CHAPTER II
CHAPTER - II

REVIEW OF RELATED LITERATURE

- Introduction
- Historical Development of In-service Education in India
- Factors influenced the demand for In-service Education
- In-service Education in Foreign Countries
- In-service Education in Australia
- In-service Education in Bangladesh
- In-service Education in Indonesia
- In-service Education in Malaysia
- In-service Education in Republic of Korea
- In-service Education in Thailand
- In-service Education in U.S.A.
- In-service Education in U.K.
- In-service Education in India
- Incentives of In-service Training Programmes
- Tackling 21st Century through Excellence in Education
- Compendium of Research in In-service Education
- Studies on Growth and Development of In-service Programmes
- Studies on Need for In-service Training Programmes
CHAPTER - II (cond..)

REVIEW OF RELATED LITERATURE

- Studies on Importance of In-service Training Programmes

- Studies on Effectiveness of In-service Training Programmes

- Studies on Micro Teaching through In-service Programmes

- Study on Models of Teaching through In-service Programmes

- Studies on Creativity through In-service Training Programmes

- Some Critical Studies on In-service Training Programmes

- Studies on In-service Training Programmes from Abroad

- Effect of In-service Training Programme on Other Fields
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

In the words of Mouly (1970), "an essential aspect of any research project is the review of the related literature".

Best (1978) defines review of literature as "a brief summary of previous research and the writings of recognized experts provides evidence that the researcher is familiar with what is already known, and with what is still unknown and untested. Since effective research must be based upon past knowledge, this step helps to eliminate the duplication of what has been done, and provides useful hypotheses and helpful suggestions for significant investigation".

The review of the literature is an exacting task, calling for a deep insight and clear perspective of the overall field. It is a crucial step which invariably minimizes the risk, help to select a topic, help to know the trial and error activities that are oriented towards approaches already discarded by previous investigations and also helps to find erroneous findings based on faulty research designs. It promotes a greater understandings of the problems and its crucial aspects and ensure the avoidance of
unnecessary duplications; it provides comparative data on the basis of which to evaluate and interpret the significance of one's findings and in addition, it contributes to the scholarship of the investigator.

The published literature is a fruitful source of hypothesis. Not only it presents suggestions made by previous investigation and writers concerning problems in need of investigation, but it also stimulates the research worker to device hypotheses of his own. As he reacts to the designs, findings and conclusions of other investigations, he can get insights which he can incorporate into an improved research design. Capitalizing on the success and errors of others is certainly a more intelligent approach to a problem especially one as broad as a thesis or dissertation than in imagining that one is born equipped with the radar system that will guide him unerringly on target and at the same time, guard him against pitfalls. No experienced researcher would think of undertaking a study without acquainting himself with the contributions of previous investigations.

In the following sections of this chapter, the investigator brief the historical retrospects of in-service training programmes in India, in-service activities in other countries and the related research perspectives regarding this study.
Historical Development of In-Service Education in India

The concept of educational extension is relatively new in India. An early reference to the need of in-service education and the role of the training colleges was made in Lord Curzon's "Resolution on Educational Policy" in 1904.

The next landmark in the history of in-service education was the Government of India's "Resolution on Educational Policy" in the year 1913. It laid down the major principles for the expansion and improvement of education and again emphasized the importance of in-service education for the teachers.

The Hartog Committee (1929), in its recommendations clearly came out with the need for in-service education of teachers. It recommended that, "even under ideal conditions where the right type of teachers have been selected and well trained, the teacher is much isolated and must often be in need of guidance and encouragement. Journals, refresher courses, conferences and meetings can do much to brighten the lives of the teachers and improve their work".

After the recommendation of the Hartog Committee, no systematic efforts appear to have been made either by the Government of India or by the universities or training colleges to organize a planned programme of in-service education in the country. For instance Madras Government
introduced the practice of vocation course, but they were discontinued in due course.

Abbot A. and Wood S.H. (1937) published a report on vocational education in India, that report clearly referred to the new concept of two-fold nature of training of teachers, namely pre-service training and in-service training. They stated "we are of the opinion that the training of teachers should consist of two distinct parts. First a pre-employment of training of students in normal schools and later refresher courses for practicing teachers..... But in course of time there ought to be in each province a government training college comfortably housed; well equipped and organized and staffed for the purpose of providing a sequence of refresher courses of one or two months duration throughout the year". After this report, there was a steady improvement in the field of in-service education in India.

In 1944, the report on "Post War Educational Development in India", while discussing the need for an improvement organization of teacher preparation said, "In addition to the provision for the actual training of teachers, refresher courses in accordance with the recommendations of the Board should be provided at frequent intervals in order to keep trained teachers up-to-date. Such courses should cover all the subjects of the curriculum as well as new ideas and
methods of general interest. They are of the greatest importance in a country where a large number of teachers necessarily serve in isolated villages."

According to the suggestions of the report, Dr. Alagappa Chettiar Training College, Karaikudi started the practice of extension lectures. In Bombay, the Association of the Headmasters of the Bombay State with the cooperation of the Education Department organized a refresher course at Mahbaleshwar. A three week in-service course was organized at Jullundar. Thus during the year 1944 to 1948 different states took-up the programme of refresher courses in the country.

In 1949, the University Education Commission under the chairmanship of Radhakrishnan S., after visiting a number of teachers colleges and meeting a number of teacher educators, recommended, "an urgent reform is the institution of vocational refresher courses for high school and inter-college teachers. At present neither students nor teachers utilize their vacation. For most of them vacation is the period of want of occupation. Most of our teachers do not keep intellectually alive, and there is little inducement for them to do so. It is extraordinary that our school teachers learn all of whatever subject they teach before reaching the age of 24 to 25 and then all their further education is left to experience which is another name for stagnation. We must realize that experience needs to be supplemented by
experiments before reaching its fullness and that a teacher
to keep alive and fresh becomes a learner from time to time.
Constant out-pouring needs constant in-taking; practice must
be reinforced by theory and old must be constantly tested by
the new".

The Commission also recommended that the scheme of
refresher courses could be made a real success, if the
authorities of schools and colleges and the government
education departments made certified attendance at university
refresher courses, once in every four or five years, a
qualification for promotion.

The Secondary Education Commission (1953) observed:
"However excellent the programme of teacher training may be,
it does not by itself produce an excellent teacher.....
Increased efficiency will come through experience critically
analyzed and through individual and group efforts at
improvement. The teacher training institutions should accept
its responsibility for assisting in this in-service stage of
teacher training. Among the activities which the training
colleges should provide or in which it should collaborate
are; 1) Refresher courses, 2) Short intensive courses in
special subjects, 3) Practical training in workshop, 4) Seminar
and conferences. It should also allow its staff
where possible to serve as consultant to a school or groups
of schools conducting some programmes of improvement".
In 1954, Government of India appointed an international project team to study the various steps and procedures needed for implementing the major recommendations of the Secondary Education Commission. In their report, the team said, "We recommend that education departments consider ways and means of helping teachers to obtain in-service training and recognizing the improvement in their professional and academic qualifications by suitable salary increments.... For teachers of technical, vocational and other special subjects who are already in service, but for those who have not been trained, we recommend short intensive courses in the theory and practice of education".

As a result, the All India Council for Secondary Education was established in the year 1955. It was decided to start a well planned and well organized programme of in-service education of secondary school teachers through the establishment of extension services in selected training colleges in the country. Then in the year 1964, with the support of the Government of India, State Institute of Education were established in all the States in the country. One of the functions of these institutes has been to organize in-service education programmes for teacher-educators and supervisors of elementary schools.

Besides the state Institutes of Education, Science Education Units and State Evaluation Units were also
established in the states. These agencies offered in-service education programmes in specialized fields.

