CHAPTER - II

REVIEW OF THE RELATED LITERATURE

Explosion of knowledge in our time is an accepted fact. The speed or the rate of further growth of knowledge is also going higher. Man is the only animal that does not have to begin a fresh attempt in every investigation, but can take advantage of knowledge which has been accumulated through the centuries. Man’s constant adding to the vast store of knowledge makes possible progress in all areas of human endeavor. Thus survey of literature is a crucial aspect in planning a study. In a simple statement, review of related literature means, to locate, read and to evaluate the past as well as current literature of researches concerned with planned investigation.

The review of literature is an extracting task, calling for a deep insight and clear perspective of the overall fields. It is a crucial step, which invariably minimizes the risk of dead ends, rejected topics and rejected approaches already discarded by previous investigation and more important erroneous findings based on faulty research design.

Sukhiaet et. al. (1987) have aptly remarked, without a critical study of related literature, the investigator will be grouping in the dark and perhaps uselessly, repeat the work already done. Therefore, to conserve time, energy and resources, it is necessary to undertake a detailed and penetrating study of available related literature. In the fields of education as in other fields too, the researcher needs to acquire comprehensive information about what has been done in the particular area from which he intends to take up a problem for research. It also suggested methods of research appropriate to the problem and to locate comparative data useful for interpretation of results.

Wierasma (1986) rightly says that the review of related literature provides the background and context for researches problem. It establishes the needs for the research.
Mouley writes that the review of literature promotes a greater understanding of the problem and its crucial aspect and it ensure the avoidance of unnecessary duplication of work.

Thus, it is worth for an investigation to have comprehensive survey of what has already been done on the problem and its related aspects. In fact, this comprehensive survey on what has already been on the problem in concern is technically called review of related literature.

2.1 REVIEW RELATED TO TEACHING COMPETENCE

Chatterjee and Singh (1965) studied prediction of teaching competency as a function of sharing a common frame of reference. The Objectives of the study were to find out whether or not sharing of experience of having observed the same performance by instructors and sharing of the role in the discussion following each lesson presentation resulted in the emergence of a common reference. The findings of the study that the range of scaled teaching competency score given by the staff judge increased in the post presentation assessment as compared to the pre-presentation prediction, while the post-presentation scaled scores of teaching competency given by the instructors themselves were found to have low range compared to the two score distributions obtained from the staff judges. The coefficient of consistency of all the five judges showed an increase from the pre-presentation to the post-presentation. The conformity of each judge, in general increased in the post-presentation judgment and those had the highest conformity correlation in the pre-presentation had a slightly lower conformity correlation in the post-presentation evaluation. The ten correlations among judgments of pre-presentation evaluations when compared by the ten correlations for the post-presentation evaluations showed that there had been increase in eight cases. The coefficient of correlation between the judgments given by the judges and instructors for the post-presentation evaluations was 0.921. The coefficient of correlation between pooled pre-presentation judgments and pooled post-presentation judgments was 0.527 and the same between pooled pre-presentation judgments given by the instructor was 0.485.
Lulla (1974) investigated the effects of teachers’ classroom behavior on pupils’ achievement. The objective of the investigation was to find out the effects of teachers’ classroom influence upon the pupils achievement. The Findings were that the pupils who were taught by the teachers trained in using indirect behavior scored higher, as compared to their counterparts studying under the teacher who were not provided any training. The indirect teacher behavior may raise the interaction potential of classroom climate resulting in the free communication and open interaction between the teacher and the group of pupils. It was found that such an atmosphere not only stimulated the learner in learning but also provided a congenial climate to the teacher for conducting his teaching. The above study is similar to present study as it had a special focus on classroom behavior of teacher. The direct and indirect influence of teacher had been studied.

The GTC Scale has been used in the experimental studies conducted by Joshi (1975). Lalita (1975) and Passi (1975) for measuring general teaching competence. During the workshop organized by the NCERT in collaboration with the CASE, the participant teacher educators from various parts of India have planned out studies in the area of microteaching. Such studies would be conducted in the respective teacher training institutions. They would be using the GTC Scale for measuring general teaching competence.

Gupta (1977) conducted a study on Personality characteristics, adjustment level, academic achievement and professional attitude of successful teacher. The objectives were to locate successful and less successful teachers to find out personality traits (Catell’s factors) of successful teachers and differentiating them from less successful teachers, to compare the academic achievement of successful teachers towards teaching, to find out the home health, social, emotional, professional and total adjustment differences between the successful and less successful teachers. The main findings were it was found that success in teaching was significantly related to Personality factors A, B, C, F, G, H, I, L, N, O, R and Q4. Adjustment in various field like home, health, social, emotional and total
adjustment and professional attitude. But it had no significant relationship with academic achievement. There was difference in personality characteristics, adjustment and attitude towards teaching of successful and less successful teachers. The personality characteristics, adjustment home, health, social, emotional, professional and total adjustment, attitude towards teaching and sex were concluded to be the determinants of success in teaching. The above study attempted to differentiate successful and less successful teachers and professional attitudes of teachers and it was also the personality factors of teachers, thus it differs from present study.

Pavanasam (1977) conducted a study on Teacher behavior and classroom dynamics for following objectives to change the teacher verbal behaviour through proper training programme, to study the effects of sustained changed behaviour and their effects on student performance, to study the effects of changed teachers behaviour such as achievement motivation, value orientation, dependency, classroom trust, initiative, adjustment and academic achievement as related to pupils. The main findings were experimental group teachers talked less, were more responsive to pupils, encouraged more pupil participation and had more pupil initiative than the control group. The interaction patterns acquired during training were sustained for more than twenty weeks after the training was completed. The students who were taught by the teachers trainee in using indirect behaviour scored high in all tests as compared with their counterparts working under teachers not given any training in this technique (using indirect behaviour). The above study is similar to present study as it aimed at finding out effects of classroom behaviour of teachers.

George and Joseph (1977) studied on effect of microteaching on general teaching competence and teacher attitude of the B.Ed. trainees and the following objectives were to discover if there was any significant change in the general teaching competence (GTC) of the B.Ed. Trainees as a result of exposure to the technique of microteaching, to discover if there was any significant change in the
attitude of the B.Ed. trainees as a result of adoption of microteaching. The Findings were Intensive training and persistent practice in the five instructional skills influenced in varying degrees of the sensitivity of the B.Ed. trainees to assimilate partly other related pre-instructional, instructional and post-instructional skills and to integrate them in their repertoire of teaching behaviour in the teaching situation. Skills were not independent but inter-dependent systematic practice and mastery of some important skills improved the sensitivity of the trainees and in due course enable them to acquire more skills and integrate them in the repertoire of the teaching skills. There was no significant difference in the teacher attitude scores of the B.Ed. trainees before and after exposure to the technique of microteaching. The students’ reactions to the microteaching approach were positive and favourable generally. In the above research, teacher competency and teacher attitude were studied. It tried to find out the effect of microteaching on trainees in acquiring teaching skills and change in the attitude towards teaching.

Kanwal (1979) conducted a study on the impact of feedback on modifying teacher behaviour: microteaching approach. The main objectives of the study were to develop the skills of probing questioning, stimulus variation, reinforcement, explaining and illustrating with examples in the students teachers through micro lesson, to examine the effect of the skills of using probing questions, stimulus variation, reinforcement, explaining and illustrating with example, on general teacher competence. The Findings of the study were more than half (57.13 percent) of the student teachers were highly academically motivated and the intellectual level of 34 percent of the total number of students was above average of 33 percent average and of 22 percent below average. In the skills of probing questioning, stimulus variation, reinforcement, explaining and illustrating with examples the student teacher maintained progress both component wise and as a whole, in all the four experimental groups. The relationship between the initial stage and after the theoretical orientation stage was not significant in the case of all the skills except the skills of reinforcement but the relationship between the final stage and the initial stage become significant both at 0.05 and 0.01 level with the exception of
the skill of reinforcement. The feedback was important source of variance, which modified classroom behaviour and increased the teaching efficiency of student teachers. The feedback by the supervisors brought better results than the feedback by the peer supervisors. Microteaching helped in developing certain skills in the student teachers thereby increasing their general teaching competence.

