CHAPTER-II
LITERATURE SURVEY
Man is the only animal that does not have to begin a new in every generation, but can take advantage of the knowledge, which has been accumulated through the centuries. For any study, it is not only important but also essential to provide a convincing theoretical framework which should have the support of the latest body of knowledge related to the field of study and which can assure the investigator that his problem does not exist in vacuum, and considerable work has already been done on problems which are directly related to the proposed investigation.

Survey of related literature is a crucial aspect in planning of study. It is an exacting task, calling for deep insight and clear perspectives of the overall field, which invariably minimizes the risk of dead ends and is a fruitful source of hypotheses. The review of related literature helps the investigator to acquaint him with the current knowledge in the field in which he is going to define the limits of his investigation. By reviewing the related literature, the investigator gets a base for the objectives of his study clearly.

Having built up the theoretical background of the problem and conceptual meaning of the variables involved in the study effort is being made to sum up the findings of relevant studies conducted in India and abroad. Only those studies have been reported which appear to have a direct relationship with the variables involved in the present investigation. With reference to present research problem the literature survey was done under following three headings:

2.1 Microteaching

2.2 Teaching Competence

2.3 Feedback
2.1 MICROTEACHING

Microteaching is a scaled-down teaching encounter designed for the training of both pre-service or in-service teachers. It has been used worldwide since its invention at Stanford University in the late 1950s by Dwight W. Allen, Robert Bush, and Kim Romney. Its purpose is to provide teachers with the opportunity for the safe practice of an enlarged cluster of teaching skills while learning how to develop simple, single-concept lessons in any teaching subject.

Orme (1966) found that the inclusion of films in microteaching format for demonstration of desirable teaching techniques led to increased effectiveness in terms of classroom performance. Further, it indicated that while microteaching scaled down the classroom situation, it did not distort it. Kallenbach (1967) carried out a study on microteaching with videotape and block teaching practice. The experimental group trained by microteaching achieved the same degree of proficiency in one-fifth of the time taken by the group trained by the block practice method. These results indicate that microteaching is a better technique than the block practice training procedures.

Tiwari (1967) initiated a project in microteaching in the Government Central Pedagogical Institute of Allahabad. He found that microteaching could be used profitably in training institutes and in secondary schools. This would develop the student teacher’s insight and make them better qualified as teachers. Kallenback and Gall (1969) undertook a comparative study to determine the effectiveness of microteaching. 19 elementary school interns trained through microteaching were compared with 18 others trained through conventional approach and found out that microteaching was a superior teaching strategy.

Bell (1970) started experimenting with microteaching with home economics education at Texas technical to determine the effect of training upon specific teaching skills of student teachers. The conclusions of study were- (1) The programme was relatively more effective in teacher preparation than usual experience (2) Self-evaluation of student teachers were more
effective in case of microteaching than in case of traditional teaching programme. Harris (1970) indicated the value of microteaching in bringing about significant changes in prospective science teachers. The experimental group, who micro-taught six times to a small group of their peers, did significantly better in the classroom skills.

**McCollum and Due (1970)** made an effort to avoid artificial situations through the elementary programmes for the inner city teachers of the Temple University for the preparation of elementary teachers from undergraduates. They used microteaching to add the needed dimension of reality. The second aim was to bring about a change in the teacher’s role in the social studies classroom. They found that the student teachers reacted more positively to their microteaching method courses. **Johnson and Knupp (1970)** concluded that students preparing for the microteaching expected that the supervisors must be qualified to render technical assistance. **Shah (1970)** tried an experiment with seven students of ninth class. He used a video tape recorder for recording the performance of a teacher. His conclusions were that the recording on the tape recorder and listening to it afterwards helps the teacher in correcting his mistakes.

**Chudasama (1971)** tried out microteaching with six students at the faculty of education and psychology, Baroda. His main objective was to know the extent to which microteaching can help a student teacher in developing more integrated behaviour. He found that the student teachers trained through microteaching were more effective in the development of indirect teacher behaviour and that the microteaching developed the skill of questioning in the teachers and increased pupil participation in the class. **McAleese & Unwin (1971)** found that microteaching is nevertheless found to be more effective if both sound and vision recording can be made.

**Dosajh (1974)** carried out a preliminary try-out of microteaching as a modifier of teacher behaviour. The teacher showed an all round improvement in all areas. **Bhattacharya (1974)** reported a pilot study on microteaching in civil engineering. The objective of the study
was to explore the feasibility of the use of audio tape recording and microteaching technique to develop the skill of "Indirectness" among the technical teachers of civil engineering in a simulated situation. It was found that the audio recording and microteaching technique would develop successful 'Indirectness' skill, and the attitude of teacher-trainees towards the microteaching technique of teaching skill development was highly favourable.

Pal (1981) worked on student perception of microteaching programme. The four micro skills selected were: Skill of Stimulus Variation, explanation, Probing Questions & Reinforcement. The results observed were that microteaching helped in development of self-confidence, revision of higher secondary content, acquisition of classroom manners to a significant extent, development of B.B. writing & planning of lesson.

Jangira et al. (1982) worked to find the effect of training in selected teaching skills using microteaching on teaching competence of S.S. teachers. The skills selected for the study were: skill of Probing Questions, Stimulus Variation, Reinforcement, Illustrating with Examples and Increasing Pupil Participation. The results of the study showed that microteaching appeared to be promising in improving skill competence & overall teaching competence of S.S. teachers.

Mathew (1983) conducted a study on the effect of microteaching and integration of skills on teaching self-concept of student teachers. The skills selected for the study were Skill of Illustrating with Examples, Reinforcement, Explanation, Stimulus Variation and Probing Questions. The results of the study showed that teaching self-concept of student teachers could be enhanced significantly through microteaching practice in simulation & there is no improvement in self-concept of student teachers who were subjected to summative strategy of integration of skills.

Chathley (1984) conducted a study on bi-clustered strategy of integration of micro skills as a teacher training technique for perspective secondary school teachers in relation to subject area & sex. The results of the study depicted that when the skills were integrated in
two’s the performance of the trainees differed according to the different possibilities of the combination of the skills. **Bawa (1984)** worked on effectiveness of microteaching with planned integration training following summative model & microteaching without planned integration training on the general teaching competence of teacher trainees. The results of the study showed that exposure to microteaching results in improving the teaching competence & this improvement was accounted for appropriateness of objectives, selection of content, explanation & pupils participation. Also exposure to integration-based instruction subsequent to microteaching-based training improves their teaching competence and helps them to increase their ability to integrate various teaching skills effectively.

**Kadam (1985)** worked on the teaching skills under microteaching amongst the student teachers. It was found that feedback is one of the effective factors for improving the skills of microteaching. The ratio analytical procedure was applied and found that there was a significant difference between teach & re-teach. **Bhatia (1988)** worked on microteaching with and without integration. The study was aimed to find out microteaching with integration & microteaching without integration in improving the general teaching competence of in-service commerce teachers and also of which of the above two is more effective in improving teacher’s ability to use the specific skills. The study concluded that microteaching based skill integration intervention training employing additive strategy is more effective than the microteaching training without skill integration intervention in improving & retaining general teaching competence in forming attitude towards teaching & retaining skill competencies. **Wadhwa (1988)** made a factorial structure of attitudes of teacher trainees toward microteaching. The purpose of the study was to reveal the effectiveness of microteaching and to identify the various underlined dimensions in a 40-item attitude scale towards the microteaching. The results indicated the attitudes of teacher trainees towards microteaching and this helped in preparing good teachers by bringing radical changes in teacher training strategy.
Naik (1989) worked to determine effect of different models of integration exercise of teaching skills learned through microteaching on teacher effectiveness. The results of the study showed exposure to microteaching practice followed by integration resulted in improvement of teaching competence. Asija (1990) conducted a study on teaching competence as related to development of skills specific to teaching of biology through microteaching among perspective secondary school teachers. The findings of the study showed superiority of microteaching group over the conventional training in developing the skills - B.B. Writing, Probing Questions, Demonstration, Drawing Diagrams & Heuristic Skills and this superiority was established on the post test as well as on retention test. Dutta (1990) conducted a study on integration in microteaching. The major objective of the study was to determine the effect of traditional training technique, microteaching (skills developed in isolation) and integration training through the additive model on the general teaching competence and attitude towards teaching of the student teachers. The control group (C-1), experimental group (E-1) and experimental group (E-2) were trained with the help of traditional training technique, microteaching (skills developed in isolation) and integration training through the additive model respectively. The results of the study showed that groups E-1 & E-2 have positive effect on development of general teaching competence & attitude towards teaching while C-1 has positive effect on development of general teaching competence only.