The report of the Education Commission (1964-66) has given special emphasis on the in-service education of teachers and other education personnel. The commission on in-service education recommended that, apart from what the schools and other agencies can do, there is need for the organization of a large scale, systematic and coordinated programme of in-service education, so that every teacher would be able to receive at least two or three months of in-service education in every five years of service. The curriculum of these programmes should be planned and organized systematically, materials being developed with great care and the staff in-charge being properly oriented. Good text books and source books, audio-visual materials and children's work should be exhibited. This can be done only if over a period of 10-15 years, every training institution is staffed and equipped to take up extension work, institutes an advisory service for teachers, and organizes in-service training programmes such as refresher courses, seminars, workshops and summer institutes. Every training institution should work on a 12 month basis with proportionate provision for additional staff and facilities. In addition, institutions that will carry out in-service work on a whole time and continuing basis should be established.

38
Immense importance was given to in-service training programmes, when the 10+2 pattern of education was introduced in our country (1977). The graduate teachers were undergone a three months in-service training to refresh their knowledge and update the teaching techniques in their subjects.

The National Policy on Education (1986) has visualized reorientation of content and process of school education to bring about over-all improvement in its quality. During the past seven years the content of education has been reorientated in line with the latest developments and demands of the society, on the one hand, and of the different disciplines, on the other. But the recent exercise of curriculum renewal is the story of an unfinished task because enrichment of curriculum has not been accompanied by a corresponding change in the mode of curriculum transaction. The District Institutes for Education and Training (DIETs) were started for the in-service training for primary school teachers.

The Programme of Action (1986), Acharya Ramamoorthy Committee (1990) and the CAPE Committee (1992) have given immense importance to retraining programmes for teachers.

Thus if we look back to all the recommendations made by various committees, commissions and organizations, we see that there has been a time-lag of more than forty-five years between the organization of the idea of in-service education
and the actual implementation of the same. Still we feel that we are far behind in the field of in-service education comparing to the other advanced countries of the world.

Factors influenced the demand for in-service education

Unemployment:

The general reduction in employment opportunity has had a marked effect on the mobility of teachers. It is now risky for teachers to resign from their tenured position to travel or experiment with alternative occupations. As a result the teaching service has become more stable, the schools are staffed by more mature and experienced teachers, and there has been a consequent slowing down of new appointments from contemporary pre-service courses. Hence in-service training is needed to refresh and update the knowledge.

Accountability:

With the growing emphasis on accountability of all school levels, employers and community leaders are becoming more out-spoken about the quality and relevance of education and the skill required for effective participation in modern vocations. These developments have led to new emphasis in teacher development.
Cultural Difference:

There is growing awareness of cultural differences amongst school children and of the difficult problems posed by poverty, disintegration of families and alienation. Programmes for the 'disadvantaged', etc. are now being planned to meet the situation.

The Post-industrial Economy:

Profound social and economic changes lie ahead for Western communities, and indeed for the world community. If present trends continue for the foreseeable future, it seems likely that a majority of citizens, not just the unemployed, will be obliged to occupy themselves in a greater proportion of time. If this happens, it would be beneficial to have a population that is well educated for the creative use of their own time. In an education system traditionally programmed to motivate and train people for work, it will need a concrete in-service programme to develop new goals and new incentives for a population for whom work is not always available.

In-Service Education in Foreign Countries

In-Service Education in Australia

There are five basic reasons which account for the wide variety and provision of in-service education in Australia. These reasons are as follows,
Catering for Population Sub-groups:

The community which has a highly developed awareness of the needs of a particular category of children may now have the resources to give special attention to such children. Since it is considered preferable to engage the services of experienced teachers for this new field, a programme of in-service education is required to develop the required skills.

Priorities in Schools Curricula:

The common and the education authority has decided to give special attention to particular aspects of the schooling programme for all children and a programme of teacher-development is, therefore, needed.

Community Attitudes:

A change in the attitude of the community towards children and schooling has necessitated continuous reorientation of teachers in order to bring a change in their attitudes and make them more tolerant and less authoritarian.

Politico-Economic Reasons:

With the decline in the population growth rate, the demand for newly graduated teachers has fallen and so the well-equipped and established teacher-training institutions are now giving more help to teachers already in service to enable them to improve their qualifications and earn more salary increments.
Professional Status of Teachers:

The teachers in Australia are not only anxious to have excess to relatively high salaries but are also concerned about maintaining respect in the community. Professional growth is, therefore, a matter of prime importance for them.

In-Service Education in Bangladesh

The Republic of Bangladesh underscored the need and importance of teacher training as; "teacher training is the heart of any one educational plan". To upgrade teacher competence, plan proposals were formulated to provide in-service training of various forms and durations. The existing status of teacher competence and training was studied and the alternatives were searched to revitalize teacher improvement through long-term and short-term training programmes. Specific curricular areas were also identified for developing teacher skills for linking education with developmental activities in the local communities and developmental programmes of the Bangladesh society.

The objectives for developing teachers' training programme have been identified as

1) to orient all teachers with new curriculum and
2) to arrange short courses and refresher's training through regular courses.
In addition, orientation training facilities have to be decentralized in order to minimize the cost. It is amply borne by a study of the plan objectives and strategies that design for the renewal of in-service training programmes are being contemplated.

The organisations involved in in-service training are,
1. Academy for Fundamental Education.
2. Audio-Visual Education Centre
3. Bangladesh Association for Community Education, etc.

In-service Education in Indonesia

In-service teacher education programmes have been there for two decades now. These are related and complementary to
a) the implementation of the new revised curriculum
b) the provision and distribution of textbooks and other resource/reading materials for the students as well as teachers and
c) the provision for educational facilities/teaching-learning aids.

Even though in-service education programmes have been in vogue, some of the problems that are faced are first, a general lack of knowledge of teaching methodology at the elementary level and also of the learning styles and abilities of younger children. Secondly, the supervisory system emphasizes administrative aspect more than the professional one of teaching-learning processes. Thirdly, the
The curriculum for the in-service education programmes is often more theoretical rather than practical. More emphasis is placed on theory than on the skills side of teaching. Connected with this is another problem of packing of the programmes with too much of the work to be completed in a short duration of time. The other problems are more on the administrative side, the first being of numbers, i.e., the number of teachers to be covered in the in-service programmes is too large. Secondly, the teachers are taken away from schools and classrooms thus dislocating the school routine.

An effort is being made to improve the competence of the teachers in two major areas, viz. the improvement of teacher education through renewal of teacher education curriculum and improvement of in-service education through

a) revision of content, duration, teaching methods, evaluation and follow-up activities as obtained in the existing programmes and

b) the innovative in-service training programmes like the Gianjur Project and radio broadcasts.

The Gianjur Project:

This project is based on the idea that better support for teachers in the field will achieve qualitative improvement. The general objectives of the project are first to construct working models for quality support to the
teachers so as to improve the quality of instruction. Secondly, by monitoring the progress of the project and getting a feedback based on periodical evaluation of the models proposed. The third and the most crucial objective is to produce a national plan for modification and improvement of support systems to teachers which can substantially improve quality of education, which is feasible to introduce within the financial, administrative and human resources likely to be available, and which is flexible enough to be effective in contrasting educational contexts obtainable in the country.

Radio Broadcasts:

A major programme of in-service education is that of radio broadcasts for the purpose. The use of communication technology such as radio and educational television was a way to overcome the problems of time and distance.

In-service Education in Malaysia

Malaysia has a binary system of teacher education. The Ministry of Education is responsible for teacher education at the non-graduate level while the local universities are responsible for teacher education at the graduate level. The Ministry of Education conducts in-service teacher education programmes at the national and state levels for teachers with a view to keep them abreast of development in knowledge,
methods, techniques in classroom instruction as well as various roles of a teacher.