George and Anand (1980) studied on effect of microteaching on teaching self-concept and teaching competence of student teachers. The Objectives of the study were to study the effect of microteaching on teaching self-concept of student teachers in a control group and experimental group separately, to study the effect of microteaching as well as integration of skills on the teaching competence of student teachers. Microteaching was treated as an independent variable, and teaching self-concept was treated as independent variable and teaching self-concept and teaching competence of student teachers were treated as dependent variables. The Findings of the study were there was significant difference between the pretest and the posttest mean teaching self-concept scores of the control group of student teachers. There was significant difference between the pretest and the posttest mean teaching self-concept scores of the experimental group of student teachers. There was a significant difference between the mean gain scores in teaching competence of the control group and the experimental group of student teachers. Microteaching facilitated enhancement of the teaching self-concept of student teachers. Microteaching proved effective in improving the teaching competence of student teachers. The microteaching treatment followed by the summated strategy of integration of teaching skills was superior to the microteaching treatment based on independent teaching skills in improving the teaching competence of student teachers. The above research tried to find out the effect of microteaching on teaching competency of trainees.

Mathew (1980) conducted study on factorial structure of teaching competency among secondary school teachers. The objectives of the study were that fourteen factors were identified. They were interpreted as general teaching
competency, competency of the teachers concern for students, competency of using audio-visual aids, competency of professional perception, competency of giving assignment, competency of illustrating with examples, competency of pacing while introduction, logical exposition, classroom management, use of questions, initiating pupil participation, use of blackboard, recognizing attending behaviour and competency of achieving closure, the opinions expressed by the students gave nineteen teaching behaviours liked by students. They were creating interest and curiosity, difficult questions, clear explanation, keeping students attentive, pace of teaching, experiments and interesting examples etc. the competencies identified through factor analysis related very closely with those expected of the teachers by the students. The above research tried to identify the desirable competency of teachers who teach physics subject. It also tried to find out teaching behaviours liked by the students and identified competencies through factors analysis.

**Passi and Sharma (1982)** conducted a study on teaching competency of secondary school teachers. The objectives of the study were to study the relationship between the teachers demographic variables (sex and age) and the teaching competency at the secondary level, to study the relationship between other presage variables (teachers’ attitude towards teaching, interest in teaching, self-perception for his teaching behaviours and intelligence) and the teaching competency at the secondary level, to study the relationship between the teaching competency of secondary language teachers and product variables in terms of academic achievement and pupils liking of the teaching behaviour of their teachers, to develop instructional materials for one of the identified teaching competency required for the teaching of Hindi/English at the secondary level and to study its effects on the development of teaching competency. The findings of the study were that the competencies, which were identified, shared a total variance of 76.80 per cent. The competencies were giving assignment loud reading, asking questions, introducing a lesson, managing the class room, clarification, secondary loud reading, using the blackboard using reinforcement, pacing avoiding repetition,
consolidating the lesson, dealing with pupils responses, improving pupils behaviour, audibility, using secondary reinforcement, recognizing pupils attending behaviour, presenting verbal mode, and shifting sensory channel. The male and female language teachers did not differ in their competency. There was a positive significant correlation between the age of the language teachers teaching at the secondary level and their teaching competency. There was no significant relationship of the attitudes of language teachers teaching Hindi/English at the secondary level towards teaching interest and intelligence with teaching competency respectively. There was a significant negative correlation between the self-perception of the language teacher teaching at the secondary level and teaching competency. There was a significant positive relationship between the teachers teaching competency the liking of their pupils of their teaching behaviour and academic achievement of the pupils of grade in Hindi. The training of the student teachers through instructional material in microteaching setting improved the cognitive competency, emotional competency and behavior competency of loud reading and the competency of loud reading as a whole among the student-teacher. After the training by instructional materials in stimulated condition, the competency in loud reading among the students-teachers of experimental group improved significantly more in real classroom condition than among the student-teacher of the control group. There was no significant difference in the teaching competency of the student teachers of experimental and control groups in the classroom condition. The above study is similar to present study as it has studied the teaching competency of secondary school teachers as well as it studied teachers attitude towards teaching, interest in teaching and intelligence. But it has also an objective to develop instructional material for one of the identified competencies required for teaching Hindi/English and studied its effect on the development of teaching competency. In this respect it is different from present study.

**Chathley (1984)** in an experimental study of the teaching competency at macro level as a function of training in micro-skills among the prospective secondary school teachers relation to the integration of skills and subject area. The
findings of the study revealed that there was a significant improvement in the
general teaching competence of trainees as a result of training in micro skills.
There was a further improvement in general teaching competence of trainees as a
result of training in integrated skills. Among the trainees in physical sciences, the
tetra clustered and hexa clustered strategies were more effective, while among
trainees in language the three strategies were equally effective in improving their
general teaching competence. Among the social sciences trainees the tetra
clustered strategy was more effective than the biclustered and hexa clustered
strategies in improving general teaching competence. There was no significant
difference in the gain in general teaching competence between male and female
trainees as a result of training in integrated skills. There was a highly significant
improvement in general teaching competence as a result of training both in micro
skills and integrated skills. The trainee who were trained through biclustered
strategy of integration did not show any difference in overall gain in general
training competence across subject areas, while in the case of those who were
trained through the tetra clustered and hexa clustered strategies of integration the
trainees in physical sciences gained more in overall general teaching competence
than their counter parts in social sciences and language, further the female trainees
who took up language scored more than their male counterparts in a overall gain in
general teaching competence. There was no significant difference in the qualitative
scores across subject area for the skills of fluency, questioning probing,
questioning, stimulus variation, recognizing attending behaviour, silence and non-
verbal cues and achieving closure. For skill of explaining the trainees in physical
science gained quantitatively more than the trainees in social science and language.
For skills of introducing a lesson, reinforcement and blackboard use, the trainees in
physical sciences gained more than trainees in social science and language. The
above study is similar to present study as it has studied teaching competency. But it
is different from present study as it was experimental study carried out at macro
level as a function of training in micro skills.
Singh (1885) in a factor analysis study of teaching behavior. The findings are teaching behaviour of secondary school teachers was found to have eight skills, viz. skill of questioning, of explaining, of blackboard writing, of reinforcement of introducing a lesson, of summarizing the lesson, of teaching aids, and skills of illustrating with examples. Teaching behaviour of science teacher was found to have ten factors of social science teacher eight factors, and of language teacher’s seven factors. The seven factors common to all three subjects were skill of introducing a lesson, of blackboard writing, of questioning of reinforcement, of summarizing a lesson, of using teaching aids and of explanation. Three factors skill of illustration with examples, skill of attending to pupils difficulties and skill of maintaining classroom discipline were found specific to science teaching. Skill of responding to pupil’s questions was specific to social science teaching while no skill was found specific to language teaching. Teaching behaviour of male teachers was compared of seven factors while that of female teachers of eight factors. The six factors common to teaching behavior of male and female teachers were skill of questioning, of blackboard writing, of explanation, of reinforcement, of introducing a lesson and of summarizing a lesson. The skill of illustration with examples was found to be specific to the teaching behaviour of male teachers. Skill of using teaching aids and of questioning to develop critical awareness were specific to female teachers. Teaching behaviour of urban and rural school teachers had eight factors. The common factors were the skill of explanation, of questioning, of blackboard writing, of introducing a lesson, of reinforcement, and of summarizing a lesson. The skill of using teaching aids and the skill of asking with examples were specific to the teaching behaviour of urban school teachers while the skill of convergent questioning and the skill of illustrating with examples to the rural school teachers.

