducted a comparative study of DIETs in Gujarat, Rajasthan and Madhya Pradesh; Nayak (2010) carried out a study of Special Orientation for Primary Teachers (SOPT) and In-Service Programmes under DPEP and SSA; Yadav (2012) studied the impact of in-service teacher training on classroom transaction; Kotreshwaraswamy (2012) studied the attitude of teachers towards in-service training programmes of SarvaShikshaAbhiyan and Yadav et al. (2016) evaluated in-service training programmes of NCERT.

The studies conducted in India with reference to various aspects of DIET generally dealt with effectiveness of In-Service Training Programmes for teachers, availability and utility of physical facilities of DIETs and study of various functions of DIETs wherein DIET (1992) conducted an evaluation study of the residential in-service training programme for the primary teachers at DIET Baroda. NIEPA (1992) undertook a study with a specific objective of identifying the strength and weakness of DIETs in Haryana; Lobo (1996) studied the functions of Malipuram, Kanur, Trisur and Palkkas DIETs; Shajoin (1996) studied the training modalities of four DIET centers of Kerala and its impact on the primary school teachers; Mayadevi (1997) studied about the role of DIETs in promoting qualitative improvement of teaching in primary schools in Kerala; Gafoor et al. (1998) studied the availability and utility of physical facilities of seven northern DIETs of Kerala; Mehta (1998) evaluated in-service teacher training organized by SCERT and conducted by DIETs; Mehta (1999) made critical study of working of DIETs in Gujarat; Swaminathan et. al (2002) conducted a study to find out the reaction of the BRCs supervisors and teacher educators on the staff development programme in Pudukkottai DIET; GCERT, Gandhinagar (2003) undertook a case study of DIET Rajkot, Junagadh, Bhuj, Jamnagar, Bhavnagar, Patan, Surat, Vadodara, Amreli, Kathlal, Gandhinagar, Ahmedabad, Santrampur, Surendranagar and Idar; Prahallada (2003) conducted a study on in-service training programmes under DIET centers; Duggal (2005) studied the arrangement for in-service education of the assistant teachers at DIETs; Trivedi (2007) conducted a study on an investigation into the present status and working of DIETs of Gujarat and Azim Premji Foundation Report (2010) highlighted the status of DIETs in India.

In spite of so many studies covering various aspects of DIETs dealing with effectiveness of In-Service Training Programmes for teachers, various functions of DIETs as well as availability and utility of physical facilities of DIETs, the researcher observed that more researches were required to cater to the requisites of the present scenario because 34 % of the reviewed studies dealt with in-service training programmes conducted for primary teachers; 4 % of the reviewed studies dealt with in-service training programmes conducted for

secondary teachers; 4 % of the reviewed studies dealt with in-service training programmes conducted for head masters; 6 % of the reviewed studies dealt with problems faced by teacher educators and trainees; 26 % of the reviewed studies dealt with functions as well as facilities of DIETs; 24 % of the reviewed studies dealt with status of teacher education in general and only 2 % of the reviewed studies dealt with reactions of BRC towards staff development programme. Few studies were found to be conducted on identifying the problems faced by DIET'S Teacher Educators and DIET Principals in organizing In-Service Training Programmes.

Throughout the procedure of the review of related literature with reference to type of reviewed research studies, the researcher found that 34.40 % of the reviewed studies were survey; 25.80 % of the reviewed studies were case studies; 17.20 % of the reviewed studies were survey cum case study; 8.60 % of the reviewed studies were experimental studies and the rest of 14 % of the reviewed studies were miscellaneous type of studies. These studies provide a substantial base to the researcher to conduct survey type of study which is the need of an hour.