The objectives of in-service teacher education programmes are,

a) to provide training to untrained teachers with a view to equip them with necessary qualifications,

b) to orient teachers towards new developments in teaching concepts, methods, techniques and curriculum programmes,

c) to provide an introduction to school administration and management for head teachers and organisers of schools,

d) to upgrade the academic and professional knowledge of teachers in various disciplines as well as skills in special education and

e) to increase the proficiency and competency of teachers in the national language.

The in-service teacher education programmes are of various durations ranging from one day to one academic year in accordance with the objectives. The courses are,

Full-time Supplementary Courses:

These are conducted for trained teachers during school terms as part of the normal programme at selected teacher training colleges. They include the following courses.
a) One year full-time specialist courses:

The one year courses provide specialised training in areas such as remedial education, audio-visual education, guidance and counselling, pre-school education, education for handicapped, school librarianship as well as music, physical and health education.

b) Six month Supplementary courses:

These courses are offered in the areas of the teaching of national language and teaching of English as a second language.

c) Three month supplementary courses:

These courses are organised in the special area of health and nutrition. These courses are geared to equip health education teachers with the ability to implement health improvement programmes and nutrition projects to promote optimum health to pupils and school personnels.

Short Courses, Seminars and Workshops:

These courses are held in various teacher training colleges and school centres. They are aimed at acquainting practicing teachers with the latest developments in teaching strategies, methods and techniques and serve also as an induction to teachers on new curricular materials.
In-service Education in Republic of Korea

The Korean government has provided legal basis for in-service education in the education law. Most of the programmes are organised in accordance with the regulations issued by the government and are under the direct control of the Ministry of Education. The programmes are conducted by various official and non-official institutions and agencies, under the direction of Ministry of Education, at the central, provincial and city or country levels. These institutions include,

1) Institute of in-service education for school administrators.
2) Institutes of in-service education for primary teachers.
3) Boards of education.
4) National institute of education.
5) The air and correspondence college.
6) Graduate schools of education and
7) Voluntary agencies.

Four major programmes are organised by different institutions and agencies with the approval or nomination from the Ministry of Education. These programmes are,

The Regular Programme:

This programme aims at promoting the status of teachers. Successful participants under this programme are awarded
qualification certificate. The curriculum of these courses is in accordance with the government act of in-service education for teachers. The content details and course of study are, however, left to the concerned institute which carries out the course. Selection of participants for these courses is done by the Boards of Education.

The General Programme:

This is designed to upgrade the quality of teachers by exposing them to new strategies and innovations in the field of education as well as by complementing their professional knowledge and competence. The duration and course contents for these programmes are determined by the concerned organisers in accordance with the prescribed guidelines by the Ministry.

Special Programme:

Under this programme expert teachers are trained in specific fields of education such as music, Korean Language, education of the retarded and the like. The programmes are mostly short-term courses and organised by Boards of Education.

The Saemaul (New Community) Programme:

This has been introduced as an integral part of the nationwide community-based movement to promote self-help,
industriousness and cooperation since 1972. The major aim of this programme is to provide leadership training to social leaders drawn from all walks of the society.

Although mostly the in-service education programmes are institutional and sponsored by the Ministry, teachers and their professional organisations enjoy freedom of activity and expression, and teachers' voluntary in-service education activities are encouraged by the government. Teachers organise voluntary clubs to develop their professional knowledge and competence through self-help activities. They organise seminars, workshops and invite experts to deliver talks on subjects of professional interest.

In-service Education in Thailand

In Thailand, in-service education programmes are meant not only upgrading the qualifications and professional status of teachers but also to ensure the application of knowledge and skills for the development of human resources in quality for overall national development. Various in-service education programmes are conducted for teachers. These programmes are distinctive in some aspects such as duration of the training, strategies employed and methodologies. Some of these Programmes are credit courses and some non-credit. The in-service programmes may be categorized as follows,
Teacher Council's Programmes:

One of the duties of the Teacher Council is training of teachers for higher qualifications. It organises various activities to help the teachers to improve their qualifications. These include study by correspondence, summer course before examinations, radio programmes, giving grants for studying abroad, printing textbooks for trainees, providing a library and an audio-visual centre for teachers, etc. It conducts examinations for lower certificate and higher certificate. The curriculum for these courses is developed by the Teacher Council in collaboration with Teacher Education Department. Teachers may take the examination either by self-study or after joining a correspondence course or after attending summer courses organised by teachers' colleges. These examinations are important means in motivating continuous self-development of teachers because for receiving a certificate, each teacher is required to pass many sets of courses.

Twilight Programmes:

Twilight programmes are the teacher training programmes offered by the teacher training institutions and these are usually offered after school hours. The curriculum, methodology and regulations for these programmes are the same as for the regular programmes. The duration of these programmes is longer than that for regular programmes.
Specific Purpose Training Programmes:

The in-service programmes organised for the purpose of updating teacher effectiveness are coming under this category. Some of these activities are, seminars on new approaches in administration, training for teaching effectiveness, training of personnel for curriculum implementation, academic conferences, school contents, producing academic printed materials, study tours, etc. These activities provide opportunities to teachers to know each other, work together, enhance their knowledge and to gain in certain skills.

Training of Personnel for Curriculum Implementation:

In 1975, the Curriculum Development Centre (CDC), Department of Educational Techniques, began to develop new curricula for primary and secondary schools. In 1978, the curricula were implemented beginning with prathom (first year of primary education) and Mathayon I (first year of secondary education). The process of implementation has been progressing through the educational ladder and will be completely implemented when the new curricula have been used in all the classes.

Community-based Programmes:

The Teacher Training Council (TTC) promulgated regulations and guidelines on in-service training of teachers
and educational personnel in 1976. The teacher education department directed the teachers' colleges to organise in-service programmes in tune with the guidelines provided by the TTC. Although the programmes aim to give the service to teachers all over the country, a survey made in early 1980 indicates that it could cover only 10 per cent of the teacher population. Therefore, all teachers' colleges are trying to expand the programmes.

Full-time Study Programmes:

The school authorities grant study leave of about 5 per cent of teachers in their provinces to attend full-time courses in teacher training institutions for higher certificates and higher degrees.

Teaching of Science and Mathematics:

The Institute for Promotion of Teaching Science and Technology (IPST) conducts experiments on methods of teaching science and mathematics. It emphasize in-service training on science and mathematics for teachers.

In-service Education in U.S.A.

In-service education programme for teachers in the United States of America range all the way from formal study during the summer vacation period, study which may count towards a degree, to learning activities involved in the teacher-supervisor relationship on the job in school systems.
They include summer study at a college or university, enrollment in extension courses on evening or week-ends, participation in summer institutes, workshops of various kinds, conferences, study groups, curriculum development and school improvement activities carried out during the school year in the school system in which the teacher is employed.

In U.S.A., in-service education opportunities have become more and more necessary for several reasons. In the first place the four year period is increasingly considered inadequate for the complete education and training of teachers in the U.S.A. In the second place, in-service education is necessary for the new teacher to become acquainted with the philosophy of the school, the objectives felt to be most important for the students of that school, the economic and social factors in the community which influence the school programme, the traditions which have been established that give the school its own character, and many other forces affecting the pattern of education. In the third place, in-service education and training are necessary to enable the teacher to keep up with new knowledge constantly being added to his field, and with newly developed teaching methods, materials and equipment. In the fourth place, teacher in service are faced with many pressing problems which were not or could not be anticipated in their pre-service programme of education.
In-service Education in U.K.

Great Britain has a long tradition of further education. Several universities run a summer course for teachers in service. A teacher who would attend six weeks summer school could take an examination leading to Diploma in Education. The in-service training programmes have become increasingly popular. Such programmes would include two types of teachers;

a) teachers who did not have any previous training, and
b) teachers who are trained but need a refresher course because of the expansion of knowledge in the particular field.