Singh (1987) studied the effect of remedial instructional microteaching course on the instructional competence of in-service primary school science teachers. The RIM course was effective in improving the skill of probing questioning and demonstration, but not effective in improving the skill of
explaining and illustrating with example. RIM course was effective in improving the skill of probing questioning of both more and less experienced teachers. Teachers sustained the science instructional competence strengthened by the RIM course even six weeks after the training. The above study is similar to present study as it has studied the instructional competence of teachers. But it has studied the effect of remedial instructional microteaching course on the instructional competence of teachers in this way it is different from present study.

**Javlekar (1988)** evaluated the effectiveness of exhibits of the Nehru Science Centre, Bombay within the context of scientific concepts to be developed among class 8th student. He found that participatory museum displays convey scientific concepts more effectively than other methods, regardless of socio-economic status.

**Sivadassan (1988)** showed the relevance of science club activities for significant gains in composite performance when linked with the classroom teaching.

**Thamilmani (1990)** studied the teacher competency and teacher personality in relation to achievement of high school students in science. Teaching competencies of science teachers were related to the academic achievement of high school students. Teacher personality was not related to student’s academic achievement in science. Both male and female teachers were similar in their teaching competencies and personality human relations and interpersonal skills. The above study attempted to assess the relationship between teacher competency and achievement of students; in this respect it is similar to present study in hand. But it also assessed the relationship between teacher personality and achievement of student; in this respect it is different from present study in hand.

**Bhonsle (1992)** evaluated the new curriculum of teacher education and concluded that majority of principals, teacher-educators, student-teachers and teachers were of the view that the new curriculum was suitable for developing teaching competence among the student-teachers.
Chardenas (2000) reported that teachers working in an open school climate were better in teaching competency and teacher effectiveness than those employed in school with autonomous, familiar controlled and class climate.

Dolmans & Vleuten (2004) conducted a study on development and validation of a framework for teaching competencies in higher education. The aim of the study was to develop and validate a framework of teaching competencies in student-centered higher education. The finding of study concluded that the integration of personal characteristics, knowledge, skills and attitudes was problematic. However, the results indicate that in most domains, the items that are more integrated and broadly defined are rated as more important than the more detailed items, which make them useful as a starting point for teacher evaluation.

Kumaraswamy and Sudha (2004) conducted a study on competency of teachers of differential organizational climates. The objective of the study was to examine the effect of the organizational climate on the competency of primary and high school teachers. They found that teachers working in open, controlled closed climates were found to be more competent in the interactive dimension than the teacher of paternal climate teachers of open climate were found to be better in this competency than the teachers in ‘closed’ climate and also of the autonomous climate.

Veer (2004) emphasized that teacher should possess teaching skills and competencies so that his task may be easy, useful and effective.

Kukreti et. al. (2005) conducted a study on value and teacher competence: a co-relational study. The objective of the study was to study the value pattern of the competent and incompetent teachers. The study was based on a sample of 60 secondary schools of Banswara district and found that there is no significant difference between the value pattern of competent and incompetent teachers of secondary schools.

Gopalakrishnan (2006) conducted a study on relationship between self-efficacy and teaching competency of secondary teacher education students. The
finding of study concluded that there is significant relationship between teaching competency and self-efficacy of secondary teacher education students. By use of appropriate strategies, teacher trainee can improve his/her self-efficacy. This will help the teacher trainees to improve their teaching competency.

Kalia (2006) focused that elementary teachers and elementary principle found teacher preparation programme in Texas doing the more effective job in the competencies of the teaching method of strategies and students level.

Ghafar (2009) conducted a study on role of teachers in promoting their competencies are determined through teaching skills, concern for school, concern for students and concern for self, forming a comprehensive and practical model of Teachers competency characteristics. The result shows that all teachers are competent, and there are significant relationships between teaching competency and gender, specializations, and academic achievement. It is also found to be a teaching competency testing among Indian school teachers.

Sabu (2010) conducted a study on in-service training programmes and teaching competence of teachers. The objective of the study was to understand the teaching competence of teachers with regard to in-service training programmes, age, gender and type of school. The sample selected for the investigation comprised 631 teachers of 24 secondary schools in Kollam district of Kerala. Sabu concluded that there is no significant difference in teaching competence of teachers with regard to number of in-service programmes attended, age, gender and type of school.

Dawn (2011) conducted a study entitled developing pedagogical practices to enhance confidence and competence in science teacher education. The aim of this self-study research was to deepen my understanding of pedagogy for teacher education and the factors that enhanced and hindered my confidence and competence as a teacher educator. I recorded my impressions and descriptions of events, discussions, and interpretations as a result of studying my practice in an electronic journal. Student teachers’ responses to questionnaires, peer evaluation
guidelines, and interviews provided alternative views about the efficacy of my pedagogy. Data collection and analysis was a hermeneutic and recursive process revealing emergent themes. One theme was that a focus on science content knowledge gave a false sense of confidence and overshadowed our ability to engage in meaningful conversations about learning to teach—practice challenged through self-study research.

An analysis of teaching competence in science teachers involved in the design of context-based curriculum materials was done by Putter-Smith, Taconisb, Jochemsc & Drield (2012). Context-based competence comprises context handling, regulation, emphasis, design, and school innovation. Context-based teaching competence was mapped using both qualitative and quantitative research methods in a composite instrument. Due to the differences in design team set-up for different science subjects, teachers with design experience from different science subjects were also compared on their context-based competence. It was found that teachers with design experience showed more context-based competence than their non-designing colleagues. Furthermore, teachers designing for biology showed more context-based competence than their peers from other science subjects.

Physics Teachers Teaching Competency in Pakistan- Perception of ‘O’ Level Students was studied by Faize and Dahar (2012). The main objective of the study was to evaluate the teaching competency of ‘O’ level Physics teachers in Pakistan as perceived by their students. A descriptive-survey type design was used for collection of data. Data were collected from 300 ‘O’ level science students randomly selected through a questionnaire prepared on a five point likert scale. Data were analyzed by using Chi square test at 0.05 significance level. It was found that the Physics teachers in Pakistan are competent in using lecture method and demonstration method but not in activity oriented method which is much required in the teaching of science subjects. Meanwhile, the Physics teachers are not competent in using a combination of teaching methods in the classroom. The
need is of training teachers of these private schools in Pakistan by the concerned universities that are taking these examinations.

### 2.2 STUDIES RELATED TO TEACHING APTITUDE

*Ekstorm (1978)* studied the relationship between teacher aptitude and knowledge, teaching behaviour and pupil outcomes. It was found that only cognitive style and one aptitude component (level of aspiration) are found related over both grade levels and subject.

In an attitudinal and personality study of *Mutha (1980)*, it was found that effective teachers have significantly higher scores than ineffective teachers, confirming aptitude as a significant predictor of effective teaching.

In the study of aptitude and achievement as predictors of performance on teacher competency, *Ken and Kleine (1984)* found a relatively small, but significant relationship between the overall competency factor and achievement variables. The competency factor is also correlated significantly with aptitude variables.

*Sharma (1984)* studies teaching aptitude; intellectual level and morality of perspective teachers. The major objectives of the study was to find out teaching aptitude, intellectual level and morality of prospective teachers to compare these factors between male and female teachers to compare teachers of different disciplines in relation to these factors. The main findings of the study were about 75% of students were below average in teaching aptitude and intellectual level, an insignificant difference was found in teaching aptitude, abilities in sex wise and discipline wise comparison, a positive correlation was found between teaching aptitude, intellectual level, morality and prospective teacher.