Khan (1990) worked to determine the effectiveness of microteaching technique in terms of student's achievement. The major objectives of the study were to see the effectiveness of microteaching technique in the acquisition of certain teaching skills, viz. Skill of Introducing the Lesson, Probing Questions, Illustrating with Examples, Using Black Board in a real classroom settings. The results of the study showed that the microteaching was more effective in developing general teaching competence, improving the teaching skills & was an effective method of instruction than traditional method of teaching of English. Ortiz (1990) examined how videotaped microteaching for training student teachers affected the conduct of
an English-as-a-Second-Language lesson, noting how faithfully student teachers transferred teaching behaviours acquired via videotaped microteaching to the classroom. Three student teachers in a bilingual education program participated. Results indicate that classroom context is critical.

Metcalf and Cruickshank (1991) tried training pre-service teachers to make clearer presentations and produce greater student learning and satisfaction. Subjects received training in 17 instructional clarifying behaviours. Researchers videotaped their teaching pre- and post training. Learners rated content and satisfaction. Results indicated significant improvement in clarity and learning but little change in learner satisfaction.

Gandhi (1992) worked on microteaching approach for student teachers. The study was aimed to find whether the development of teaching skills through microteaching helped in shaping behavioural modifications of student teachers or not. It was concluded that a well-planned microteaching strategy put into practice before trainees start practice teaching goes a long way in changing the picture of teacher education program.

Cano (1992) administered the Group Embedded Figures Test and a teaching style inventory to 25 pre-service agriculture teachers. The results of the study showed (1) field-independent learners achieved higher scores in methods courses; (2) those preferring more sensitive teaching styles achieved higher microteaching scores; (3) preference for the inclusion teaching style did not influence teaching using the problem-solving approach.

Cruickshank and Metcalf (1993) recommended improving pre-service teacher assessment by providing multiple forms of on-campus laboratory experiences (e.g., microteaching, reflective teaching, simulations) that offer job-related tasks. Performance on the tasks could be assessed at multiple points and for various purposes (selecting pre-service teachers and student teachers and exiting students from professional programs). Sapare (1993) worked to find out the effect of mastery over the theory & planning skills on performance of teacher trainees. The objective of study was to analyse interaction effect between the training
strategies & nature of skills on general teaching performance & skill performance. Pre-test post-test control group design was selected. Independent variables used were standard Microteaching Cycle, Mastery over Theory & Mastery over Planning. The findings of the study were that training over mastery & planning on both the skills is effective in improving in general teaching performance & skill performance and also there was an interaction between nature of skill & training strategy.

Dubey & Buddhisagar (1996) worked on empowering teaching through training model microteaching approach. The aim of the work was how to improve the teacher's effectiveness with the help of the training model, which was discussed with the help of microteaching approach. The study concluded that microteaching training technique entirely on teaching model. The teacher trainees after undergoing this training acquired mastery in different skills i.e. Skill of Explanation, Reinforcement, Classroom Management, Use of Audio-Visual Aids and Encouraging Effective Interaction. A teacher after mastery through the training model improved his general teaching competence. Wilkinson (1996) studied collected data over three years from a project where pre-service administrators provided feedback to pre-service teachers on their microteaching while practicing their supervision skills. Results suggested that the project helped pre-service teachers shift their perceptions of teaching and facilitated the transition into teaching.

Bean (1997) described pre-service teachers' selection and use of specific vocabulary and comprehension teaching strategies for a microteaching session in a field-based practicum attached to a required content area literacy course. Data from interviews showed that pre-service teachers were clear on the socio-cultural context of their practicum settings and the influence of cooperating teachers in selecting and using particular strategies.

Kpanja (2001) conducted a study, in a Nigerian setting, to investigate whether the use of videotape recordings is an effective method of teacher education prior to full-time teaching. Two groups of students were used for study. The first group was allowed to practice the skills
through microteaching with the aid of video recording equipment. The second group practiced their own skills through microteaching but without the aid of video recording equipment. At the end of the study it was discovered that the group which used the video recording equipment had more significant progress in the mastery of teaching skills.

To cope with ever changing scenario of community of aspirants to become teachers, there should be new courses to suit to various types of emerging needs, The Tenth Five Year Plan document stated that "New courses for teacher educators and curriculum developers would be developed and tried out on a pilot basis. Innovations and pilot projects in pre-service and in-service teacher education will be supported (Planning Commission 2002, Art. 2.2.58)

Butler (2001) investigated music education majors' concept maps that focused on teacher effectiveness. He explained that the students created the concept maps after two microteaching and included the quantitative and qualitative findings from the study. He concluded that the combination of concept maps and microteaching might be beneficial. Huang (2001) conducted a study by selecting Forty-five secondary teacher education program students in a midwestern U.S. university. Participants were required to develop lesson plans by applying various teaching techniques. They taught lessons to a small group of peer students in the microteaching lab. The presentations of lessons were videotaped. Peer students were asked to write anonymous comments on feedback sheets. The videotape, peer feedback, and instructor's comments were given to participants every time after completing microteaching. Each participant presented five microteaching lessons and wrote five reflection journals. The study is an investigation of pre-service teachers' reflective practice in the context of their microteaching performance.

L'Anson et al. (2003) examined the range of strategies that can be used to promote reflection, focusing on microteaching as a vehicle for enabling students to become aware of their values, attitudes, and assumptions about learning as these are enacted within microteaching. The subsequent feedback becomes a dialogue between student, peer, teacher
fellow, and tutor that provides different refractions of this practice and contributes to the
development of pre-critical, internalised, and hypothetical thresholds. Pringle et al. (2003)
explored how pre-service elementary teachers incorporated technology into a microteaching
activity that was a component of their science education, mathematics education, and
educational technology courses. Participants displayed varied levels of technology use. Four
uses emerged: knowledge source, data organizer, information presenter, and facilitator. The
article discusses microteaching as a tool in teacher education, sharing pre-service teachers'
efforts to integrate computers and other related technologies in their science teaching.

Kupetz and Ziegenmeyer (2005) evaluated a blended learning concept for a university
teacher-training course for prospective teachers of English. The concept aimed at purposeful
learning using different methods and activities. The activities discussed include classroom
recordings and multimedia-based case stories, an electronic interview with an expert who was
an experienced grammar school teacher, and mini-practices, which implement microteaching
in a classroom setting. The mini-practice offers guided insights into analysing teaching
materials, hands-on experiences with lesson planning and the experience of acting as a teacher
in an authentic teaching context.

Fernandez and Robinson (2006) stated that Microteaching Lesson Study [MLS] is a
cooperative learning experience that could challenge the prospective teachers thinking about
teaching and support their connection of theory and practice during an initial course on
learning to teach mathematics. Findings from analysis of quantitative and qualitative data
gathered through MLS Feedback Surveys and written reflective MLS reports revealed that our
prospective teachers perceived MLS to be a worthwhile learning experience.

Bell (2007) conducted a study to learn more about the interactional structure of the task
of microteaching. The results of discourse analysis that was performed on 22 videotapes of
microteaching showed that the question of how to frame the task was a constant challenge to
the students, who must simultaneously negotiate the roles of teacher, student, classmate, and
peer/friend. Analysis of the tapes, as well as of questionnaires in which participants described their perception of the activity and explained how they approached the task, reveals that microteaching resembles "performance" or "classroom task" to a much greater extent than it does "teaching."

2.1.1 SUMMARY OF RESEARCH TRENDS: Trends obtained from various studies related to Microteaching are:

1. Microteaching is a better technique than the traditional teaching programme and would develop the student teacher's insight and make them better-qualified teachers.

2. Use of hardware (audio/video equipment) increases the effectiveness of microteaching technique. Microteaching found to be more effective in developing teaching skills if both sound and vision recording is made.

3. Teachers trained through microteaching change their teaching behaviour in the classroom significantly better than those trained through Interaction Analyses.

4. The practice of two microteaching cycles for each skill appears to be desirable for acquiring the reasonable degree of mastery over teaching skills.

5. Microteaching is more effective in developing general teaching competence, improving the teaching skills & is an effective method of instruction than traditional method. Microteaching is an effective device for providing feedback.

2.2 TEACHING COMPETENCE

Allen and Clark (1967) divided student teachers into two groups of approximately thirty each. One group received all its practice teaching experience in microteaching setting and the other group was in-school observation and teaching experience. The first group made discernible improvement in the skill practiced and were judged to display greater teaching competence.
Ward (1970) conducted a survey of microteaching courses being used in secondary teacher education programme. The general opinion was that where microteaching had been used the teaching competence of both student and staff and their attitude towards education have been improved.