In U.K. the in-service education of teachers is considered extremely important by the educational inspectors and teacher educators.

In-service Education in India

Besides the preparation of teachers through pre-service teacher education programmes, it is essential that they must be academically updated periodically. With the explosion of knowledge and rapid changes in educational methods and techniques of teaching and learning, new demands are made on the teachers competencies. It has been accepted that teacher education is a continuous process and its pre-service and in-service components are inseparable. The National Policy on Education (NPE) 1986 in its Programme of Action (POA) has
given due emphasis to in-service education of teachers to
keep them abreast of changing national goals, revision of
school curricula, additional inputs in teaching-learning
system, strategies, etc.

To enhance in-service training, the teachers are
encouraged by giving traveling allowance and staying
allowance. The period of their attendance is treated as on
duty. Most of the aided schools also allow their teachers to
participate in the programmes on duty. The Ministry of Human
Resource Development (MHRD), Government of India, have
formulated the centrally sponsored scheme of restructuring
and re-organisation of teacher education which has the
following five components:

1. Establishment of District Institutes for Education
   and Training (DIETs)
2. Upgradation of selected Secondary Teacher Training
   Institutions
3. Strengthening of SCERTs/SIEs
4. Strengthening of University Departments of
   Educational Studies
5. Programme of Mass Orientation of school Teachers
   (PMOST)
6. Establishment of Academic Staff Colleges for Higher
   Education.
Establishment of District Institutes for Education and Training (DIETs):

The scheme envisages setting up of district level institutions to be called DIETs with the capability of organise pre-service and in-service courses for elementary school teachers and for the personnel working in non-formal and adult education. The functions of a DIET would include:

- Pre-service and in-service education of elementary school teachers
- Provision of resource support, including induction level and continuing education of instructors and supervisors for non-formal and adult education
- Planning and management support for District Boards of Education, educational institutions and school complexes
- Action research and experimentation work
- Serving as evaluation centre for primary and upper primary schools as well as non-formal and adult education programmes
- Resource and learning centre for teachers and instructors
- Educational technology and computer education support at the district level.

The DIET would work as the academic wing of the District Board of Education. At the state level, SCERT/SIE will
coordinate the functioning of DIETS established in various districts. Operationally, the DIETS will coordinate all academic activities of elementary stage at the district level.

Upgradation of Secondary Teacher Training Institutions (STTIs):

There is a large number of STTIs in the country offering B.Ed. and M.Ed. courses and many institutions have maintained high standards for the past several decades. In view of the generally poor facilities as prevalent in the secondary training institutions, it is proposed to select some of the STTIs for the purpose of providing financial assistance by the Ministry of Human Resource Development to raise their standards and develop them as institutions of excellence. Besides pre-service training, several other functions have been envisaged from them to provide a comprehensive approach to secondary teacher education and secondary education. These institutions will have net-working arrangements with University Departments of Education, SCERTs, Regional Colleges of Education, NCERT, etc.

Strengthening of SCERTs

Several SCERTs have distinguished record of service to school education. They are the composite body incorporating SIEs, SISEs, ET cells, Bureaus of Vocational Guidance, etc.
Many SCERTs have made contribution in curricular reform and in development of learning material. In recent years, they have also started to take interest in non-formal education. Since SCERTs will be the apex level institutions for DIETs and they would closely interact with colleges of teacher education and will also have an important role to play in the working of State Council of Teacher Education, it is necessary to take immediate steps for making improvements in SCERTs which would include:

a) Improvement of buildings and hostels
b) Provision of resources for improvement of library, laboratory, workshops etc.
c) Rational staff placement policy.

Strengthening of University Departments of Educational Studies:

While NPE/POA were under preparation, it transpired that university support to educational study is extremely insufficient and this is one of the reasons for unsatisfactory level of educational research and inadequate support to institutions of teacher education. The university grants commission will need to go into this matter in detail and do needful for improving researches in the departments and help the findings should reach the end user in the form of in-service training or some other form.
Programme of Mass Orientation of School Teachers (PMOST):

The objective of the orientation programme in the National Policy is to increase teacher motivation for implementation of the policy and to better equip them to play their role in the process of educational reform. The objectives of the mass orientation of teacher training programme are as follows:

1. To familiarise the teacher with salient features of NPE specially with reference to change in their role.
2. To strengthen their competencies to organise teaching/learning strategies appropriate to educational objectives and the learners' characteristics.
3. To orient teachers to organise curriculum transaction for development of values, productive skills, creativity, scientific temper and appreciation of composite Indian culture and its struggle for freedom and conservation of environment.
4. To clarify the role of continuous comprehensive evaluation and the modalities of organising it.

This programme was initiated in the year 1986-87 by Ministry of Human Resource Development through the NCERT in collaboration with the state Governments. In 1989, a special component under PMOST, namely PMOST-OB was conceived to cover the school teachers working in the primary schools adopted
under the scheme of Operation Blackboard (OB). The scheme of OB visualised upgradation of facilities in the rural area primary schools. Two volumes of training packages, namely, awareness package and performance package have been brought out in 1991.

Establishment of Academic Staff Colleges for Higher Education:

The scheme envisages setting up of Academic Staff College to organise in-service training courses namely, orientation programmes and refresher courses for college teachers for enhancing their teaching competences. The teachers are given promotion only after attending the above set courses. There is a separate wing in some selected universities and they are organising such courses. The functions of a Academic Staff Colleges are,

- Providing in-service education to college teachers.
- Provision of resource support to college teachers etc.

Incentives of In-service Training Programmes

Incentive is nothing but giving inducement (material/non material) to a person for his work/activity. It may be the reward for an activity to make more involvement in that work. Though in-service training programmes help the teachers to refresh their teaching techniques and methods, it should be provided with proper incentives to get expected fruitful result.
Some foreign countries have been given incentive in the form of certificate which helps the teachers promotion and mobility. Some school authorities grant study leave to about 5 per cent of the teachers in their provinces to attend full-time courses in teacher training institutions for higher certificates and higher degrees. Many in-service programmes, after a lecture, for instance, learning packages be given to trainees with exercises to be done and returned. So, teachers in abroad have good awareness on in-service training programmes and willing to take part in it.

In India too, after introducing the Academic Staff Colleges, which are the centres for providing in-service training for college teachers, the promotion for them has been given on the basis of refresher course attended. This may be considered as an incentive for them.

But in school education, least importance has been given for incentives. 'On duty' is the only incentive which the teachers enjoy to attend in-service training programme. Beyond this incentive, in a few courses, teachers may get T.A. and D.A. No promotion is given to the school teachers on the basis of attending in-service training programmes. So, many teachers are not interested in attending such programmes. Hence, we can create a congenial situation only by providing proper incentives to teachers for attending in-service training programmes.
Tackling 21st Century through Excellence in Education

We are living in the scientific age, where minute after minute new inventions and innovations are coming up. Today, the advancement in technology is in geometric progression whereas the competent personnel are increased in arithmetic progression. This tendency widens the gap between the innovations and its practice in the real situation. It is quite acceptable in our educational system also. It must be realised that the heart of any educational system is the teaching-learning process and neither New Educational Policy nor Ramamootri Commission Report will lead to a significant improvement in the educational system, unless the heart viz. the teaching-learning process is sound. It is only community of teachers who can improve this process.

In our schools, we have homogeneity in the syllabi and heterogeneity in the infrastructure and mental ability of students. So, the prime duty of the teachers is to tackle all kinds of students in their classrooms and they should make themselves fit by making them as innovative teachers. An innovative teacher try to learn something new every day and try to think of some new teaching ideas every day. If he cannot do something new every day, he will try to introduce innovations at regular intervals. The innovative teacher makes the class lively by making the subject interesting.
through modern methods of teaching and new innovations. They only command the respect from their students.