*Donga (1987)* found that teacher aptitude is not a factor to control the adjustment behaviour of the student teachers. The study also suggests that female teacher trainees are more adjusted than male trainees. Trainees of different colleges differed significantly in adjustment. Trainees coming from science faculty have the lowest adjustment.
More (1988) examined the relationship between teaching effectiveness, teaching aptitude and personality traits. The objectives of the study were to bring an improvement in the criteria for the admission in the teachers training programme (B.Ed. training for secondary teachers). The major findings of the study were, only six factors out of sixteen factors of personality (R.B. Cattell) were found to positively correlated with teaching effectiveness of which intelligence was the most important, Teaching effectiveness and teaching aptitude have positive correlation and total personality of the teacher is found to be influencing effectiveness of the teaching.

Kohalon and Saini (1989) study was concerned with the impact of mental health on the teaching aptitude of education graduates of Punjab Agriculture University. The relationship between mental health and teaching aptitude was also investigated. All the 20 students of B.Ed. programme of Punjab Agriculture University participated in the study. Teaching aptitude was measured in terms of various personality aptitude ($t = 2.23; P = 0.05$) and the mental health has low positive correlation ($r = 0.21$) with teaching aptitude.

In a study of teaching aptitude of student teachers Sajan (1999) found that there exists significant difference in teaching aptitude between male and female student teachers. The study also revealed that the level of achievement in degree examination has no influence in predicting teaching aptitude.

Chandrakanta (2000) conducted a study of teaching aptitude of secondary school teachers and their teaching competency. The main findings of the study were, knowledge of subject matter, faith in co-operative and democratic way of teaching was positively correlated to flexibility teaching aptitude, planning, presentation and evaluation and teaching competency. Emotional and social adjustments were positively correlated to managerial trait, Teaching aptitude was positively correlated to planning, presentation, closing, evaluation, managerial aspects and teaching competency. There existed significant difference between higher and lower teaching competency teacher groups towards teaching aptitude.
Teachers with high teaching competency show high teaching aptitude. No significant difference was found between the higher and lower teaching competency groups towards emotional and social adjustment. There was no significant difference in teacher’s teaching aptitude, whether they mid high or low teaching experience.

Flores (2001) asked 14 newly graduates primary school teachers what affect their attitudes towards teaching they indicated that it is the social and political control exerting over teachers and over their profession. In addition to economic problems. She also reported that the workplace also plays a crucial role in shaping teachers attitudes towards teaching.

Rodger (2007) in a study examined a possible aptitude treatment interaction between teaching clarity and student test anxiety. Results revealed significant beneficial main effects for high vs. low teacher clarity for both achievement motivation measures, but no aptitude treatment interaction between teacher clarity and student test anxiety.

In a study of self-esteem and teaching aptitude of D.Ed. students, Ranganathan (2008) found that there is a significant positive relationship between high self-esteem and teaching aptitude and there is no significant different between males and females and the level of self-esteem and teaching aptitude.

Abdullah (2010) conducted a study on academic achievement, teaching aptitude and the personality traits as the predictors of success in elementary teacher training and to study the teaching aptitude in predicting success in terms of achievement, teacher educator rating and school teacher rating. The finding of study concluded that Teacher aptitude is found to have significant and positive correlation with all the parameters of success.

Jena (2012) studied teaching aptitude of Harijan Madhymik Vidayalya teachers in relation to their teaching competency and organizational climate with the aims at studying teaching aptitude of Harijan Madhymik Vidayalya teachers in relation to their teaching competency and organizational climate. It is a descriptive
study and the investigator has selected 100 teachers as sample for his investigation (50 male and 50 female) from 10 Harijan Madhymik Vidayalyas of Deoria district of Uttar Pradesh. The total number of sample teachers is further subdivided into (25 science males, 25 arts males, 25 science female and 25 arts females) by using simple random sampling technique. For collection of data the investigator has used, Teaching Aptitude Test Battery (TATB) constructed and standardized by Singh and Sharma (2005), General Teaching Competency Scale constructed and standardized by Passi & Lalita (1994) and Organizational Climate Scale constructed and standardized by Chaudhari & Pethe (2001). For analysis and interpretations of result the investigator has used F-test (Analysis of Variance) and Product moment coefficient of co-relation techniques. The main findings of the study stated that there exist significance differences and positive relationships in teaching aptitude, teaching competency and organizational climate.

Teaching aptitude of elementary and secondary level teacher educators was studied by Jan and Malik (2012). The study was conducted to study the teaching aptitude of elementary and secondary teacher educators of Kashmir division. The sample for the present study was 300 including 150 elementary teacher educators and 150 secondary teacher educators by using simple random sampling technique. For the measurement of teaching aptitude of elementary and secondary level teacher educators, Shamim Karim and A.K. Dixit’s teaching aptitude test battery was used. It was found that elementary teacher educators have more teaching aptitude as compared to secondary teacher educators on total score of teaching aptitude test battery. Among the eight dimensions, six dimensions were showing significant difference on teaching aptitude of elementary and secondary teacher educators.

2.3 STUDIES RELATED TO INTELLIGENCE

Grewal (1975) investigated intellectual hand personality correlates of teacher effectiveness among higher secondary school teachers. It was concluded from the results that intelligence, introversion-extroversion, neurotic tendency and self-confidence were the main correlates of teacher effectiveness. The adjustment
were found to be the correlated of teacher effectiveness, when considered on different criterion measures.

Grewal (1976) conducted intellectual and personality correlates of teacher effectiveness at the higher secondary school stage and the objectives were the measures of attitude, interest, pupils rating of teachers and colleges rating of teachers are the interrelated criteria of teacher effectiveness, the measures of intelligence and personality traits cluster in specific constellation with the criteria measures of teacher effectiveness to explain common factor variance, the measures having communality appear on common factors, thereby justifying the factorial validity of different tools used in this study, the predictors correlate significant with the criterion measures of teacher effectiveness in a bivariate analysis, the conjoined effect of predictors on the four criterion measures taken one at the time is higher than any of the individual correlation in a bivariate analysis and the predictors contribute differently to the criterion measures of teacher effectiveness and the main findings of the study were the four criterion measures of teacher effectiveness were not orthogonal to teach other and the observed R was very high. The measures of intelligence and personality traits clustered in specific constellations with the criterion measures of teacher effectiveness. The hypothesis that similar type of measures fall on one common factor was confirmed. The hypothesis that the predictors correlate significantly with the criterion measures of teacher effectiveness was confirmed partly in a trivariate analysis. Main predictors of teacher effectiveness were home, health, social emotional and total adjustments. Dominance, submission and verbal and nonverbal intelligence. The above study is similar to the present study, as it has studied the effectiveness of secondary school teachers. The above study has attempted to find out the pupils rating of teachers and interrelated it with teacher effectiveness.

Jain (1977) concluded a study on Proficiency in teaching as a function of creativity, intelligence and interests. The main objectives were to explore the area of proficiency in teaching as it specifically related to personality make up of
teacher, to note characteristics influences of the five components of creativity, intelligence and ten areas of interests upon proficiency in teaching so that better predictive value of these variables could be attained, to study both first and second order interactions between the variables for deeper understanding of the problem in view, to assist on the basis of findings, in the programme of selection of teachers as well as to provide relevant items of information for activity programme in teachers’ guidance. The main findings were Intelligence promoted in teaching and it tended to denote proficiency in teaching only when it was low. Creativity components were positively effective correlates of proficiency in teaching. For innovative and adventurous experiments and experiences teachers should have good ‘creativity-reserve’. To make creativity as a promoter of teaching proficiency, high interests in scientific pursuits were a must; low interest in literary, medical and technical pursuits went against the promotive role of creativity. Interests as a set of attention and preferences behind choice-behaviour, provided continuity to proficiency in teachings. Potential teachers must possess a high level of creativity related to creative production, originality, flexibility and ingenious solution of problems. Intelligence, creativity and interest were characteristically interrelated in promotion of proficiency in teaching. The above study is similar to present study as it has studied the teacher interest and areas of interest. But it differs from present study as it has studied the proficiency in teaching as a function of creativity, intelligence and interest.