From the time perspective context, it is found that the most relevant studies of Pillai (1992), Gafoor (1996), Mehta (1999), GCERT, Gandhinagar (2003), Caroline & Choksi, A. (2004) and Trivedi, B. (2007) had their focus on role and functioning of DIETs and the studies of Patel (1999), Patel (2000), Sathyanesan (2001), Prahallada (2003) tried to study the effectiveness of in-service training programmes conducted by DIETs. As these studies were conducted long back from 1992 to 2007, it is obvious that the findings of these studies cannot be applicable in the prevailing scenario. Hence, there is a need of a research to study the effectiveness of in-service training programmes conducted by DIETs in current scenario and the role as well as functioning of DIETs in the present context.

Reviewing the related studies with respect to their findings, the following observations were derived wherein SCERT (1980) cited that the key persons of the course felt that inadequate staffs, lack of individual attention and unavailability of books were the main problems in training programmes; Butala

(1987) found that there was a need for the proper assessment of in service training programmes. Special training programmes should be organized for the resource persons was recommended in the study; Bardoloi(1990) pointed out that despite the existence of 22 training centers to train lower primary teachers, there was still a shortage of untrained lower primary teachers in Assam and the quality of entrants in these institutes was not up to the mark. Rao (1994)cited that the evaluation team observed that the large scale implementation of the in-service programme had an adverse effect on quality control, which requires continuous monitoring and evaluation; Gafoor (1996) studied about functioning and work efficiency of the DIETs in promoting pre-service and in-service teacher education. The study also reported that no DIET had conducted any study for assessing the effectiveness of in-service courses they had provided; Yadav (1999) cited that the teachers felt that competent resource persons should be employed during training programmes; Yadav (2000) reported that due to the lack of academic support and incentives to teachers, insufficient facility for training, and use of inappropriate transactional methodologies, the efficiency and effectiveness of in-service training programmes got affected and ultimately it affected the performance of teachers and students; Sathyanesan (2001) reported that the rate of teacher participation in the in- service programmes were not up to the expected level due to lack of administrative power to DIETs for giving compulsory directions to the school authorities, lack of motivation among teachers and lack of long - term planning; Subramanian (2001) reported that after attending the in-service training programmes, teachers had positive impacts on their work efficiency in schools; Soni (2011) reported that in-service training programmes need improvement in the context of content matter, selection of resource persons and transactional methodologies; Study of NIEPA (1992) indicated that building, hostels and other civil works etc. needed immediate attention - DIETs had not sufficient space; Lobo (1996) cited teacher's opinions and showed that the practical branch of the DIET was weak in its work; Mayadevi (1997) reported that the trained instructional methods were more theoretical and not practical in real classroom situations; Mehta (1999) pointed out that the infrastructure facilities should be increased according

to guideline and due to more training programmes, less attention was paid on the preparation of the programmes by the lecturers of DIET; Yadav (1999) cited the views of the teachers that the same resource person should not deal with modules related to different subjects. Competent resource persons should be employed during the training programmes. The findings of GCERT (2003) revealed that all the DIETs were having insufficient academic staff. Prahallada (2003) found that a large number of teachers were participating in the training and also there was a good coverage but still the expected results were lacking. There was need of more research to bring out the actual outcomes of in-service training. The major findings of the Study of Trivedi,

B. (2007) showed that Majority of the DIETs had good infrastructural facilities excluding special rooms. There was a lack of proper infrastructural maintenance fund in DIET. There was a deficit in academic staff of the DIET. All the DIET faculties were overburdened. Almost one third of the DIETs did not have separate science laboratory facility. Usability of the science charts in pre-service and in-service training was very satisfactory. Azim Premji Foundation Report (2010) on the status of DIETs in India reflected that the performance of DIETs across the country had not been satisfactory. The report also identified some problems faced by DIETs with respect to poor infrastructure, disturbing number of vacancies as well as personal issues related to faculty and staff.