In-service training programmes are like the bridge between the innovations and the actual practice. Many research studies have proved the positive correlation between the strength of in-service education and the status of educational system and the teaching community. Hence, if we want attain the excellence in education, proper attention should be given for in-service training programmes.

Compendium of Research in In-service Education

An elaborate description of the historical retrospects of in-service education was made in the preceding section of this chapter. The following pages of this contain a detailed collection of research pertaining to in-service education.

Studies on Growth and Development of In-service Programmes

Srivastava (1966) studied the growth and organization of in-service programmes in India and its impact on secondary schools. The study has shown that there is a significant improvement in attitudes with increasing number of activities attended. It has also revealed that the attitude of the teachers towards the profession as well as towards the extension programmes stabilizes after attending four extension programmes. The improvement is rapid after participation in the first activity and it goes on improving
upto the stage of participation in the fourth activity. This does not mean that the participation after the fourth extension activity is futile; it indicates only a plateau period.

Sharma (1982) studied the growth and development of in-service education for secondary school teachers in the state of Bihar since 1955. He found that the techniques of in-service education programme had borne fruits, but still the way was long and thorny and the educationists had to discover better techniques to obtain the goals. He also found that there had been a sharp decline in the organization of activities with regard to in-service education programme after the administration of extension centres, formerly administered by the NCERT had been taken over by the Government of Bihar.

Studies on Need for In-service Training Programmes

Sharada Devi (1964) in her study on education of graduate teachers in the traditional and basic methods - An analysis of the problem and suggestions for an integrated pattern to suit our socialistic pattern of society suggested that an extension service department should be attached to every training college for the promotion of in-service education of teachers.

Banerjee (1967) in his study on training of primary teachers in India, he observed that in-service training of
primary teachers was thought to be important for enabling the teacher to grow intellectually in the course of his daily classroom work. The teacher should be kept up-to-date regarding new developments in the field of education. To remove the backlog of untrained teachers and to improve their academic and professional qualifications, summer courses should be introduced. For the teacher educators and administrators, courses should be conducted to refresh their knowledge.

NCERT (1967) the Educational Survey Unit, studied the women teachers in rural areas. They found that majority of them feel that they do not get proper guidance from departmental authorities and that there is a need for extension and in-service training programmes which are lacking.

Lakdawala (1977) studied the professional growth of women teachers of secondary schools of Greater Bombay. He found that there was not a single activity leading to professional growth performed by 50 per cent or more of the teachers; the activity of attending courses attracted the highest number of teachers. More than 25 per cent teachers implemented new techniques in the classroom teaching.

Buch (1978) surveyed the status of teachers based on the Third All India Educational Survey. The survey revealed that only 13.68 per cent of the primary school teachers, 20.18 per
cent of the middle school teachers, 28.76 per cent of the secondary school teachers had participated in some kind of in-service education programme during the two years preceding the survey. It reveals the magnitude of the task to be accomplished in terms of an in-service education programme in the country.

Goyal and Chopra (1979) studied the problems bearing on teacher education in the context of the 10+2 Pattern. They found that since the syllabus of various subjects in the new pattern of school education had been enriched and a number of new activities had been added, there was an urgent need for in-service training or existing teachers working in the schools under the new pattern. Such areas were environmental studies, art, music and other aesthetic activities, development of moral values, work experiences (SUPW), etc.

Gupta (1979) studied the in-service teaching needs of the secondary teacher-educators. He found that there was some measures of association between the qualifications of secondary teacher-educators and their in-service education proneness. There was a small measure of association between the teaching experience and the in-service education proneness of teacher-educators. In view of the emerging curricular changes at the school level and subsequently at the teacher education level, the in-service education courses required by secondary teacher-educators were identified.
NIEPA (1979) studied the administration of elementary education in relation to the programme of universalization in Andhra Pradesh and found that the efforts for providing in-service training of teachers were not sufficient for the qualitative improvement of elementary education.

NIEPA (1979) studied the elementary education in relation to universalization of elementary education in Assam and found that no in-service training programme for teachers was organized at the block, sub-division or district level.

NIEPA (1979) studied the administration of elementary education in relation to universalization of elementary education in Jammu and Kashmir and found that the percentage of trained teachers at the elementary stage was satisfactory.

Mama (1980) studied the Impact of in-service education on teachers in the state of Maharashtra. He found that little importance was attached to in-service education. No effort was made to involve teachers in the planning, evaluation and follow-up of in-service programmes. The school teachers had no access to the college libraries except while participating in in-service programmes. In-service programmes were run as weekend courses. Adequate communication did not exist between the colleges of education and the secondary schools. Control of in-service programmes was in the hands of the school principals. The teachers were sometimes prevented from
attending in-service programmes by the principals. The concept of in-service education was not clear to the teachers.

Gadgil (1981) studied the expectations of primary school teachers in Pune regarding further training, orientation and continuing education. He found that most of the teachers desired to have continuing education/orientation in school subjects to get mastery over them.

Singh (1981) studied the progress and problems of primary education. On the basis of his study, he suggested the in-service education for improving the quality of primary education.

George (1982) studied the role expectations, role performance and training needs of teachers of English in the secondary schools of Kerala. He found that intensive training for teachers of English at the in-service courses were necessary to close the gap between role expectation and role performance.

Kundle (1982) studied the linguistic differences between Marathi and Hindi and their impact on learning Hindi as second language by Marathi students. He found that in-service training programmes should be a regular feature for language teachers.

Sharma (1982) studied the progress and problems of teacher education in India. He found that, to meet the
demands for constant improvement in the field of education and to introduce new strategies in teaching, there was dire need of organizing refresher courses, short-term intensive courses in special subjects, practical training, workshops and professional conferences at both the levels (primary and secondary) of teacher education programmes.

Gogate (1983) in his study on training of primary school teachers in the context of universal primary education, found that a new method of orienting primary school teachers had been established for their better performance.

Studies on Importance of In-service Training Programmes

Sali (1978) in his survey report on work experience in secondary schools and the teaching of optional subjects found that in class VIII the percentage of trained teachers was 86.6 and in class IX 84.2. The training provided to most of these teachers (70 per cent) was through in-service workshops.

Nagaraju (1982) evaluated the radio correspondence-cum-contact in-service teacher training programme in Kerala. He found that a majority of the participants felt that the training was useful to them as it enabled them to learn the topics which they had not studied earlier. They felt that the in-service training improved the academic achievement of their students.
Mohanty, Giri and Mohanty (1976) studied the educational television programmes telecast during the in-service teachers training course in 1975. They found that a large majority of teacher-monitors expressed positive reactions towards all the TV programmes. On an average, 81 per cent of TV sets used for in-service training programmes functioned well.

Mohanty, Giri and Mohanty (1976) studied the radio programmes broadcast during the in-service training course in 1975. They found that a majority of teachers monitors (78 to 89 per cent) appreciated to some extent all the radio programmes used for in-service training.

Mohanty and Giri (1976) studied school broadcast programmes in Orissa, found that a majority of teachers had benefited from such programmes in terms of acquiring more knowledge.

SCERT (Andhra Pradesh, 1980) evaluated the in-service training of secondary school teachers in science teaching centres attached to the college of education - in content and methodology. The proportion of participants who understood the concept, principles and facts was 50 per cent in physics, 64 per cent in chemistry and 45 per cent in biology teaching. Participants indicated that many of the concepts were dealt with in an impressive manner in physics and biology. Many of the participants felt that the laboratory techniques employed
during the training programme were useful to improve professional competency. The course was useful in teaching in the classroom and many simple techniques were given to make improved apparatus for teaching science. The duration of the course was quite short. Several activities and projects undertaken during the training programme made many participants enthusiastic to undertake such projects in their schools also.