Mahapatra (1987) comparative role of intelligence, attitude and vocational interest towards success in teaching. Regional background did not have a significant effect on all the tour variables studied. Sex had a significant effect on these variables, namely, teaching success, intelligence and attitude towards teaching and vocational interest. The coefficient of correlation between teaching success and intelligence, attitude and interest were 0.38, 0.27 and 0.25 respectively and were significant at 0.01 level of significance. The coefficient of multiple correlations between teaching success and predictor variable was found to be 0.44 and was significant at 0.01 level of significance. The combined predictive power of
all the three predictors in predicting the criterion was found to 23 percent. The predictive value of intelligence and attitude towards teaching success was 20 percent and intelligence and interest towards teaching success was 11 percent and intelligence and interest towards teaching success was 19 percent. Among all the three predictors, the contribution of intelligence was 13 percent. Intelligence was considered to be most influencing predictor. The above study is similar to present study as it has studied the intelligence attitude and interest of teachers.

More (1988) concluded that out of 16 personality factors, only six were found to be positively correlated with teacher effectiveness of which intelligence was the most important. The total personality of the teacher was found to be affecting his teaching.

Minicucci (1988) examined to whether background characteristics that are available prior to employment have any relationship to teacher satisfaction or teacher effectiveness ratings. The results revealed that few background characteristics of teacher viz. educational levels, sibling status, birth rank, childhood socioeconomic level, mother’s education, father’s education, years of teachings, decision to teach, extracurricular relationships either to teacher satisfaction reports of effectiveness ratings.

Singh (1991) conducted a study on the relationship of teaching effectiveness with creativity and intelligence and composite effect of creativity and intelligence on teaching effectiveness in a male and female teacher. The sample included 150 male and 150 female secondary school teachers of Punjab. The findings indicated that among the male and female teachers, teaching effectiveness was positively related with fluency, flexibility, originality, composite creativity and intelligence.

Srivastava, Tripathi and Mishra (1995, 1996) have presented a theoretical analysis of Indian and western concepts of intelligence. They have examined the status of Intelligence testing in India and have undertaken an empirical analysis of the views or perspectives of people about intelligence.
A sizable number of studies have attempted to examine the relationship between intelligence and various background variables. Bilquis and Umadevi (2004) using RPM (Standard) in Andhra Pradesh, found that social class, mother’s education, SES and family environment were positively related to intellectual ability among the rural adolescents. Ordinal position was negatively related to the measured level of intelligence.

Much of the research related to implicit theories of intelligence has focused on investigating the beliefs of students. As a result, there is less research related to teachers’ beliefs about intelligence. Teachers’ conceptions of intelligence are important, however, because they have been found to affect students’ beliefs about intelligence (Oakes, Wells, Jones, & Datnow, 1997; Watanabe, 2006), which in turn impacts students’ motivation and achievement (Dweck, 1999). The purpose of this study is to contribute to the literature on implicit theories of intelligence by investigating the nature of pre-service and in-service teachers’ intelligence beliefs.

Pre-service and in-service Teachers’ Implicit Theories of Intelligence was studied by Jones et. al. (2012) implicit theories of intelligence (i.e., individuals’ beliefs about the nature of intelligence, such as whether it is fixed or changeable) are important because they are related to individuals’ behaviors and their beliefs in other areas (Sternberg, 2000). Implicit theories of intelligence are especially important in educational settings because students who view intelligence as something that can be changed tend to be more academically motivated and perform at higher academic levels than students who view intelligence as a fixed, unchangeable trait (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 1999).

2.4 STUDIES RELATED TO TEACHERS ATTITUDE TOWARDS TEACHING

Ahluwalia (1974) developed a teacher attitude inventory and a study of change in professional attitudes of students-teachers. The Objectives of the study were to develop a Teacher Attitude Inventory (TAI), to measure the change in the professional attitude of student-teachers as a result of teacher education course of
one academic year duration, to make inter institution and intra institution comparisons for a deep and probing analysis, to study the sex wise differences in professional attitudes of the selected student teachers of Uttar Pradesh. The findings of the study were that new teacher attitude inventory was a reliable and valid tool for the measurement of teachers’ attitudes. The mean attitude scores, as a general rules were found to decrease in place of improving at the end of training programme. The mean attitude scores were changed either positive or negative as a consequence of the nature of training programme provided by different institutions. Sex wise and institution wise mean attitude score difference were found but these were not significant. Sex was not found to be either a determinant or differential of change in professional attitude of student teachers as consequence of teacher preparation programme. The above study is similar to present as it has studied the teacher attitude. But it is different from present study as it has an objective to develop teacher attitude inventory and it was also focused on studying changes in professional attitude of student teachers.

Singh (1974) measured teacher value and their relationship with teacher attitudes and job satisfaction. The objectives of the study were to know precisely what were the document values of the teachers, whether their attitude towards their profession was favourable or not, and whether they were satisfied with their jobs or not. To examine the nature of relationship between teacher values, attitudes and job satisfaction. To construct and standardize Teacher Value Inventory. The Findings of the study were that teachers scored highest on social and theoretical values and the lowest on economic and political values. Age of the teacher did not make any difference to his values, only religious and political values differed due to age. Level of education, training management of school location and size of school had no significant bearing on values of teachers. Values of teachers also differed according to the subject they taught. Professional attitudes of teachers were favourable and their attitude towards child centered practices and educational process was more favourable than their attitude towards teaching as a profession classroom teaching, pupils and teachers. There was no difference in the attitude of
teachers due to difference in age, male and female teachers differed in their attitude. Teachers were found to be moderately satisfied with all factors of job satisfaction except with economic benefit physical facilities and administration. There was no significant positive relationship between scores on theoretical and social values and scores on attitudes, contrary to this there was a negative relationship between scores on economic and political values and scores on attitudes. There was a positive and significant relationship between scores on attitudes and scores on satisfaction.

Saran (1975) in a study of teacher’s attitude towards teaching profession and certain personality variables as related to their level of education and amount of experience. The attitude of teachers towards the teaching profession was positive. Interest was positively related with attitude towards the teaching profession. The teachers who help a positive attitude showed more interest in the fields of agriculture and sports. Attitude towards teaching profession was not positively related to experience in the teaching profession as well as age.

Sarswat (1976) conducted a study of attitude of trained high school teachers of Aligarh towards their professional training and the student’s perception of their teachers. The objectives of the study were to find out the attitudes of teachers, trained by various universities and serving in the Aligarh district, towards their professional training, to compare the attitudes of teachers with reference to differences in sex, academic achievement, intelligence and teaching experience. The main finding of the study were most of the high school teachers did not possess positive attitude towards their professional training. There were significant differences between the male and the female and the science and arts teachers. There was no difference between the attitudes of teachers trained by various universities towards their professional training. High academic achiever did not like teacher training while the low achiever did. The teachers with a low level of intelligence had positive attitude towards teacher training, but the teachers with high level of intelligence did not. Teaching experience was not related to attitude
towards teacher training. Academic achievement, intelligence and attitude were interdependent. Intelligence had maximum contribution to the determination of attitudes, attitudes were highly saturated with I factor. The attitudes of the teachers towards teacher training and the students’ perception of their teachers’ personality and performance were related. The teachers’ attitude towards teacher training influenced their behavior in the classroom, which was inferred by the student’s perception. The female students were better critics of their teachers than the male.