Sharma, K.K. (1976) found that teaching competence of student teachers trained through microteaching was higher that of the group receiving training through conventional approach. Gupta (1977) reported that blackboard work, correcting oral mistakes, explaining difficult points, general knowledge, handwriting, knowledge of the subject, maintaining discipline, power of oral expression, revision of main points, skill in questioning and the use of material aids were found to be helpful in teaching.

Patel (1978) found that microteaching, under simulated conditions and in real classroom conditions, produced the same effect in respect of general teaching competencies. Ray (1978) concluded that teachers showed a significant change on general teaching competence due to the training in teaching skill using microteaching. Jangira et.al (1979) revealed that teachers showed a significant gain on general teaching competence due to the training in teaching skill using microteaching.

The Department of Teacher Education, NCERT, in collaboration with the State Institution of Education (1980) conducted a study which revealed that the teachers improved their skill competency as well as general teaching competence after being trained through microteaching in the skills of reinforcement, probing questions, stimulus variation, illustration with examples and increasing pupil participation through microteaching technique.

George and Anand (1980) studied the development of general teaching competency through use of microteaching. They used observation schedule rating scales for stimulus-variation and gave feedback during microteaching and inferred that there was significant difference between the mean gain scores in teaching competence of the control group and the
experimental group of student teachers and also found that microteaching proved effective in improving the teaching competence of student teachers.

Sharma (1981) inferred that (1) There was no significant difference in the competence of male & female Hindi teachers teaching at higher secondary level. (2) There was no significant difference on the language teaching competence of student–teachers of the experimental groups in the real classroom conditions. Passi and Sharma (1982) identified the teaching competencies of language teachers at secondary school level as giving assignment, loud reading, asking questions, introducing a lesson, managing the classroom, clarification, secondary loud reading, using the black-board, using reinforcement, pacing, avoiding repetition, consolidating the lesson, dealing with pupils' responses, improving pupils' behaviour, audibility, using secondary reinforcement, recognizing pupils attending behaviour, presenting in verbal mode, and shifting the sensory channel. The male and female language readers did not differ in their competency.

Pandit (1982) worked to find the achievement in theory & teaching competence of student teachers. The objective of the study was to ascertain the relevance of various theory subjects to the development of B. Ed. student teachers. A sample of 105 student teachers was selected. The results of the study showed that there was a correlation between achievement in theory subjects and content knowledge contributed significantly towards teaching skills.

Patel (1983) worked on improvement of teacher's professional competence in the use of classroom techniques. The objectives of the study were to improve the teachers competence by facilitating observation of one another's lesson, to encourage proper use of A.V. aids and C.R. teaching skills and to give teachers a feedback by new methods and techniques. The results of the study showed that the highest improvement was in the abilities for co-ordination of different teaching skills and in the habit of using A.V. aids & interest in written work of the pupils.
Singh (1985) found six factors common to the teaching behaviour of both male and female teachers: skill of questioning, blackboard writing, explanation, reinforcement, introducing a lesson and summarizing the lesson and skill of illustrating with example was found to be specific to the teaching behaviour of male teachers, Skill of using teaching aids, and skill of questioning were specific to female teachers.

Chaudhary & Vidya (1986) worked on effect of module development through content cum methodology approach on teaching competence of pupils teachers. The results of the study showed that experimental group had better teaching competence and affected positively the attitude. Joshi & Kumar (1988) presented a research report on the study of the effect of skill based training in decision making ability on the development of teaching competence. A sample of 22 student teachers equally divided into two matched groups on the basis of age, sex, intelligence scores, academic qualifications & previous achievements. The results of the study showed that training model is effective in developing teaching competence, which pointed out the necessity for having the link practice between the skill based programme. The specific skills were developed through microteaching technique & micro situations.

Dubay (1989) studied the effects of a training strategy for developing feedback-receiving competence in relation to selected variables of student teachers. For this she had made two groups - Control and Experiment. She also tried to determine whether the feedback training strategy affects the self assessed feedback-giving competency and self assessed feedback-receiving competency in terms of intelligence of student teachers. Experimental group was given the treatment of theoretical orientation of feedback, viewing the model feedback through video film and live demonstration and also practice in simulation. The results showed that experimental group performed better as compared to the control group.

Carlsen (1991) reviewed research on classroom questioning. Analysis focuses on three characteristics of questions: context, content, and responses and reactions by speakers. The review argued that research on questioning must acknowledge that the meaning of questions is
dependent on their context in discourse that the content of questions cannot be ignored, and that questions may reflect and sustain status differences in the classroom. It must be considered that classroom questions are not simply teacher behaviours but mutual constructions of teachers and students. Schunk (1991) discussed academic motivation in terms of self-efficacy, an individual’s judgments of his or her capabilities to perform given actions. After presenting an overview of self-efficacy theory, he contrasted self-efficacy with related constructs (perceived control, outcome expectations, perceived value of outcomes, attributions, and self-concept) and discussed some efficacy research relevant to academic motivation. Studies of the effects of person variables (goal setting and information processing) and situation variables (models, attributional feedback, and rewards) on self-efficacy and motivation are reviewed.

Dubey & Panda (1993) worked on developing story telling ability among nursery student teachers - effectiveness of Stimulus Variation. The major objective of the study was to compare the effectiveness of training strategy with & without the Skill of Stimulus Variation in developing story telling ability among nursery student teachers by considering personality as covariate. A sample of 21 student teachers was divided into two experimental groups consisting of 11 student teachers (E-1) & 10 student teachers (E-2). The training of story telling was given to both the groups but treatment of Stimulus Variation was given only of E-1 group. The results of the study showed that the story telling ability of E-1 group improved significantly as compared to E-2. Sharma (1993) investigated to determine the importance of teaching skills. The objectives of study were to find out the relevant teaching skills suitable for effective teaching at secondary stage and to determine the relative importance of various teaching skills. The finding of the study showed that promoting pupils participation is the most important teaching skill at the secondary level. Also the skill of questioning, explaining, assignment, introducing the lesson, stimulus variation, reinforcement, set induction are important at teaching skills at secondary level.
According to Johnston (1994) the students should be made to stop and carefully rethink their detailed experiences. There should be a lot of discussion during the mentoring sessions on what personal pedagogical activities a student should be more conscious of. One may well question critically the 'myth of experience', which expects that the more experience you have, the better teacher you automatically become. Singhal (1996) tried to develop an in-service training programme for secondary teachers and studied its effectiveness in terms of teaching competence, attitude towards teaching & students achievement. The results showed that students taught by teachers who received in-service training showed significantly higher achievement mean than students taught by teachers who has not received in-service training as in-service teachers training brought significant changes in the teachers competence.

Vanadhi & Anandhi (1996) studied some of the factors affecting teacher’s effectiveness of B.Ed. student teachers. The main objective of the study was to determine the influence of intelligence, anxiety, self-concept, attitude towards teaching and achievement motivation on teacher’s effectiveness. The result of the study showed that intelligence predominantly contributed to teacher’s effectiveness followed by achievement motivation, self-concept and anxiety. Kiran (1997) conducted a study to find the effectiveness of competence based learning system on achievement in relation to place of residence and socio economic status in govt. & private schools. The results showed that the group, which was exposed to competence based learning system scored higher mean than the students who learned through traditional learning strategy.

Baker et al. (1997) investigated the effect of a fully elaborated training model on the transfer of complex teaching strategies into the practice of first year graduates. A cohort of 30 graduates was followed through their first year of full time teaching to determine the frequency and appropriateness of their use of two complex teaching strategies, concept attainment & inductive thinking. Although only 10% of the in-service teachers transfer new learning into their active teaching repertoires without work place support for their new behaviours, students
in this cohort achieved transfer rates of 40% & 27% respectively for each of the strategies. Students attributed their success in transferring the complex teaching models to the intensive training provided to them. Moran et al. (1998) investigated the theoretical and empirical underpinnings of teacher efficacy to bring coherence of the construct and its measurement. They explored the correlates of teacher efficacy revealed using various instruments and search for patterns that suggest a better understanding of the construct.

Bajwa (1998) worked on effectiveness of a competence based teacher-training strategy in terms of acquisition of basic & general teaching competencies. The study established that basic teaching competence training strategy was better in developing cognitive based & affective based teaching competence in pupil teachers and also found it is superior than traditional performance based teaching competence.