Massey (1981) studied the effects of training in the formulation and usage of behavioural objectives on the classroom verbal behaviour of in-service teachers. He found that after training in the formulation and usage of behavioural objectives, exerted indirect influence on students, rewarded students' responses by praise and encouragement, attended to students ideas and integrated them into class discussion by asking more and more questions. They laid less emphasis on lecturing, were less authoritative, less commanding and less critical and encouraged students to supplement their answers with additional information based on independent judgment. The teachers showed significant gain in the pupil talk ration, indirect talk ratio, indirect/direct ratio, teacher response ratio, teacher question ratio and pupil initiation ratio. The training led to reduction in talk ratio, content cross ratio, steady state ratio and vicious circle. Significant gains in indirectness, questions, praise
and flexibility were observed with reduction in teacher talk, restrictiveness, restrictive feedback and negative authority. The flow patterns following the training revealed more short questions followed by short answers by students, frequent acceptance of ideas as well as clarification and use by teachers.

SCERT (Andhra Pradesh, 1981) evaluated the in-service training programme for primary teachers in the selected government and aided teacher training institutions. It found that the participants felt that the training programme was good and helped in developing knowledge about new concepts in science. The participants felt motivated to implement most of the teaching strategies taught during the course.

Sharma (1982) made a study on "developing instructional material in civics at 10+2 level for pre-service and in-service teachers". He found a positive performance among in-service teachers.

Krishnan (1983) in his study on development of multimedia package for teaching a course on audio-visual education, found that ninety eight per cent of the trainees obtained more than 80 per cent of the marks on the final post-test. The mean gain scores of knowledge, comprehension and higher mental abilities were found to be significant at 0.01 level. The mean attitude change was found to be significant at 0.01 level.

74
Valand (1983) studied the innovative proneness of teachers of primary teachers' training colleges in the state of Gujarat. He found that the mean innovative proneness score of the teachers who attended the in-service programme was higher than the mean score of the teachers who had not attended any in-service programme. The components of the innovative proneness scale significantly correlated with teachers' in-service education.

Gill (1984) investigated the impact of "Teach-English-Learn-English" (TELE) radio programme on listener teachers' and pupils' English in Gujarat. He found that the impact of the TELE series on the teachers' own English was positive and it was in favour of listener teachers. The listener teachers clearly gained from the broadcast. The teachers did gain in the specific areas, viz. listening comprehension, pronunciation, vocabulary and grammar. The TELE series helped the teachers and learners of English in the school of rural area. TELE proved to be a useful source for teachers and learners regarding the natural and appropriate use of English. TELE also served as a source for teachers to become familiar with practicable and effective ideas. The TELE series contributed to the development of general awareness in teachers in teachers and learners of English.

Mohanty and Giri (1984) evaluated the school broadcast Programmes in Orissa. They found that more than 50 per cent
of teachers opined that the structures used in all the programmes were up to the standard. Most of the programmes were good with regard to their language.

Cowasji (1985) studied the effectiveness of the orientation programmes for teachers working in the integrated education for the disabled children in Rajasthan. He found that there was improvement in pronunciation and spelling after the orientation. The teachers felt that the orientation helped in raising their standard and it was useful. Because of orientation, special activities like sewing and toy-making were introduced for the first time in schools.

Sundararajan and Karuppathevan (1990) studied the effectiveness of in-service training programmes organized by the SCERT, Madras, for the middle school science teachers. They found that only a very small percentage (1.68%) of the teachers have poor opinion in respect of effectiveness of the in-service training programmes organized by the SCERT. Significant differences are found among the categories of teachers in respect of the effectiveness of such programmes. Women teachers, private school teachers, graduate teachers and teachers with less than ten years of experience have better perceptions of the effectiveness of such programmes than men teachers, government school teachers, non-graduate teachers and teachers with more than ten years of experience, respectively.
Ramabrahmam (1991) evaluated the refresher course in political science given by an Academic staff college. He found that 70 per cent of the participants responded the course is adequate in nature and 60 per cent of the participants accepted it as upto date in quality. He also found that 57.5 per cent of the participants were satisfied with the refresher course.

Studies on Micro Teaching through In-service Programmes

Ray (1978) studied the effect of various treatments on the acquisition of teaching skills through microteaching. He found that the in-service school teachers in the microteaching groups for the acquisition of teaching skills, exhibited significantly higher gain scores of general competence than that of the filler group under integrated skill-based traditional practice teaching. The in-service teachers reacted favourably towards micro-teaching, the techniques of skill acquisition, modeling and feedback through supervision with or without tapes.

Jangira, Mattoo and Singh (1980) studied the use of microteaching for improving general teaching competence of in-service teachers. They found that the group of nineteen in-service social studies teachers included in the study showed significant gain in the mean scores on the competence to use the five skills, namely, reinforcement, probing,
stimulus variation, illustration with examples and increasing pupils' participation after their training using microteaching. The teachers showed significant gain in the main scores on general teaching competence after their training in teaching skills using microteaching. The teachers had retained the gains on skill as well as on teaching competence eight weeks after the training. Microteaching of the individual teacher profile of skill and general teaching competence revealed improvement in all teachers except one.

Paintal (1980) made an evaluation of microteaching and other recent innovations in educational technology. He found that both pre-service and in-service teachers which the investigator observed in their classrooms for differences in the teaching behaviour before the course and immediately after the course, had definitely shown improvement in the use of the questioning skills of prompting, seeking further clarification and asking questions that called for a set of related facts.

Yogendra Kumar and Rattan Lal (1980) studied the use of microteaching in improving general teaching competence of in-service teachers. They found that there was improvement in general teaching competence and in teaching skills and also found that microteaching could go a long way in improving the general teaching competence of in-service teachers if undertaken on a large scale.
Jangira, Singh and Mattoo (1981) studied the effect of training in teaching skills through microteaching on the skill competence and general teaching competence of in-service science teachers and pupil perceptions of teaching. They found that training in teaching skills using microteaching technique brought about significant improvement in teaching skill competence and general teaching competence of science teachers. Pupils' perception of the teaching of their respective teachers after training in teaching skills underwent a significant change in the desired direction.

Bailkeri (1983) studied the effect of self-instructional remedial microteaching course on the instructional competence of in-service secondary school mathematics teachers. In this study he found that the remedial self-instructional microteaching course was effective in improving mathematics general instructional competence of in-service teachers of secondary schools.

Kalyanpurkar (1986) studied the effect of microteaching on the teaching competence of in-service teachers and its impact on pupils' attainment and pupils' liking. He found that microteaching treatment had a positive significant effect on the development of general teaching competence of teachers. Microteaching treatment had a positive significant impact on pupils' attainment as well as on pupils' retention.
Study on Models of Teaching through In-service Programmes

Passi, Singh and Sansanwal (1985) studied the models of teaching - developing training strategy. They found that training in concept attainment model (CAM) did bring significant favourable change in teacher educators' reactions towards CAM. Training in CAM in the form of lecture, demonstration, discussion and peer practice plus feedback did enhance the understanding of teacher educators' theoretical aspects of CAM. Training in inquiry training model (ITM) in the form of lecture, demonstration, discussion and peer practice plus feedback did enhance the understanding of teacher educators' theoretical aspects of ITM. Training in ITM did bring about favourable reactions of teacher educators' towards ITM.

Studies on Creativity through In-service Training Programmes

Nirpharake (1980) organized a training in creative appreciation. He found that the experimental group showed marked improvement in all aspects of creativity after receiving training over the control group as well as over its own pretest scores.