Malhotra (1976) conducted a study on teachers’ classroom behavior in relation to presage variable of teacher attitude adjustment, and product variables of students liking and perceived behaviour by peers, principals and self. The objectives of the study were to find out the relationship between demographic (age, sex, qualification) and professional (teaching experience, professional status and subject taught) variables and the indirect-direct teacher’s classroom behaviour, to determine the relationship between teacher attitudes and adjustment, and indirect-direct teacher’s classroom behaviour, to find out the relationship between indirect-direct teacher behaviour and students liking about their teachers, to find out relationship between indirect –direct teacher behaviour and the perception of teacher bahaviour by peers, principals and self, to study the factorial structure of the test-space of presage-process-product variables through multi variate approach. The main findings were there was negative relationship between the age of the teachers and indirect- direct teacher classroom behaviour. The male and female teachers did not differ in indirect-direct teacher classroom behaviour. The teachers with bachelor’s degree were more indirect in their classroom behaviour than teacher with master’s degree. Teachers with low teaching experience were more indirect in their teaching classroom behaviour than teachers with high teaching experience. Science teachers were more indirect in their classroom behviour than arts teachers. Teachers with positive attitude were more indirect in their classroom behaviour than teachers with negative attitude. Poorly adjusted teachers were more direct in their classroom behavior than teachers who were well adjusted. Teachers with indirect classroom behaviour were more liked by students than the teachers
with direct classroom behaviour. The teachers with indirect classroom behaviour were rated higher by peers and principals for their behaviour in schools. The teachers with indirect classroom behaviour rated themselves higher for their own behaviour in school. Factor analysis resulted into nine varimax factors, namely reinforcing pupil participation, peers disapproval of stable behaviour, teacher attitudes-adaptability, teacher stimulated pupil initiation, teacher stimulated pupil participation, students liking for indirectness, principal approved subject informative behaviour, perceived teachers behaviour and silence-confusion. The above is similar to present study as it aimed at studying classroom behaviour of male and female teachers classroom behaviour of teachers with low and high teaching experience, attitudes of teachers and students liking towards teachers.

Sukhwal (1977) conducted a study on Attitudes of married lady teachers towards the teaching profession. The Findings of the study were that majority of teachers favoured the profession; the differences between the favourable and unfavourable attitudes were highly significant. The higher the age, the greater was the increase in the degree of favourableness in attitudes towards the profession. Experience played a greater role in the development of favourable professional attitudes. Qualification wise an increase in the favourable attitude towards the profession with the increase in qualification. Trained teachers were found to presses more favourable attitude towards teaching than the untrained teachers. Personal, social, educational, financial, professional, family and miscellaneous factors operated in selecting the profession. The above study has tried to focus on attitude of teachers towards teaching and also tried to find out as how experience plays role in the development of favourable teaching attitude and in this way above study is similar to play present study.

A positive favourable attitude makes the work not only easier but also more satisfying and professionally rewarding. A negative unfavourable attitude makes the teaching task harder, more tedious and unpleasant (Ahluwalia, 1978).
Jaleel and Pillay (1979) studied on bureaucratism of college teachers and their attitude towards teaching profession. The Objectives were to analyse the attitude of college teachers towards teaching with respect to age and professional experience, to analyse the bureaucratism of college teachers with respect to age and professional experience, to find out the relationship between the attitude of college teachers towards teaching and their bureaucratism. The Findings of the study were nearly two of college teachers were highly bureaucratic. The age and experience of college teacher appeared to have defined positive relationship with their attitude towards the teaching profession. As teachers grew in age and experience their attitude towards the teaching profession grew more favourable. Bureaucracy was negatively correlated with age and experience. Bureaucratism as an aspect of personality was related to the attitude of teachers towards the teaching profession. The teachers who had developed sound attitude towards the teaching profession were relatively more traditional and impersonal. The above study is similar to present study as it has studied the attitude of teachers towards teaching profession. But it has also studied and analysed the bureaucratism of college teachers with respect to age and professional experience. In this way it is different from present study.

Kushwaha (1979) conducted on an investigation into the attitude and role perceptions of secondary teachers. The objectives of study were to measure the attitudes of secondary school teachers towards children and school work, to collect teachers’ personal data regarding their academic qualifications, sex, teaching experience and subject taught, to construct a questionnaire for determining their role perceptions, to find out the relationship between their attitudes and five types of role perception. The Findings of the study were the teachers quality was inversely related to the referrer role. Teachers’ quality point was inversely related to the disciplinarian role. There was no relationship between teaching experience and motivator role. There was no discrimination between teachers with high or low experience in their perception of the counselor role. Teacher’s attitude was inversely related to the advisors role, referred role, motivation role and
disciplinarian role. The high quality point group chose the referrer role more often and more consistently than the medium quality point group. The quality point did not seem to affect the teachers’ perception of their role. The high, medium and low experience groups of teachers did not mutually differ from one another in their perception of any of the five types of roles, the length of teaching experience as not a factor influencing the teacher’s role perception. There were no significant differences among the high, medium and low attitude groups on the roles of the motivator and the counselor. The male teachers were better than the female teachers on advisor and disciplinarian roles. The female teachers were better than the male teachers on the motivator and counselor roles. Science teachers were superior to arts teachers in respect of referrer, motivator and disciplinarian role. Both arts and science teachers were same in respect of advisor and counselor roles. The above study of similar to present study as it has studied of secondary teachers. But it is different from present study, as it has also studied the attitude of teachers and its relationship with five types of role perception.

Goyal (1980) conducted a study on relationship among attitudes, job satisfaction, adjustment and professional interests of teachers-educators in India. The objectives were to measure attitudes, job satisfaction, adjustment and professional interests of teacher-educators of different categories based on sex, age, qualification, and experience, to find out the difference in attitude, job satisfaction, adjustment and professional interests among groups of teacher-educators based on sex, age, qualification and experience, to find out the relationship among attitude, job satisfaction, adjustment and professional interests of teacher-educators of different categories to predict job satisfaction of teacher-educators by treating their attitudes, adjustment and professional interests as independent variables. The Findings of the study were that a large majority of teacher-educators were favourable inclined towards their profession and were satisfied in the job. However, they were not well adjusted and had low professional interest. The attitude and job satisfaction of different groups did not differ significantly. A majority of teacher-educators had low interest in the profession.
Emotional stability among the teacher-educators increased with teaching experience in schools. Professional interest among teacher-educators increased with teaching experience in school. Attitude, job satisfaction and occupational adjustment among teacher-educators were associated with one another, whereas social and emotional adjustment and professional interests were not related with other variables. Job satisfaction could be predicted by attitude and occupational adjustment but not by other variables. The above study is similar to present study as it has studied the teaching attitude and interest in teaching profession of teachers i.e. teacher-educators. But in addition to this it has also studied the job satisfaction of teacher-educators in this respect it is different from present study.

**Mutha (1980)** conducted an attitudinal and personality study of effective teachers. The main objectives of the study were to identify the factors attitudinal, motivational and personality-which differentiated effective teachers from ineffective ones. The main findings were that Sex, professional training, nature of schooling and income level were significantly associated with the teacher’s effectiveness. The effective teachers had significantly higher scores on intelligence than the ineffective teachers. The effective teachers had scores in anxiety than the ineffective. The effective teachers had higher scores on teaching aptitude than the ineffective. The effective teachers had significantly higher scores on neuroticism than the ineffective. The effective teachers had significantly higher scores on theoretical value than the ineffective. The ineffective teachers had significantly higher scores on political value than the effective. The ineffective teachers had significantly higher scores on job satisfaction value than the ineffective. The set of personality variables-ascendance-sub mission, anxiety, marital adjustment, extroversion, neuroticism, job satisfaction and teaching attitude significantly predicted the teacher’s effectiveness. Personality variables- ascendance-sub mission, anxiety, marital adjustment, extroversion, neuroticism, job satisfaction and teaching attitude, real self-ideal, self-discrepancy, religious value, social value, theoretical value, aesthetic value, economic value, political value and intelligence- significantly predicted the teachers effectiveness. The above study is similar to
present study as it has studied the attitudes of teachers. But it is different from present study, as it has tried to identify the attitudinal, motivational and personality factors, which differentiated effective teacher from ineffective ones.