Dunn and Shriner (1999) investigated two studies on teacher activities that may lead to the development of competence, if not expertise. In Study I, 136 teachers indicated in a questionnaire that evaluation and planning activities (informal and formal) were best parallel deliberate practice activities that Ericsson and colleagues report as accounting for expertise in other domains. In Study II, log data and interviews from eight experienced teachers indicated that these activities provide opportunities for self-improvement even though that may not have been why teachers did them. The frequent and mindful engagement in these activities, prompting cycles of teaching – evaluation – revision, may be what accounts for expertise.

Bhatacharya (2000) worked on intrinsic motivation and teaching competence at primary level with a view to establish whether or not extrinsic or intrinsic motivation enhance the teaching competence of teachers. He used BGTC scale and Teacher Attitude Scale by Ahluwalia. Using experimental design purposive sampling was done. The results showed that for elevating the essential level of teaching competence intrinsic motivation is needed. Tatar and Horenczyk (2000) examined parental expectations of their children's teachers through use of the Expectations of Teachers questionnaire. Participating parents (N=765) reported greater
expectations for help and assistance, followed by teaching competence and fairness on the part of the teacher. Mothers were found to hold higher fairness, help, and assistance expectations as compared with fathers.

Britzman (2000) stated that there is little understanding regarding how those trying to teach actually learn from their practices, their students, or their incidental anxieties made from acquiring experience. There is a need to emphasize the conception of teaching on teachers’ cognition and mental work and to study teachers’ thoughts and actions about their teaching practice, so we will be able to gain insights into teacher’s professional development. Huang (2001) carried out the investigation of pre-service teachers’ reflective practice in the context of their microteaching performance. Results showed that the content of participants’ reflections focused on eight areas of teaching practice: (1) teacher characteristics (82%), (2) delivery of instruction (78%), (3) classroom interaction (40%), (4) subject content knowledge (25%), (5) questioning techniques (23%), (6) instructional aids (15%), (7) students (9%), and (8) general education issues (4%). The conclusions of the study pointed to the need for improvement on reflection contents and reflective thinking.

Cowley (2002) in her article titled “An investigation into the competence of workplace trainers to meet the special learning needs of under-prepared learners” focuses on the competence of trainers in the South African workplace to provide training to under-prepared learners whose special learning need should be understood by the trainers. He investigated the capacity of trainers to meet under-prepared learners’ special need. She found that most trainers who are confronted by under-prepared learners are not able to provide all the special support that they require.

Bullough et al. (2002) gathered three types of data on a partnership and a single-placement model of early field experience. The authors concluded that partnership placement holds promise for providing richer, more interesting, and more educative early field experience for elementary pre-service teachers than traditional practice allows. Bridges et al., (2002)
concluded that the assessment of students helps the teacher to evaluate the students’ performance and the effectiveness of the teacher’s effort. Freidus (2002) examined the vision of student teaching in the Bank Street College for Reading and Literacy Program and the advisor’s role in this process. Data from surveys of program alumnae, student feedback forms, student-advisor conferences, and weekly conference groups indicated that advisor roles included prospector, dramaturge, coach, and negotiator.

Kishore (2003) in his article on towards competence based class room instruction behaviouristic of minimum level of learning stated that acquisition of competencies are important but freedom in the pace of learning and individual guidance are more important as self-pacing and individual guidance contribute to the self esteem & gives motivation. So the need is to train teachers in the skills of managing self-pacing and individual guidance. Wayne and Youngs (2003) stated that a large body of studies examined the relationship between student achievement gains and the characteristics of teachers. To help policymakers and researchers, they reviewed the studies systematically and synthesized their results with deliberate consideration of each study’s qualities. Determinate relationships are described for four categories of teacher characteristics: college ratings, test scores, degrees and coursework, and certification status.

Hill et al. (2005) explored whether and how teachers mathematical knowledge for teaching contributes to gains in students’ mathematics achievement. The authors used a linear mixed-model methodology in which first and third graders’ mathematical achievement gains over a year were nested within teachers, who in turn were nested within schools. They found that teachers’ mathematical knowledge was significantly related to student’s achievement gains in both first and third grades after controlling for key student- and teacher-level covariates.

Apodaca and Grad (2005) reviewed the unidimensionality versus multidimensionality of students’ ratings of teaching performance, and the relationship of this dilemma to summative and formative uses of these instruments, with special attention to the implications of their
development and application in the Spanish university system. The results suggested that the structure of the students' ratings could be interpreted as multidimensional as much as unidimensional. The reason for this apparent paradox is that some specific dimensions are more central (versus peripheral) in the construct of teaching skills.

Adams and Forsyth (2006) conducted a study to examine the influence of three contextual variables: socio-economic status, school level, and school structure on teacher perceptions of collective efficacy. Results supported the premise that contextual variables do add power to explanations of collective teacher efficacy over and above the effects of prior academic performance. Voss and Gruber (2006) carried out a research study to develop a deeper understanding of the teaching qualities of effective lecturers that students desire and to uncover the constructs that underlie these desires & expectations and reveal the underlying benefits for which students look. The results indicated that students want lecturers to be knowledgeable, enthusiastic, approachable, and friendly. This study also showed that students are mainly concerned about vocational aspects of their studies and are less interested in their subject.

Gilbert (2006) gave stress on personalizing learning: It stated that developing the school workforce must be informed by an understanding of the skills that are particularly important in personalising learning. Training courses in India need to cover this concept to improve quality of teacher preparation.

Teacher is the single-most important factor in determining student achievement. Nations need not only sufficient numbers of teachers, but also need effective teachers. "Quality education produces good learning outcomes – and the initial training and preparation of teachers contribute to this aim" (UNESCO 2006, P.49).

Schwille et al. (2007) stated that the continuum of teacher training starts with the apprentice of observation of teaching of teachers they had during their own schooling. This has a powerful effect on how future and beginning teachers think about teaching. In fact, this
influence is more powerful than the influence of formal teacher training. Training provides certain skills; but whether to utilise these skills or not depends on the professional values and the attitude of the concerned teacher.

Zientek (2007) proposed that every child has the right to a highly qualified teacher, yet as a nation we are reluctant to empirically investigate how teacher preparation programs are succeeding. Results from the present study suggested that (a) traditionally certified (TC) teachers felt better prepared than non–traditionally certified (NTC) teachers on communicating, planning, and using instructional strategies; (b) NTC teachers’ positive mentoring and prior classroom experiences in conjunction with the overall less positive mentoring experiences of TC teachers may have minimized differences; (c) novice teachers did not feel prepared on items related to multicultural curriculum or assessing student learning; and (d) prior classroom experiences, first year support, and program components were important, but instruction on teaching standards was of particular importance for NTC teachers.

D'Agostino and VanWinkle (2007) conducted Paper–pencil teacher tests of professional knowledge typically are organized around the conventional dimensions that define teaching standards, such as classroom management and assessment. They examined if such tests could be partitioned into three other dimensions (general knowledge, academic or textbook knowledge, and functional teaching knowledge), and if these dimensions (1) identified between those who did and did not receive teacher preparation, and (2) predicted teaching competence. A teacher test was given to advanced and beginning education majors, and non-majors. They found that advanced education majors and non-majors differed mostly on academic knowledge, but that functional knowledge predicted competence to the greatest extent.
2.2.1 SUMMARY OF RESEARCH TRENDS: After going through the various studies related to teaching competence following trends are summed up:

1. Microteaching technique is one of the useful techniques for improving teaching competence of teachers and their attitude towards education.

2. Blackboard work, correcting oral mistakes, explaining difficult points, general knowledge, handwriting, knowledge of the subject, maintaining discipline, power of oral expression, revision of main points, concept attainment, inductive thinking, sense of achievement, prompting cycles of teaching – evaluation – revision, fairness on the part of the teacher, motivating students, assessment of students, student feedback forms, student-teacher conferences, use of material aids and use of AV aids, were found to be helpful in teaching.

3. Training & acquisition of microteaching skills using microteaching technique significantly increases the general teaching competence. Microteaching skills of reinforcement, probing questions, stimulus variation, illustration with examples, increasing pupil participation, skill of questioning, explaining, assignment, introducing the lesson, reinforcement, managing self-pacing, individual guidance and set induction found to be useful in improving the teaching competence of teachers.

4. There was no significant difference in teaching competence of male & female teachers. But there was significant difference in the acquisition of some of the teaching skills among male & female teachers.

5. The achievement in theory subjects and content knowledge contribute significantly towards teaching skills. Intelligence predominantly contributed to teacher’s effectiveness followed by achievement motivation, self-concept and anxiety.