Raina (1981) conducted a factorial study of the personalities, attitudes to teaching and creativity of in-service and student-teachers belonging to three subject areas. He found that the rank correlation between the science and arts in-service teachers was not significant whereas the
same between the science and commerce teachers and between the arts and commerce teachers was significant. There were no significant differences in the attitude to teaching between the in-service science teachers and in-service arts teachers and the in-service commerce teachers. The in-service teachers were highest on the factors of intellectuality, self-strength, environmental sensitivity, individuality, initiative and artistry as measured by the test of creative potential.

Some Critical Studies on In-service Training Programmes

Mehra (1970) in his national survey of elementary teacher education found that, the quality of teacher education had deteriorated on account of expansion. In 1965 there were 1,548 institutions of elementary teacher education. No uniformity was found among these institutions regarding the level and type of training given. In-service education and extension service programmes were largely ignored.

Gangaiah (1980) Critically studied the English teacher education in Andhra Pradesh. He found that the in-service programmes were not need-based and the periods of training were not adequate to improve the teachers' competence in English.
was updating the teacher and the content area. The second
indicated that the major accomplishment of in-service education
being organized on working days only. Teacher participants
was in favour of in-service training programmes.

Burata (1987) in his study on "a critical inquiry into
classroom situations. The teaching activities being practiced during the in-service training activities with new developments in science. In most of the
the participants felt that the course was good and adequate
coaches of education, found that more than 60 per cent of
improvement techniques in science teaching course of the
secondary training of secondary school science teachers in
SCERT (Andhra Pradesh, 1982). In its evaluation on in-

training programmes.

headmasters were reluctant to send them to in-service

The participants felt that a) there was too much

the interference from the deputy education officers and b) the

schools. The participants were quite useful but could not be practiced in the

that, the laboratory techniques employed during the training
government and added teacher training institutions. It found
training programme for primary teachers in the selected

SCERT (Andhra Pradesh, 1987) evaluated the in-service
gain of the in-service programme was developing skills for better teaching of the subject. The quality of in-service programmes was rated fairly high by teacher-participants. They felt that the programmes were useful in terms of their professional growth.

Studies on In-service Training Programmes from Abroad

Yodsuwan (1980), studied the factors affecting in-service education programme of teacher education programme in Thailand. He found that the data supported the in-service programme. The incentives were effective. The organizational structure was conducive to the programme. There was lack of properly trained personnel. Lack of trained personnel and follow-up work and lack of research were the obstructing factors. Teachers' attitude towards the teaching profession was positive but slightly lower than their attitude towards in-service education.

Anowarul Aziz (1984) in his study on "science education programme in the secondary schools of Bangladesh", found that a planned programme of in-service education of science teachers should be developed for better performance.

Ehsan (1985) evaluated the environmental education programmes in primary schools of Bangladesh. He found that all the content topics of the modified programmes were up-to-date and suitable to the learners' needs, interests, ability and experience. The teaching learning strategies suggested in
the modified programmes were feasible and practicable for use by teachers in the school. All the experts felt that the suggested instructional media had been taken into account through locally available resources and low-cost materials.

Ariya Somboon (1986) studied the extension education activities as organized by the Northern Teachers Colleges in Thailand. He found that the introduction of the extension education programme was the outcome of the need for linking teachers college to the national programme of rural development. According the rectors and vice-rectors, the programme resulted in an additional load on the academic staff but they nevertheless appreciated the importance of the programme. The teacher perceived the extension activities as being more relevant to community needs than to those of the instructors. The community had a favourable attitude towards the programme. The programme also increased the clients' participation in community life.

Rolheiser-Bennett (1986) compared the effects of four theory-driven models of teaching on student learning. He found that the results strongly support the rationale that preservice and in-service programmes can profitably direct their efforts towards increasing teachers' repertoire of research-based models of teaching.

Pradhananga (1986) evaluated the elementary teacher education curriculum of Nepal. He found that for making
elementary-teacher education more effective, the first three preference were given to a) the field-needed orientation, b) teaching of professional courses in relation to actual classroom situations in schools and c) linking theory courses with actual practice in pedagogy. The training contributed positively towards teaching skills like questioning pattern, pupils participation, class management and pupil responding and initiation.

Sriviha (1986) studied the supervisory role of Principals, Regional Educational Division II of Thailand as perceived by self and teachers, found that staff meetings and individual conferences as instruments of teacher growth, and specific in-service education techniques like action research, inter-class visitation, seminars, workshops, etc. found little place in school life. The principals did not specially encourage the teachers to attend in-service education programmes.

Morgan (1987) studied the cooperative learning: Teacher use, classroom life, social integration and student achievement. He found that highly trained teachers performed well than their counterparts.

Rangel (1987) studied the effect of cooperative learning on the spelling skills, self-concept and locus-of-control of below average learners. He found that the in-service teachers' students (experimental group) were significantly
outperformed the control group in spelling achievement with both the experimental males and females showing significantly greater growth in spelling than the control males and females, respectively.

Bashey (1988) studied the cooperative learning model: An assessment of current practices and implications for use within the Bellevue School District (Washington). He found that the teachers and administrators indicated that most familiarity with types of cooperative learning methods for which in-district in-service had been provided. All sixteen of the principals and 142 teachers want to continue in-service training in the area of cooperative learning.

Costello (1988) studied the use of cooperative learning groups in a site-based staff development programme to facilitate teacher conceptual development. He found that individual teachers showed evidence of small gains in thinking primarily in a positive direction and also found that teachers did not perceive a two day training as an in-depth staff development experience.

Wiesner (1989) studied the concept learning and the learning of strategies for teaching graphing, probability and statistics among in-service elementary and secondary mathematics teachers. He found that significant amounts of conceptual learning did take place as a result of workshop participation. Also found that the workshop helped each of
them to understand some concepts better and that they had learned new techniques for teaching these concepts.

Berman (1990) in his study on an empirical test of the variable 'availability of follow-up activities' in the Fenstermacher and Berliner Staff Development Model, found that the staff development with follow-up activities did have a positive cumulative effect for most participants.

Dutton (1990) investigated the relationship between training in cooperative learning and teacher job satisfaction. Although this study did not reveal a significant relationship between training and cooperative learning and teacher job satisfaction, a significant relationship was found between training variables and levels of satisfaction.

The training variables such as kind of training, preparation for implementation and opportunity for skill maintains are found to be significantly associated with,

a) Use of cooperative learning at the level of seven or more times a week and

b) Small group sharing and problem solving sessions for participants during training.

In a study conducted by Gladder (1990) on principals' behaviour of five elementary schools in implementing cooperative learning, it was reported that principals encouraged teachers to engage in professional growth centered
on cooperative learning and facilitated staff development for cooperative learning.

Meinster (1990) studied the in-depth investigation of teachers using computers. He found that teachers believed that additional workshops and computer classes would not provide them with needed computer skills. Teachers needed extensive assistance provided by the computer science teacher along with some self-directed learning and trial and error methods.

Rothberg (1990) studied descriptively the implementation of cooperative learning by three groups of teachers after in-service training. The results indicated that

a) the in-service training helped the teachers to properly implement cooperative learning methods.

b) experienced teachers implemented cooperative learning at a higher level of understanding than teachers with five or fewer years of experience.

c) teachers trained by internal and external instructors implemented cooperative learning at equivalent levels.

Sandeen (1990) studied the implementation of cooperative learning in grades kindergarten through twelve. He found that teachers reported student academic achievement most frequently as a strength. Related teacher concerns included administrative understanding and the need for parent
education. He also indicated that on-going staff development at many levels may be needed to extend the range of cooperative strategies.