**Ramakrishnainh (1980)** revealed through his study, that women teachers have a significant and more favourable attitude towards teaching than men teachers.

**Jain (1982)** in a study of classroom behaviour patterns of teachers in relation to their attitude towards profession, morale and values. Findings of the study shows male teacher develop more time in asking questions than female teachers. Pupils interacted differently in the classes of married, unmarried or deserted teachers. Teachers with a positive attitude towards child centered practices, educational process. Pupils and teachers voted more time to asking questions in the classroom while guiding the more content-oriented part of the class discussion. Teachers with a positive attitude towards teaching profession, classroom teaching, child centered practices and educational process reacted to ideas and feelings of pupils and frequently created an emotional climate in the classroom. Pupils interacted more in the classes of teachers having a positive attitude towards teaching profession, pupils and teachers. There was significant positive relationship between teacher’s status and teachers’ questions. Teachers, who had full freedom to discuss controversial issues in the classroom, asked more questions. Pupils interacted more in the classes of the teachers who enjoyed rapport with the principal. There was significant positive relationship between the social value and the proportion of indirect behaviour to direct behaviour including content emphasis (I/D). Theoretical and aesthetic values were not significantly related to the affective behaviour of teachers (I/D). Pupils interacted less in the classes of teachers having political and religious values. Young teachers had more favourable attitude towards teaching profession, classroom teaching and educational process than older teachers. Sex was not significantly related to any dimension of the teacher’s morale. There was significant negative relationship
between the teaching experience and the teacher’s attitude to classroom teaching. Married, unmarried and deserted teachers differed with respect to theoretical value. The interference of the community in educational programme was not favoured by teachers. The teacher’s attitude towards educational process had significant negative relationship with teachers and community support to education. Satisfaction with teaching was positively related to the theoretical and political values. There was significant negative relationship between the curriculum issues and the political values. The theoretical value was significantly negatively related with the teacher’s attitude towards pupils and teachers. Teachers with a high aesthetic value did not have a favourable attitude towards teaching profession and the teachers. Teachers with high religious value had favourable attitudes towards teaching profession, educational process and pupils and teachers. The above study is similar to present study as it attempted to study classroom behaviour patterns of teachers and teacher attitude towards teaching. But it differ from present study as it also tried to find out the teachers’ morale, values and classroom behaviour pattern of teachers.

Sood (1982) and his students at the Regional college of Education, Ajmer (Rajasthan) have studied attitude towards science and scientist among student and teachers for years. These are very valuable studies, which need to be consolidated at the place. In the present major project, he examined a rare and valuable problem, ‘the public understanding of science’, using his own test, among students and members of the public understanding of science and attitude towards science. However, sex differences on public understanding of science and attitudes towards science also appeared significantly in this study.

In a study conducted by (Bhalwankar, 1984) it revealed a positive relation between teachers’ attitude towards teaching and their teaching efficiency.

Gupta (1984) conducted a study on attitude of teachers and found that male and female teachers differ significantly in attitude towards teaching profession.
Rawat and Sreevastava (1984) conducted a comparative study of the attitude of male and female teacher trainees towards teaching. Significant difference was found between male and female teacher trainees in their attitude towards teaching profession.

Teachers’ attitude towards teaching and teaching profession has been found to be correlated significantly with patience, initiative, carefulness and responsibility (Som, 1984).

Austin (1985) found significant differences between attitudes of teachers and principals concerning various aspects of main streaming practices. Teachers show a great deal of concern about classroom behaviour and academic progress of students, whereas principals tend to show a greater concern about philosophy of students.

Mathus (1988) studied the attitude of teachers towards creative learning and teaching. The findings indicated that teachers at different stages had a favourable attitude towards creative learning and an unfavourable attitude towards creative teaching. Age, sex, teaching experience and academic discipline did not tend to affect the attitude of different levels of teachers towards creative learning and creative teaching. The above study is similar to present study as it has tried study the attitude of teachers. But the study has more focus on attitude of teachers towards creative learning and teaching in this respect it has different from present study.

Devi (1988) found that the teacher education programme non-contributory to the teaching attitude of student - teachers but did account for influencing their aesthetic values positive as also social and health adjustment.

The National Centre for Education Statistics (NCES) sponsored the 1988-89 Teacher follow up Survey (TFS) conducted (1992) by the U.S. Bureau of the census, to update data on teacher career patterns and plans. One of the main purposes of TFS was to obtain data on attitude towards teaching profession.
Singh (1988) studied of the relationship between verbal interaction of teachers in class and attitude towards teaching. Indirect influence, pupil talk, indirect to direct ratio, pupil initiation ratio, teacher response and question ratio appeared to be significantly related to attitude towards teaching in male and female groups, teaching subject groups, and teaching classes. There was a significant relationship between attitude towards teaching and classroom verbal interaction of student-teachers at the secondary level. Lecturing, criticizing and justifying authority, direct influence and restrictiveness were found to be negatively correlated with attitude towards teaching in male and female groups and in language, social studies, science and mathematics groups. Pupil talk and pupil initiation ration were found to be associated with attitude towards teaching in male and female groups, teaching subject groups and teaching classes. Teacher response ratio, teachers question and instantaneous teachers response and teacher ratios were found to be related to attitude towards teaching. Restrictions, restrictive feedback and negative authority were found to be negatively associated with attitude towards teaching. Teachers talk was found to be independent of attitude towards teaching at any level.

Attitudes towards teaching in relation to variables of personality, intelligence, adjustment, creativity and values were studied by Kala (1989).

Maurya (1990) studied the relationship between teachers’ attitudes and teacher efficiency of University and pre-university lecturers. The external surroundings contributed a great deal in formulating teaching attitude. Frequent changes in the curriculum adversely affect teaching efficiency. The size of the classroom affects adjustment and teaching efficiency. Indiscipline and violence on the campus caused problems of adjustment. Attitude and academic achievement were not significantly related. Sex difference existed both in teaching proficiency and adjustment. Pre-university teachers were better in teaching efficiency. The study is similar to present study as it has studied the attitudes and efficiency of teachers. But in addition to that it has an objective to find out the interrelationship among attitudes, teaching efficiency and adjustment of teachers at university and
pre-university level; in this respect it is different from present study.

Singh (1990) studied teacher effectiveness as related to their attitude towards teaching profession. This study found that rural and urban teachers do not differ significantly on their attitude score towards teaching profession. Rural teachers attitude towards teaching was significantly related to teachers effectiveness but this was not so in the case of urban teachers.

Reddy et al. (1990) tried to determine the degree of relationship between a teachers age, sex, training and years of teaching experience and attitude towards teaching and found out no differences among teachers in their attitude towards the teaching profession because of the factors considered.

Sundaresan (1991) studied the extent to which B.Ed., students were favorably disposed towards teaching and found 95.04 percent of B.Ed., and students had a favorable towards teaching. Negative correlation was found between the student teacher’s attitude towards the teaching and their interest in it.

Sinha (1991) studied about the impact of elementary teacher education programmes on attitudinal change of elementary teacher trainees of Orissa, followed the design of presage studies.