6. Teaching competence is dependent upon teacher characteristics like intrinsic motivation, college ratings, test scores, degrees and coursework, age, sex, academic qualification, institutional background, humour, general knowledge, academic or textbook knowledge, and functional teaching knowledge.
2.3 FEEDBACK

Emmer and Millet (1966) conducted a pilot study in which the experimental group of 27 students took part in 10 microteaching lessons with supervisors and pupil feedback. The control group however persuade the traditional instruction course. The experimental group was superior in determining the readiness, motivating pupils and evaluating pupil response. In a study conducted by Tuckman & Oliver (1968) comparison was made between pupil feedback and supervisor feedback. They found that the pupil feedback did produce a significantly greater change in teacher's behaviour and supervisor feedback alone also produced changes in teacher's behaviour.

Wood and Hedley (1968) reported that in an examination of factors relating to success in their Training Instructional Practice Sessions (TIPS), the video-recording element came last in a student ranking. However, not withstanding this evidence, it is often suggested that video tape recorder has an important part to play in feedback. Olivero (1968) reported that group discussion with videotape feedback, as compared with group discussion without it, is significantly more effective in modifying teacher behaviour.

Shively et al. (1970) examined the 'effects on teacher performance and attitudes of several manipulations of the conditions under which the microteaching supervisors provide feedback'. The basis of their critique is: (i) A videotape of the microteaching lesson, which the teacher views with the microteaching teacher (VT group); (ii) an audiotape (AT group); (iii) his experience with the live lesson (LL group). The major findings are (i) The AT treatment appears to be the strongest, resulting in the greatest amount of change as measured by student rating and also being highly valued by the microteaching teachers. (ii) The VT treatment appeared relatively weak in producing change yet was highly valued. (iii) The LL treatment appears least effective and tends to be lowly valued.

Perlberg (1970) said, "Audio recordings are limited to verbal interaction in the classroom and thus do not provide the whole picture since a supervisor's comment based solely
Wragg (1971) studied the influence of feedback on teacher performance. In his study, four groups of student teachers taught short lessons to small classes of children. They then re-taught a similar lesson approximately one hour later to comparable but different group of children. In the intervening one hour period, they received various kinds of feedback about the first lesson they had given. Analyses of the second lesson showed that the students who had both seen videotapes of their first lesson and had been given information about their interaction with the class were likely to lecture less, elicit more spontaneous talk by the children and be rated higher by them.

Gall et al., (1971) compared audio and video feedback in terms of their effect on the acquisition of teaching skill outlined in mini course on individualizing instructions in Mathematics. They concluded that the two forms of mechanical feedback are generally equally effective in providing gains in skills, such as use of diagnostic questions, number of demonstration techniques used and setting pupils practice examples to complete. McIntyre (1971) compared the relative effectiveness of three approaches of microteaching supervision. Students undergoing the same microteaching programme were allocated to one of the three treatments of (a) Individual conference with a tutor supervisor (Group A), (b) Group of three students working with their tutor (Group B), (c) Group of three students working alone. Comparison of groups ‘A’ with group ‘B’ and ‘C’ indicates that group ‘A’ showed a significantly greater mastery of skill studied, comparison in terms of the opinions and reactions revealed that most of the students consider it beneficial to have a tutor supervisor.

According to Stones and Morris (1972), “The availability of video recording enhanced the effectiveness and flexibility of microteaching.” Marker (1972) carried out a study in which micro lessons were given in five skills-set induction, stimulus variation, questioning, response of pupils and reinforcement and closure and the lessons were videotaped and feedback was given on the following day. She found that microteaching was an effective technique.
Dosajh, N.L. (1975) compared different types of feedbacks for modifying teacher behaviour through microteaching. He took 12 students of Electric Group, III semester of the Technical Teachers’ Training Institute, Chandigarh. The following three types of feedback were provided to the experimental groups after the microteaching sessions: Group ‘A’ through videotape and discussion of evaluation with supervisor; Group ‘B’ through videotape and discussion of evaluation with supervisor and fellow trainees; Group ‘C’ through videotape and discussion of evaluation with supervisor and self-evaluation. Group ‘C’ showed the maximum improvement in teaching behaviour.

Dosajh, N.B. (1975) also tried to study change of teaching self-concept through microteaching. He took 10 teacher-trainees of the Electrical Group of the Technical Teachers’ Training Institute, Chandigarh. They were asked to evaluate their teaching performance before and after two microteaching sessions with closed circuit television. Their self-evaluations are compared with their supervisors’ evaluations. In all cases there is very significant change in teaching self-concept, bringing it close to that of the average of their supervisors. A trend towards direct relationship between intellectual ability and change in teaching self-concept is suspected.

Sharma, R.C. (1976) compared the effectiveness of two types of feedback on the acquisition of questioning skill through microteaching. Two groups of B. Ed. trainees were taken for the experiment. One group was given audio as well as supervisory feedback and second group was given supervisory feedback alone. It was found that audio as well as supervisory feedback was more effective in developing skill of questioning. Sharma and Passi (1976) observed that peer feedback, oral discussion and written feedback treatments did not produce differential effect on the teaching skill of gestures. One of the objectives of the project was to compare the effectiveness of various techniques of feedback. It was found that there was no significant difference between the scores of groups getting supervisory feedback and peer feedback.
Das et al. (1976) studied the effect of peer feedback & supervisor feedback and found that the peer feedback was significant at 0.05 level as against the traditional technique group, which has no feedback, and the differences in the general teaching competence of the student teachers due to the peer feedback as against the supervisor feedback were insignificant. Passi (1976) studied the effect of instructional material and feedback on the development of teaching skills of set induction and closure. She found significant difference between the acquisition of general teaching competence by student teachers having the treatment of instructional material and skill based feedback and student teachers of control group.

Bhagia (1977), Dixit (1977), Prajapati (1977), Rama (1977), Vishesharan (1977) and Pillay (1977) conducted the parallel studies to determine the relative effectiveness of peer feedback and supervising feedback. The evaluation criterion used was scores on general teaching competence scale. They all found that the feedback given by peers and by supervisors had similar effects on development of general teaching competence. Sagdeo (1977) compared peer feedback with audio-feedback and found them equally effective in developing teaching competence through microteaching.

Visvesvaron & Soondararaja (1978) worked on a comparative study of the effects of microteaching under simulated conditions and microteaching varying sources of feedback upon general teaching competence. Five teaching skills i.e. Skill of Using Illustrations, Introduction, Explanation, Stimulus Variation and Probing Questions were selected for microteaching sessions. One group was provided feedback by the peers & other by peer & supervisor. The results of the study showed that the peer feedback alone has the same effect as peer + supervisory feedback.

Ray (1978) explored that the performance of the teachers trained through the microteaching for skill acquisition under supervisory feedback and audiotape feedback was significantly higher then that of the group under traditional practice. Kanwal (1979) studied the skill of stimulus variation and skill of reinforcement and inferred, (1) Feedback by the
supervisors brought better results than the feedback by the peer supervisors. (2) Microteaching helped in developing certain skills in the student teachers there by increasing their general teaching competence. (3) The feedback was an important source of the variance, which modified classroom behaviour and increased the teaching efficiency of the student teachers. (4) Feedback by supervisors brought better results than feedback by peer supervisors.

Das et al. (1980) found that the feedback provided by peer & college supervisor and the feedback from peer & audiotape were equally effective in the development of general teaching competence. Dholakia (1980) established that student teacher’s performance is improved by increased positive comments and decreased negative comments as the number of lessons advanced. Tareen (1980) found that feedback had a highly significant effect on the teaching competence.

Kaur (1981) established that Self-instructional audio cassettes were effective for developing different teaching skills and Immediate & self-feedback through audio cassettes was an effective way of improving the performance of student teachers in the use of different teaching skills. Rajamony (1981) conducted the study to identify the effective modes of feedback for improving teaching skills for questioning and reinforcement in technical teachers. He found that Feedback through videotape resulted in a significant improvement of teacher’s classroom behaviour.

Kloeden & McDonald (1981) conducted a study on obtaining student feedback for the improvement of an external mathematics course. It involves the continuing use of short questionnaires, which become more specific as the major difficulties encountered by the students are revealed, and does not require large resources or very much time. Moreover it appears to encourage students to think critically about the course and their involvement in it, and to provide a means for them to freely communicate their thoughts and frustrations about the course.
Das et al. (1981) worked on relative effectiveness on variations in microteaching components. The major objectives of the study were to find the relative effectiveness of different sources of feedback in the development of general teaching competence of student teachers. Five teaching skills considered for the study were: Reinforcement, Illustrating with examples, Probing Questions, Stimulus Variation & Explanation. The major findings of the study were that the peer feedback is significantly more effective than self-feedback through audio tape in the development of general teaching competency among student teachers, the feedback provided by peers + college supervisor & feedback from peers & audio tape are equally effective. The development of G.T.C. is not effected if same or different unit is taught in the re-teach session. The practice of two microteaching cycles for each skill appeared to be desirable for acquiring the reasonable degree of mastery over teaching skills.