Reviewing the related studies with respect to their suggestions, the researcher found a number of helpful suggestions and the researcher has highlighted some of the relevant suggestions as follow wherein Pillai (1992) suggested that there is a need for improving infrastructural facilities in DIETs so that in-service training programmes can be strengthened. Gafoor et al. (1998) emphasized that DIETs should have prescribed facilities in accordance with the Guidelines (1989). Kotreshwaraswamy (2012) suggested that the resource persons should have mastery over the subject and the selection criteria of resource persons should be precise and fair. Yadav (2012) implied that after conducting an in-service training programme, there should be continuous evaluation, feedback mechanism and post training help at school level

Throughout the review of related studies, the researcher came across some studies highly relevant to the present Study wherein Mehta (1999) made critical study of working of DIET in Gujarat in the context of training programmes and other programmes; opinions of teachers as well as resource persons regarding the training programmes; infrastructure facilities of the DIETs and difficulties in administrations of the DIET; GCERT, Gandhinagar (2003) undertook a case study of DIET Rajkot, Junagadh, Bhuj, Jamnagar, Bhavnagar, Patan, Surat, Vadodara, Amreli, Kathlal, Gandhinagar, Ahmedabad, Santrampur, Surendranagar and Idar with respect to availability of academic staff, physical infrastructure, monitoring system as well as quality of modules and teaching material created by DIETs for pre-service and in-service trainees and Caroline, D. & Choksi, A. (2004) made a comparative study of the DIETs of Gujarat, Rajasthan and Madhya Pradesh with the major objectives of analyzing the pedagogical support, availability of teaching material, interaction with villagers but none of the studies have dealt with problems faced by DIET Principals in organizing In-Service Training Programs and studying the views and reactions of the functionaries and beneficiaries in terms of In-Service Teachers Training Programmes as well as studying the selection procedure of resource persons. So, the present Study would have its importance in this context too.

In addition to this, the research studies of Mehta (1999), GCERT, Gandhinagar (2003) and Caroline & Choksi, A. (2004) were conducted before the introduction of Right to Free and Compulsory Education Act - 2009 and implementation of Samagra Shiksha Abhiyan whereas the role and responsibilities as well as functioning of DIETs have changed a lot subsequently. Hence, after introduction of RTE - 2009 and Samagra Shiksha Abhiyan, a great need is felt to rethink over various aspects of DIETs and conduct a survey of DIETs of Gujarat State from latest perspectives.

As the present Study is related with Organization and Implementation of In - Service Training Programmes conducted by District Institute of Education and Training (DIETs) in Gujarat, the researcher has also presented an analytical review of DIET related studies and focused chiefly on discussion of findings

obtained from the studies concerned with DIETs; the researcher found that some DIETs were having good district level coordination while some DIETs were lacking in coordination. All the DIETs were not having satisfactory and sufficient hostel facility. There were no consistent similarities in the field of research work in all the DIETs. All the DIETs were not competent enough to receive external financial and human resource supports.

From all the studies undertaken, it was found that few studies reported that all the DIETs had made good physical and infrastructural developments. The in-service programmes and pre-service programmes were found to be conducted in good manner. In general, all the in-service trainings were organized as per the requirement of the school teachers. It was found from the findings of the case studies that, in majority of the studies, DIETs were found to be well - equipped with facilities but there were few studies that did point out insufficient facilities in the hostel.

While looking at the methodological part of the reviewed studies, questionnaire and interview schedules were used by most of the investigators while other tools used were Opinionnaires, scales, test, observation schedules and information schedules. The Studies were not only based on the qualitative data, but considered quantitative data as well.

Many studies had concluding remark that in-service training programmes were compulsory for the professional development of teachers yet some training programmes conducted by DIETs were not found concentrating much on need based, research based, area based training programme which direct the researcher to address this area.

From the above discussion, it can be concluded that there is need to develop the capacities of these institutes for improving the quality of education and in-service programmes. Research components still continue to be the weakest area of operation and are greatly needed to be focused upon. Many research and evaluation studies on the functioning and operationalization particularly on DIETs supported this view (NCERT, 2000, NIEPA 2001, and Yadav 2000).