Core (1991) investigated the effect of cooperative learning on attitude towards in-service programmes for biology and chemistry teachers in Knox Country, Tennessee. He found that the results indicated that the use of a cooperative learning in-service program resulted in positive gains in attitude toward in-service for the participants of both populations of biology and chemistry teachers. Comparisons between participants and non-participants demonstrated that a more positive attitude was achieved by the participants in each discipline and combination of disciplines. Teaching experience was not a determining factor in gain of positive attitude for either population.

In a study related to staff development, Niska, John (1991) examined the effectiveness of a cooperative learning supervision training and development model (CLSTD) on the skills, confidence levels and sense of efficacy of principals supervising cooperative learning.

The study yielded these important findings: (1) Teachers and principals in the CLSTD group reported a significant increase in principals' effectiveness in providing feedback to teachers about cooperative learning lesson plans. Teachers and principals in the control group
reported no increase in effectiveness. (2) Teachers and principals in the CLSTD group reported a significant increase in principals' effectiveness in providing specific feedback about the three major parts of the cooperative learning lesson. Control group teachers and principals reported no significant increase in effectiveness. (3) CLSTD teachers and principals reported a significant increase in principals' knowledge and effectiveness of usage of cooperative learning concepts. Teachers and principals in the control group reported no significant increase. (4) CLSTD group principals reported a significant increase in self-perceptions of levels of confidence in selected cooperative learning supervision skills after training. Control principals reported a decrease in self-perceptions of confidence levels in their supervision of cooperative learning. (5) Principals in the CLSTD group reported a significant increase in self-perceptions of sense of efficacy in supervising cooperative learning at the end of the study. Control group principals reported a decrease in self-perceptions of sense of efficacy in their supervision of cooperative learning at the end of the study.

Johnson (1991) studied the effect of a conflict management training program upon the self-reported conflict management styles of school teachers. Through this study he found that the training in conflict management had enhanced teachers' effectiveness in managing conflict in the school.
Shelton (1991) in his study on implementation of cooperative learning training, found that in-service training resulted in implementation. Experienced teachers implemented cooperative learning at a higher level than teachers with five or fewer years of experience. Teachers trained by internal and external instructors implemented cooperative learning at equivalent levels. The two training groups which had a cadre of support on site implemented the training at higher levels than the third training group.

Skeans (1991) studied the effects of Cooperative Integrated Reading and Composition (CIRC). Teachers were trained on this concept. Statistically significant results were found in the following areas: (1) the implementation of CIRC resulted in greater achievement in vocabulary at grade three; (2) the implementation of the district's integrated language arts program resulted in greater student achievement in reading comprehension and language at grade five; (3) CIRC teachers with high degrees of implementation had a greater impact on student achievement in language at grade three; and (4) CIRC teachers with both high degrees of implementation and high Stages of Concern had a greater impact on student achievement in language at grade three.

Yoder (1991) in his study on "telecommunications in the classroom: Factors affecting implementation", found that educators who took the telecommunications course generally
felt comfortable with installation of the hardware and using telecommunications software. Successful telecommunications projects depend on continued administrative support, ongoing training and technical support, and good curriculum materials and ideas. Where teachers have been successful in implementing telecommunications, they have observed a dramatic improvement in writing skills.

Barker (1992) investigated the current practices of Arizona high school social studies teachers regarding the frequency and nature of their textbook usage and to determine what these teachers were doing to provide supplemental instruction not found in their textbooks. The study revealed that teachers need training effectively to teach students how to comprehend and use the textbook. He also found that increased emphasis should be placed on training potential teachers on how to effectively use the textbook.

Gross (1992) investigated changes in the actions and perceptions of secondary level students and teachers when they move away from a traditional approach toward a whole language instructional mode. He found that after receiving the training teachers allowed much more student choice and interpretation and also found that the practice held intrinsic motivation and resulted in renewed interest in teaching and learning.
Kozlik (1992) examined the perceptions of caring among pupils receiving resource room instruction in grade 11 and 12, their service providers and parents. He found that in-service training is needed for parents and teachers.

Maloney (1992) in his study on "teacher training in creativity: A phenomenological inquiry with teachers who have participated in creativity coursework", found that coursework in creativity does make a difference. These teachers' self-esteem was enhanced and creativity became a value which was implemented in the classroom. The teachers were willing to try new methods and to take risks because they enjoy facilitating growth and creativity in themselves and their students. They realize that teachers need to know how to bring creativity out in themselves in order to foster students' creativity.

Payne (1992) evaluated the use of curriculum study groups and peer observation as effective means of staff development in an elementary school. He found that the teachers in the study would have benefited from a longer period of time for their reflective tasks. Some groups needed institutionally-recognized meeting times. All teachers needed training in conflict resolution and in leadership skills.

Effect of In-service Training Programme on Other Fields

Directorate of Adult Education (1973) in its study on "Farmers' Training and Functional Literacy", found that the
literacy effects were quite satisfactory. The training increase in agricultural knowledge about wheat was significantly higher in the experimental group than the control group. The same was true in respect of awareness, interest, trial and adoption of high yield variety seeds and other modern techniques and practices. The attitude towards literacy, material comfort, contact with extension personnel and use of radio, had significantly changed for the better.

Panwar (1978) studied the effect of short duration agricultural training on farmers' earning. He found that a five-day training course resulted in significant gains in knowledge in all areas of farming included in the course. It resulted in a significant change in the farmers' attitudes towards new agricultural practices, high-yielding varieties of seeds, use of fertilizers and plant protection. Participants suggested an effective follow-up programme, including visits by experts, supply of literature and further organization of refresher courses.

Nagia (1979) studied the industrial workers education and training in India with special reference to Madhya Pradesh. He found that most of the workers who attended classes believed that workers education scheme developed trade union consciousness and helped them appreciate labour-management problem better.
Desai, Rama, Patel and Shah (1982) in their study on "An appraisal of the implementation of the National Adult Education programme in the state of Gujarat", found that the project officers and supervisors felt that the training programme was effective and also suggested that the training be imparted more frequently.

Panjwani (1982) studied and found that most polytechnic teachers were willing to participate in in-service teacher training programmes. A majority of the polytechnic teachers preferred certification/ compulsory in-service teacher training of polytechnic teachers.

Ravishankar (1982) evaluated the management training programmes in public enterprises with special reference to the use of educational technology. He found that a large number of trainees were not satisfied with the existing training programme as they were pertinent to the needs of the organizations only. Efforts to introduce innovations in training methods to raise the efficiency of the training programme and level of satisfaction of trainees did not appear to have been given adequate consideration. In most of the organisations, qualified and trained trainers with specialized skills in educational training technology were far too short in terms of the needed numbers.

Bhaskara Rao, Yashoda, Eliah and Sundara Rao (1986) studied the individual modernity on in-service and per-
service teachers. They found that both in-service and pre-service teachers were having the same type of distribution of individual modernity. It was also found that only one variable, i.e. sex, was associated with the individual modernity. Women were identified as having more individual modernity. The other variables, namely, discipline studied at graduation, past academic achievement, teaching experience, teaching of subjects, participation in in-service orientation programmes, entrance achievement, social status and religion had no influence on the possession of traits of modernity.

Gupta (1986) in his study on "attitude of teachers towards environmental education" found that, after attending the vacation course on environmental education, the mean attitude score for all the groups of teachers showed a favourable attitude towards environmental education.

Rajindersingh (1987) in his study on "Adult Education, training and productivity: A study of Workers in Haryana" found that, there was a significant increase in workers' productivity after adult education and training. On the literacy test, the scores of the workers range from 43 to 65 per cent and on the numeracy test the scores of the workers ranged from 47 to 66 per cent after adult education and training programme.

The elaborate review of related literature given in this chapter clearly highlights the need and nature of in-service
training programmes. The review provided necessary insight to the investigator to carry out the research study effectively. Having described the review of related literature, the investigator presents the methodology of the study in chapter III.