Mishra (1983) studied that the relative impact of feedback from different sources in modifying teachers behaviour. He inferred that there were significant and positive behaviour changes in the student teachers as a result of receiving feedback from different sources. Syag (1984) inferred that peer feedback in the standard microteaching group and peer cum audio tape feedback in the modified microteaching group produced equal effect but superior to that of college supervisors feedback in the traditional student-teaching group on the development of general teaching competence and competencies in the selected teaching skills. He implied that teacher training institutions might use either peer feedback and/or peer cum audiotape feedback during microteaching treatment.

Prabhune et al. (1984) established that all the three strategies of providing feedback were equally effective. The routine strategy of giving feedback by college supervisors could be continued in the training through microteaching. Misra (1985) observed that the teaching behaviour of teachers could be changed in a positive direction if they were appraised with the sum total of their teaching in the form of feedback information by way of self-rating and class rating. Purohit (1987) found that Microteaching feedback helps significantly in the classroom
performance of language teachers. Microteaching feedback appeared to invite more pupil response than interaction analysis feedback.

Fedor (1990) conducted two studies to demonstrate the importance of subordinates' perceptions of superiors' intentions in the feedback process. Study 1 included 49 undergraduates, graduates, or professors; and Study 2 included 220 undergraduates. Results indicate that subordinates make fine distinctions concerning their perceptions of supervisors' intentions.

Brown (1991) described the Mandell Instant-Active Device, a microcomputer-based system that enables teachers to add questions and/or statement prompts to existing videotape without affecting the videotape itself. Applications, procedures, student feedback, and hardware requirements were also discussed. Walker (1991) used Classroom assessment techniques in a large survey college course in psychology to monitor student performance and collect other forms of student feedback. As a result, student-teacher role relations changed, the teacher adopted the role of learning coach and reduced lecture content, and the classroom environment was enlivened.

Dubey (1992) worked to find out the effectiveness of a training strategy in terms of developing feedback receiving competence among student teachers. The results of the study showed that students of the experimental programme used the feedback training strategy, which helped them in internalising the concept of feedback and the process of receiving feedback. Experimental group developed the necessary feedback skills as they got opportunity to compare & discriminate between positive & negative instances of feedback receiving process through video film treatment. MacDonald (1992) conducted a study to explore how novice teachers make sense of the ways that experienced teachers alter their planned teaching strategies on the fly in response to student feedback during interactive teaching. He also analysed conversations of experienced teachers with novice teachers and discussed differences in their perceptions. Ellis (1993) suggested ways to improve instructional quality which
include identification of teaching skills through consultation with expert teachers, specification of teaching standards, use of student feedback on teaching, awarding of distinguished teaching awards, assessment of teaching competence upon hiring, a faculty development course, and encouragement of self/peer evaluation.

Karl & Kopf (1994) examined the impact of performance, self-esteem, self-efficacy, and self-consciousness on individual choice to seek videotaped feedback. The results indicated that those individuals who need to improve their performance the most were least likely to seek feedback. Individuals who chose not to receive feedback were also lower in self-esteem and self-efficacy. Soini & Kronqvist (1994) stated that feedback from peers is believed to help students to take more responsibility of their own working. One of the main purposes in peer consultation is to create a situation where learning problems can be examined in a safe and confidential atmosphere. It aims to minimise competition between students and to help students to discuss about theoretical and practical problems of psychological research.

Gibbs (1995) discussed ways to reward and promote excellent teachers based on a survey of higher education promotion practices in the United Kingdom. Highlights include the need for promotion criteria; the need for standards; balancing different areas of achievement, including teaching, research, and administration; student feedback questionnaires; implementation; and monitoring. Rauch and Fillenworth (1995) noted that motivating students to apply new study strategies could be difficult but that obtaining student feedback gives teachers insight into the matter. It offers 10 ideas encompassing students' suggestions on how to motivate students.

Lasater & Brady (1995) used a video instructional package including self-assessment, behavior reversal, and self-modelling to improve self-help skills of two adolescent boys with developmental disabilities and behaviour disorders receiving home instruction. Use of the package increased task fluency, promoted generalized increases in task fluency to other tasks, and decreased co-varying task interfering behaviour. Thakare (1995) worked to find the effect
of immediate & delayed feedback on the improvement of spellings in English. The sample was divided into three groups, which received immediate feedback, delayed feedback and no feedback respectively. The results of the study showed that at the initial stage there was no significant difference in mean & standard deviation (s.d.) of all the three groups. But at final stage there was significant difference in mean & s.d. between non feedback group & other two groups.

Desai (1996) worked on interactive effect of sources of feedback & student teacher personality on student teacher competence. The major objective of the study was to determine the effect of audio-self feedback & supervisory feedback in the development of four selected teaching skills i.e. Skill of Questioning, Probing Questions, Introducing the Lesson and Explanation, among the high & low neurotic student teachers. The 2x2 factorial design with two levels of personality and two types of sources of feedback was used, with intelligence being the control variable. It has concluded from the study that high neurotic student teachers receiving audio feedback will not differ significantly in their teaching competence when compared to high neurotic student teachers receiving supervisory feedback. The same is true for low neurotic student teachers.

Wilkinson (1996) proposed that an inexperienced teacher has difficulties in recognising the essentials of teaching-learning processes during unstructured observation. On the other hand, a videotape of one's own teaching behaviour is without exception emotionally very poignant: practically no one can watch a videotape of him/herself with indifference! But watching the video alone can tempt one to fix on 'cosmetic' issues (e.g. voice control, expressions, gestures or dress) and consciously or unconsciously reject the pedagogically significant messages.

Barth et al. (1997) in their research study found that when residents critically review their own microteaching videotapes with a trained consultant, their teaching skills appear to improve. Such results are not achieved, however, if residents review the tapes alone. Tzetzis et
al. (1997) indicates that goal setting and feedback are among the most important factors for learning physical skills. However, they suggested that when feedback is separated from goals, feedback does not improve performance. Intuitively, this makes sense as typically in any kind of coaching instruction, there is some sort of goal involved because the nature of feedback has to refer to a goal even if it is implicit.

**Topping (1998)** worked on Peer Assessment between Students in Colleges and Universities and concluded that the peer assessment is of adequate reliability and validity in a wide variety of applications. Peer assessment of writing and peer assessment using marks, grades, and tests have shown positive formative effects on student's achievement and attitudes. **Goodyear (1998)** found that Larson's Social Cognitive Model of Counsellor Training (SCMCT) is located among extant training and supervision models. Three general observations about SCMCT were made. Five specific elements relating to supervisor functions discussed were: modelling; social persuasion; supervisor feedback; supervisor self-efficacy; declarative and procedural knowledge.

**Lalley (1998)** compared the effectiveness of textual feedback to video feedback during two computer-assisted biology lessons administered to secondary students. Lessons consisted of a brief text introduction followed by multiple-choice questions with text or video feedback. Findings indicated that video feedback resulted in superior learning and comprehension, and that students preferred video to text. **Boyce (1998)** compared the effectiveness of peer, teacher, and video feedback during elementary students' skill development units. Groups of students received one of the types of feedback. Pretesting and posttesting indicated that teacher-directed feedback was best for younger students and video feedback with teacher was best for older students.

**Buggey et al. (1999)** analysed the effects of Videotaped self-modelling (VSM) on the acquisition and maintenance of appropriate verbal responses to questions by children with autism. A multiple baseline design across students was used to evaluate performance. The
results indicated that the three participants almost doubled their rates of appropriate responding to questions during play situations. The findings suggest that VSM may constitute a positive behavior change intervention worthy of consideration in a treatment regimen. **Rauch and Whittaker (1999)** investigated pre-service teachers' attitudes regarding peer observation and feedback during student teaching. Students had positive perceptions of the helpfulness of peer observation and feedback in improving their teaching and the comfort level they felt working with peers.

**Johanson (1999)** described audio-feedback as a teaching method for English-as-a-Second-Language (ESL) writing classes. Using this method, writing instructors respond to students' compositions by recording their comments onto an audiocassette, then returning the paper and cassette to the students. The first section describes audio-feedback and explains why it is an effective alternative to traditional written comments (e.g., it lets instructors talk out comments instead of scribbling remarks in the margins, it allows instructors to provide students with a holistic impression of their writing, and it shifts teacher participation in the writing process from being an impersonal grader to being a writing coach). The next sections describe a typical audio-feedback session and discuss when to use audio-feedback, suggesting that it is particularly effective at the beginning of the semester. Finally, the paper offers some caveats for those who want to incorporate audio-feedback into their teaching.