In the light of above mentioned findings as well as suggestions, the researcher felt it timely to address maximum aspects reflected herewith and to conduct a research study chiefly aiming at studying the different components of the ongoing In-Service Training Programs conducted by DIETs of Gujarat; identifying the problems faced by DIET'S Teacher Educators in organizing In-Service Training Programs; studying the views and reactions of the functionaries and beneficiaries in terms of In-Service Teachers Training Programs as well as studying the selection procedure of resource persons and area covered in the In-Service Teachers Training Programs.

The area of this Study was wider than all the previously reviewed studies. It covered zone wise six DIETs of Gujarat. It also presented comprehensive situation of in-service teacher training programmes of DIETs of Gujarat. In the present Study, emphasis was laid on the views of DIET Principals, Head Teachers and Resource Persons. In some of these contexts, the present Study differs from the previous studies wherein it emphasizes the views and reactions of the functionaries and beneficiaries with respect to different aspects of the in-service teachers training programmes conducted by DIETs.

Thus, by locating this research gap from the discussion held above and seeing the importance of studying In-Service Training Programmes conducted by DIETs of Gujarat in the present scenario, a dire need was felt that more and more research studies should be conducted to strengthen this area and the present Study is an optimistic step in that direction.

2.6 RATIONALE OF THE STUDY

After the implementation of the Right to Free and Compulsory Act - 2009, it became mandatory for the State to establish a structure which will support the system to implement the Act in an effective manner. Teacher training would play an important role to improve the quality of education and to bring a positive change in perception of the teachers regarding how to impart such education.

There is a need to bring greater convergence between professional preparation and continuing professional development of teachers at all stages of schooling, in terms of level, duration and structure. The central and state governments are spending a huge amount for the organization of in-service training programmes. This investment demands a good return in the form of quality in elementary education.

The DIETs were formulated mainly with the objective of improving the quality of elementary education. Considerable development has taken place with the establishment of DIETs in the area of elementary education. The DIETs organize in- service as well as pre-service training programmes which help the teachers to enrich themselves in conceptualization of content and methodology.

Also, in order to achieve the goal of quality education, timely assessment and reviewing of the training programmes is needed. The improvement reflected in the quality of elementary education, as a result of various programmes designed by DIETs to support school system, has also to be periodically reviewed.

Existing programmes have come under severe criticism for not addressing the needs of contemporary Indian schools and not preparing teachers who can impart quality education in schools. Their designs/ practices are based on certain assumptions which impede the progress of ideas and professional and personal growth of the teacher.

From the literature Review, several pertinent questions arose: -

Is In-service Teacher Training in consonance with the objectives envisaged by DIETs? Do teachers undergoing the In-service Teacher Training perceive it as useful to their classroom practices? Are the learnt practices used in classroom transaction? Are the themes/areas covered under DIETs in-service training programmes appropriate? Do students perceive some change in teachers' performance? Do students learn better?

In other words, has the In-service Teacher Training under the DIETs impacted teachers, resource persons, head teachers, DIET faculties and DIET Principals? What were their perceptions? What were the problems faced during these in-service training programmes?

Keeping in view these issues, the researcher felt it necessary to address these aspects and to conduct a research Study aimed at studying the different components of the ongoing In-Service Training Programs conducted by DIETs of Gujarat; identifying the problems faced by DIET'S Teacher Educators in organizing In-Service Training Programs; studying the views and reactions of the functionaries and beneficiaries in terms of In-Service Teachers Training Programs as well as studying the selection procedure of resource persons in the In-Service Teachers Training Programs.

2.7 CONCLUSION

The present chapter of 'Review of related literature' provided an in-depth overview of research studies related to in-service teacher education programme, research studies conducted abroad, research studies conducted in India, research studies related to DIETs.

The researcher presented an analytical study of reviewed literature and located the research gap on the basis of reviewed literature.

The next chapter of 'Research Methodology' deals with the methodological procedures used in the present Study including various methods of research, design of the Study, population and sample of the Study, tools of the Study, source of data and data analysis.