**Jelfs and Whitelock (2000)** examined the role of virtual environments as conceptual learning tools in science at the United Kingdom Open University and the notion of presence, or reality. Interviews with competent computer users about their feelings of presence when using virtual environments indicate that audio feedback and ease of navigation are important. **Johnson (2000)** outlined the difficulties of conducting action research and recommends student perceptual surveys to teachers who want to do action research. Points out the importance of students' perceptions of the learning environment and student feedback for professional development.
Falchikov and Goldfinch (2000) in their research study subjected Forty-eight quantitative peer assessment studies comparing peer and teacher marks to meta-analysis. Peer assessments were found to resemble more closely teacher assessments when global judgements based on well understood criteria are used rather than when marking involves assessing several individual dimensions. Similarly, peer assessments better resemble faculty assessments when academic products and processes, rather than professional practice, are being rated. Studies with high design quality appear to be associated with more valid peer assessments than those, which have poor experimental design. Hypotheses concerning the greater validity of peer assessments in advanced rather than beginner courses and in science and engineering rather than in other discipline areas were not supported. In addition, multiple ratings were not found to be better than ratings by singletons. The study pointed to differences between self and peer assessments.

Motwani & Sampath (2000) in their article on feedback mechanism for effective instructional process implicit that for the achievement of the cherished goal of good & effective teaching system the prerequisite is the effective mechanism of feedback as effective feedback mechanism aims to document an efficient & practical methods & tools for quality learning. This is important for the up-gradation of educational system. For providing effective feedback the important tools are questionnaire, student management teams & computer technology.

Kamra (2001) worked on impact of feedback on the learning of scientific concepts at different levels of intelligence. The objective of the study is to see the difference in the learning of scientific concepts on the basis of two levels of intelligence and feedback and no feedback. The results of the study showed significant differences in low & high intelligence groups of student. It was found that mean score of students under high intelligence was higher as compared to mean score of students under low intelligence group. Also in case of feedback
f-ratio was significant at .01 level, which showed that feedback group scored higher as compared to no feedback group.

**Duppenthaler (2002)** investigated the effect of three different types of teacher feedback on students' journal entries, and possible positive transfer effects on their in-class compositions. The three types of feedback were (a) meaning-focused feedback, (b) positive comments, and (c) error-focused feedback. It has been found that positive comments, meaning-focused feedback might have been expected to be more effective than error-focused feedback.

**Joshi (2002)** in her article on feedback from students: An exercise worth undertaking. She is of the point of view that there are two dimensions of student feedback. One is quantitative dimension that can ascertain through various types of questionnaires filled by students, second one is qualitative dimension that ascertained through the interaction with the students. Considering the both there have been useful tips for improvement in teachers behaviour.

**Falconer and Lignugaris (2002)** described the benefits and limitations of using two-way audio/video conferencing technology in a pre-service teacher-training program located in a remote area. Some of the perceived benefits include: increased contact with on-campus personnel; opportunities for face-to-face interactions; and the chance to provide immediate feedback to field-based students. Limitations include: problems with the microphones; concerns about conferencing via modem and overcoming the initial fear of being on camera.

**Embregts (2002)** conducted a study to evaluate effects of a multifaceted training procedure on the inappropriate and appropriate social behaviour of five adolescents with mild intellectual disability and on staff responses. The training included video feedback and self-management procedures and staff training with video and graphic feedback. Results indicated increases in appropriate behaviour.

**Ziv et al. (2003)** found that Video Feedback is an important component of Simulation Based Medical Education (SBME). Video Feedback has employed to strengthen the impact of
learning opportunities and to provide strong incentives to modify the behaviour. Bullough et al. (2003) compared two models of student teaching (traditional versus peer teaching in which two student teachers worked with one cooperating teacher). Case study data indicated peer teaching had a positive impact on children and offered such advantages to student teachers as increased support, ongoing conversation about teaching, and experience in collaborating to students.

Paul et al. (2003) carried out the study to explore the feasibility & effectiveness of Video Feedback by selecting medical students in the undergraduate paediatric medicine. Medical students believe that video feedback highlights areas for their professional development not identified by traditional teaching. Their initial anxiety decreases during feedback. The study concluded that video feedback is effective at delivering the set objectives. Larson et al. (2003) conducted a single-subject study that presents the development of an observational rating scale of supervision feedback. Feedback statements across 31 hours of supervision were scored on a 4-point scale for 4 behaviors: positivity, negativity, constructiveness, and specificity. Adequate interrater reliability and initial estimates of construct validity are provided.

Wert and Neisworth (2003) found that Video self-modelling (VSM) is a promising intervention to teach new skills and improve the use of existing skills in young children with autism. VSM includes observation and imitation of one's self on videotape that records specific desirable child behaviors. Embregts (2003) evaluated effects of a training package to improve behaviours of residents with mental retardation and staff responses. The training procedure included video feedback and self-management procedures (for residents) and video and graphic feedback (for staff). Results showed improved behaviours for residents with both internalising and externalising behaviour problems as well as improved performance by direct-care staff.
Bharambe (2003) studied the impact of feedback on teaching performance of student teachers. The results revealed that to improve the quality of teaching of student teachers, the needful feedback must be essential to them during their teaching. Dubey (2003) in her article on feedback in interpersonal communication and teaching has given a number of tips for giving & receiving effective feedback. Some of the tips for providing effective feedback are: immediate feedback, appropriateness, objectivity, and socio emotional climate. Some of the tips for receiving effective feedback are: sensitivity, supportiveness, openmindedness & specificity.

Srivastava (2004) in his article on giving effective feedback in practice teaching feedback, stressed on following points for an effective feedback: have clear intention, there should exist a bridge of trust between the giver & the receiver, enough time should be devoted for feedback, immediate feedback, be descriptive rather than evaluative, giving specific feedback, give positive feedback first, concentrate on behaviours that can be changed, seek or offer alternatives, politeness on the part of giver, objectivity & clarity in feedback and check understanding.

Natarajan and Natesan (2004) worked to find the effect of competence based teaching of environmental science through video on students attainment at primary level on 86 students studying in V class of government aided school in Pudukkotti. The study clearly indicated that the video approached programmes were superior over the conventional method.

Ramalingam (2004) tried to find out the effectiveness of video recorded teaching skills development programmes in higher education. The objectives of the study are to explore the effectiveness of video recorded training skills in the development of skills of the teacher & to enable the teacher participants to gain confidence in skill based teaching and mastering a number of skills in teaching. Seven teaching skills have been practised with the help of micro lessons. The results of the study showed the teaching skills developed based on the video recording were beneficial.
Krishnakumar (2004) studied the effectiveness of teaching through video. The objective of the study was to compare the effectiveness of conventional methods of teaching science with video teaching alone & video teaching with the help of teachers. The sample consists of 327 students of standard IX. The students were divided into three groups for experimentation. The results of the study depicted that means of post-test scores of conventional groups was 20.0 & that of video group was 23.5 and also it was 26.1 in case of video with teachers support.

Dauphin et al. (2004) evaluated an intervention package for teaching generative sociodramatic play activities to a young boy with an autism spectrum disorder. The results recommend video-enhanced activity schedules to teach sociodramatic play and the use of matrix training to program for generative learning outcomes.

Richardson (2005) reviewed the research evidence concerning the use of formal instruments to measure students' evaluations of their teachers, students' satisfaction with their programmes and students' perceptions of the quality of their programmes. These questionnaires can provide important evidence for assessing the quality of teaching, for supporting attempts to improve the quality of teaching and for informing prospective students about the quality of course units and programmes. The paper concluded by discussing several issues affecting the practical utility of the instruments that can be used to obtain student feedback. Many students and teachers believe that student feedback is useful and informative, but for a number of reasons many teachers and institutions do not take student feedback seriously.

London et al. (2005) presented a multilevel model of group learning that focuses on antecedents and consequences of interpersonal congruence, transactive memory, and feedback processes. The model holds those members' self-verification motives and situational conditions (e.g., member diversity and task demands) give rise to identity negotiation behaviors (i.e., self-disclosure and feedback sharing). The effects of identity negotiation on interpersonal congruence, the transactive memory system, and ongoing group processes are influenced by
team process interventions such as team-level feedback and group facilitation. Moore and Kuol (2005) investigated university teachers' perceptions of and reaction to students' structured feedback on various aspects of their teaching. Using semi-structured qualitative data gathered from a group of lecturers who voluntarily participated in a formative student evaluation process at the University of Limerick, the researchers analyse the types of reactions and perceptions that this data reveals. Finally, the implications for the development or enhancement of student feedback systems are outlined and discussed.

Mechling (2005) summarised the results of a review of the empirical literature (1999-2003) focusing on the use of instructor-created video recording incorporating personalized video to teach individuals with disabilities. Twenty-four investigations were identified which provided information on several effective procedures. Six areas of research on instruction through video technology were defined and analysed through the identified studies: (a) video feedback, (b) video modelling, (c) video self-modelling, (d) subjective point of view, (e) interactive video instruction, and (f) computer-based video instruction. Douglas and Douglas (2006) compared student feedback questionnaires, peer review and the potential use of mystery students as a means of evaluating the quality of teaching and learning and providing a vehicle for continuous improvement. The findings showed that staff have very little faith in student feedback questionnaires, whether module or institutional, participate (sometimes reluctantly) in the school's peer review scheme and are divided on the potential use of mystery students.

Henning et al. (2006) have carried out study on peer-assisted learning (PAL) within athletic training education in order to provide evidence for its current use or as a pedagogic tool. The study revealed that Entry-level students are utilizing their peers as resources for practicing clinical skills and report benefiting from the collaboration. Yeany & Padilla (2006) carried out a study, which was a synthesis of practice and research related to the use of behavior analysis to train science teachers. An idealized model (derived from practice) for training science teachers was presented first and subsequently all available studies on the topic
was classified by the type of treatment used to influence the teaching behaviors. The results were meta-analyzed. The effectiveness of training procedures fell into the following order, from lowest to highest: (1) study of an analysis system and self analysis; (2) observing models; (3) analyzing models; and, (4) practice and analysis with feedback.

Liu and Carless (2006) focused on peer feedback in relation to assessment processes. The findings indicate that a significant number of academics and students resist peer assessment using grades and that the majority report that students never or rarely grade each other in assessment activities. Rubin (2006) suggested developmental peer feedback as a method for providing students with individual feedback critical to the learning process. He pointed out that faculty members were reluctant to employ peer feedback citing fear of student responses, student feedback capabilities, unfamiliarity with the process, and time constraints in and outside of class.

Hoban and Hastings (2006) described a 10-year collaboration between a teacher educator and a high-school science teacher as they investigated different ways to gather student feedback to enhance teacher reflection. Four different procedures were developed during this time: (i) interviews by a teacher educator with students; (ii) learning logs written by students; (iii) observation schedules completed by students; and (iv) a survey completed by students and teachers. Of the four procedures, the most meaningful for teacher reflection was the student interviews because they were the most personal. Cotnoir-Bichelman et al. (2006) evaluated the effects of an intervention designed to increase the variety of positions experienced by infants in a child-care setting. Six student teachers were trained, using a multi-component intervention, to reposition infants according to a chart. The intervention was successful in increasing the mean percentage of correct position changes made by all 6 student teachers, and performance gains by 3 student teachers persisted when supervisor feedback was briefly removed.
De Poorter et al. (2007) stated that Video feedback offers great potential for use in teaching but the relative complexity of the normal set-up of a video camera, a special tripod and a monitor had limited its use in teaching. The authors have developed a computer-web cam set-up, which simplifies this. Anyone with an ordinary computer and web cam can learn to control the video feedback parameters in less than one hour. Besides the normal video feedback images, a simplified method to generate video feedback fractals is presented. Buggey (2007) stated that Video self-modelling (VSM) is a relatively new technique for modifying and training behaviours and has accumulated a relatively impressive track record in the research literature. Using only positive examples, VSM gives persons the opportunity to view themselves performing a task just beyond their present functioning level via creative editing of videos using VCRs or video software.

Anseel and Lievens (2007) conducted a study to examine how feedback interest, after career assessment can be influenced by changing individuals’ beliefs about the importance and modifiability of the various performance dimensions. Results showed that participants in the experimental condition were more interested in feedback about important dimensions as opposed to unimportant dimensions and were more interested in feedback about non-modifiable dimensions as opposed to modifiable dimensions.

Whitaker et al. (2007) conducted a study by involving 170 subordinate-supervisor dyads, develops a model that demonstrates that subordinates who perceive a supportive feedback environment display increased feedback seeking, higher role clarity, and higher performance ratings. Furthermore, the results showed that effort costs moderated the relationship between the coworker feedback environment and feedback seeking from coworkers. Hendry et al. (2007) stated that Teachers’ approaches to teaching might influence the way they interpret and respond to student evaluations. In this article they explore the relationship between teachers’ approaches to teaching and responses to qualitative student feedback in a problem-based medical program. Results were that most teachers report making
changes to their teaching in response to students' suggestions at least sometimes. The types of change(s) teachers make are consistent with their approach. Teachers strong on a conceptual-change student-focussed (CCSF) approach were more responsive to feedback and positive about strategies for improving their teaching.

2.3.1 SUMMARY OF RESEARCH TRENDS: The trends visualised from the various studies linked to Feedback are summarised below:

1. The feedback is an important source of the variance, which modifies classroom behaviour and increases the teaching efficiency of the student teachers.

2. Student Feedback, Peer Feedback, Supervisor Feedback, Audio-self Feedback, Audio+Supervisor Feedback, Video-self Feedback and Video+Supervisor Feedback are found to be superior alternative to the development of teaching skills by traditional methods.

3. Only one research study concludes that there was no improvement in the teaching competence of student teachers when trained by Audio+Supervisor Feedback and Video-self Feedback in comparison to traditional method of without providing any feedback. One research study stated that there is negative effect of Video-self Feedback.

4. Ten research studies support that there is not any significant difference in the improvement in teaching competence of student teachers when trained by Peer Feedback & Supervisor Feedback. Insignificant difference in the improvement in teaching competence when comparison of student teachers trained by Audio+Supervisor Feedback & Video+Supervisor Feedback; Peer Feedback & Audio+Supervisor Feedback; Peer Feedback & Audio-self Feedback and Audio-self Feedback & Supervisor Feedback is made. One research study supports each of the above four cases.

5. Student Feedback, Peer Feedback & Audio+Supervisor Feedback is superior to Supervisor Feedback, Supervisor Feedback is superior to Peer Feedback, and Video+Supervisor
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Feedback is superior than Video-self Feedback is supported by only one research study for each.

6. Feedback has a highly significant effect on the teaching competence. Video tape recorder does play an important part in feedback.

7. Some of tips for effective feedback are: immediate feedback, appropriateness, objectivity, socio emotional climate, sensitivity, supportiveness, openmindedness & specificity, have clear intention, there should exist a bridge of trust between the giver & the receiver, enough time should be devoted for feedback, immediate feedback, be descriptive rather than evaluative, giving specific feedback, give positive feedback first, concentrate on behaviours that can be changed, seek or offer alternatives, politeness on the part of giver, objectivity & clarity in feedback, and check understanding, more positive comments and less negative comments.

8. Microteaching feedback appeared to invite more pupil response than interaction analysis feedback. When feedback is separated from goals, feedback does not improve performance.

9. It is found that positive comments, meaning-focused feedback expected to be more effective than error-focused feedback.

On scrutinising the various studies related to different aspects of present research i.e. microteaching, teaching competence & feedback, it becomes clear that Feedback is an important tool for developing teaching skills & improving teaching competence of student teachers. Different types of feedback used by the researchers in improving the teaching competence are Student Feedback, Peer Feedback, Supervisor Feedback, Audio-self Feedback, Audio+Supervisor Feedback, Video-self Feedback and Video+Supervisor Feedback. Microteaching is one of the important techniques for using feedback effectively to develop teaching skills and teaching competence. In light of above literature survey the investigator plans to test following hypotheses to fulfil the objectives of the present study: 

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1. There is no impact of the knowledge of skills of teaching on general teaching competence of students-teachers.

2. There is no effect of knowledge of components of skills of teaching on general teaching competence of students-teachers.

3. There is no effect of efficiency of using the different skills on general teaching competence.

4. There is no effect of different modes of feedback on general teaching competence of student teachers.

5. There is no relationship between cognitive-based competence and performance-based competence of students-teachers.

The effect of different types of feedback on the teaching competence is ascertained by using microteaching as a feedback device. Thus before discussing the method & procedure in Chapter 4 for the present study it is important to plan out the microteaching setting to carry out this research study in a meaningful manner. Chapter 3 elaborates the microteaching setting & organisation for the present research study.