Reddy (1991) studied on the teaching aptitude and, attitude towards teaching with right to sex, age, faculty and category of teachers.

Tapodhan (1991) studied professional attitudes of secondary school teachers of Gujarat state. Sex, area (urban/rural) and caste (BC/non BC) had a main effect on professional attitudes, while qualifications had no effect. Area, sex and caste had significant interaction effect; while sex and qualification had interaction effect had 0.05 level. Area and caste, area and qualification, caste and qualification as well as sex, area, and caste; sex, area and qualification had no significant interaction effect on professional attitudes. The above study is similar to present study in hand as it is studied the professional attitudes of teachers in relation to sex, area, teaching experience of secondary school teachers. It differs from present study in hand as it constructed and standardized an attitude scale for secondary
school teachers of Gujarat state. Also it studied attitude of teachers in relation to qualification, type of school, marital status, faculties of education and experience.

**Ganapathy (1992)** self-concept of student-teachers and their attitude towards teaching profession. Both male and female student teachers had a favourable attitude towards the teaching profession. Both male and female students-teachers had a positive self-concept, and it was related to their attitude towards the teaching profession. The above study is similar to present study as it has studied the attitudes of teacher towards teaching profession but it has also a objective to find out the relationship between the self-concept of student-teacher and their attitude towards teaching and in this respect it is different from present study.

**Skariah (1994)** studied creativity of teacher trainees’ in relation to their self-concept, attitude towards teaching profession and success in teaching and found that high teaching success group and high attitude towards teaching group are more creative than the other groups.

**Pandey and Maikhuri (1999)** in their study attempted to explore the attitude of effective and ineffective teachers towards teaching profession. The major findings included that there was no significant difference between effective teachers having high or low experience in terms of their profession. High experienced teacher’s attitude was positive towards teaching profession than low experience ineffective teachers. Age of effective teacher was not a differentiating factor in their attitude towards teaching profession. Young ineffective teachers had a negative attitude towards teaching than ineffective old teachers.

**Cornelious (2000)** investigated the factors affecting teacher competence of teacher trainees at the secondary level, revealed that intelligence, attitude towards teaching profession, and academic achievement of teacher trainees are the discriminating factors of the different groups of subjects.

**Lynn et al. (2002)** presented a career cycle for teachers, including variables of enthusiasm, interactive teaching skills and attitude towards the teacher
profession. This study discussed the models in eight stages pre-service induction, competency building, enthusiasm and growth career frustration, career stability, career wind down and career exit.

This research Agius et al. (2003) was based upon the teachers’ attitudes towards the progressive teaching strategies and the affects that these strategies had upon children. In this research, investigators focused mainly on the observations and questionnaires completed in Church, State and Independent schools. Investigators discovered that the need for change was necessary in their schools. These results were also associated with the National Minimum Curriculum principles that the teachers should implement in their classrooms. This study pointed out that teachers could benefit from both approaches to create a successful learning environment.

Pushpam (2003) while examining the attitudes of women teachers towards teaching profession on a sample of 725 teachers found significant and positive relationship between attitudes of women teachers towards teaching profession and job satisfaction.

Chahar (2005) conducted a study of teaching competency of student teachers in relation to certain non-cognitive variables. The sample for the present study comprised of two hundred B. Ed. student teachers studying in Colleges of Education in Rohtak City. Random sampling technique was used to select the sample. Thus, the 200 B. Ed. student teachers studying in the Colleges of Education located in Rohtak city were included in the study. He found that (i) There is significant relationship between General Teaching Competency and Self Concept, General Teaching competency and Attitude towards Teaching and General Teaching Competency and Socio-Economic-Status of male, female and total Student teachers (ii) The mean General Teaching Competency scores of female student teachers is significantly higher than that of the male student teachers in Science, Arts and combined groups, and (iii) The mean Attitude towards Teaching scores of female student teachers is significantly higher than that of the male student teachers in Science, Arts and combined groups.
Devi (2005) in a study, found that moderate and highly significant correlation exists between success in teaching and the predictor variables like, role conflict, attitude towards teaching profession and job satisfaction. It was also reported that role conflict and Attitude towards teaching profession are the two variables capable of significantly and efficiently discriminating between successful and less successful groups of women teachers of Kerala.

Suja (2007) in a study found that attitude towards teaching, interest in teaching, and teaching experience have significant main effect on job commitment of teachers.

The Purpose of this study was to ascertain the beliefs of Mathematics teacher trainees about their chosen profession before they began their service. Specific topics included instructional approaches, the role of the teacher, interaction among students, and interaction between teacher and students during class. Data were collected by use of an open-ended questionnaire administered to 46 pre-service Mathematics teachers. Most of the participants in the study held non-traditional beliefs about Mathematics teaching. This finding has several implications for teacher education (Boz, 2008).

This study set out to investigate the attitude of senior secondary school students towards the teaching profession. This was with a view to ascertain the extent to which variables like gender, location and school type may influence students’ attitude towards teaching as a profession. A fifteen (15) item questionnaire was designed to elicit responses from individual students with a view of determining students’ attitude towards teaching profession. A representative sample size of 250 respondents was chosen from ten (10) schools randomly selected from public and private schools within the rural and urban areas of the Federal Capital Territory (FCT) Abuja, Nigeria. Findings confirmed that senior secondary school students in the Federal Capital Territory exhibited general positive attitude towards teaching as a profession without prejudice to gender, school type and location. It is recommended that government and other employers of labour should create the enabling environment to motivate students to choose
and pursue career in teaching. It is also emphasized that teachers and educators in general should continue to conduct themselves in manner that would endear the noble profession to the hearts of the upcoming generation (Oluwatimilehin, 2009).

2.5 STUDIES RELATED TO TEACHER EFFECTIVENESS

Arora (1976) conducted study to find out the characteristics differentiating effective and ineffective teachers. The findings of the study were that the age and tenure of service were non differentiating characteristics and the teacher did not differ in terms of the length of teaching experience and satisfaction with allotment of teaching subjects and Differentiating characteristics with regards to professional growth and desire to attend in-service programme could be observed.

Patel (1976) conducted a comparative study of the effectiveness of integrating five teaching skills through the summative model and the group with vicarious integration upon teaching competence of the student-teachers and the objectives were to find out the general teaching competency of the student teachers who were given training for some teaching skills (skills of probing questioning, skill of explaining, skill of using illustration with example, etc.) through the micro-teaching technique and use micro-teaching with integration of teaching skills through the summative model and micro-teaching technique along with vicarious integration, to compare the general teaching competency of the student teachers who were given training for teaching skills through microteaching withy integration through summative model and with vicarious integration. The Findings of the study were the integration of the component skills in the context of microteaching took place vicariously and it did not need deliberate planning such as summative model. The above research attempted to find out the teaching competencies of trainees, specific five teaching skills were focused. It also compared summative model and vicarious integration. In this respect it is different from present study.

Gupta (1976) concluded his study on predication of teacher effectiveness through personality test and the hypotheses of the study were teachers in high to average and low categories, put according to their scores on the teachers
effectiveness measure, can also be differentiated on the basis of their 16 PF scores profiles, some of the sixteen personality factors will be significantly correlated with the composite teacher effectiveness used and on the basis of this relationship; it is possible to develop a 16 PF specification equation and linear qualification grid for predicting teacher effectiveness. The main findings of the study were high effective teachers differed significantly from the general population with respect to nine-personality factor out of sixteen. They were more affect thymic (A+), more intellect (B+), having more ego strength (C+), more surgent (F+), more self-sentiment (Qs+), less suspicious (I-), less guilt prone (O-) and less radical (Q-). The low effective teachers were less intelligent (B-) and were having lower self-concept control (Q3-) compared to general adult population. In comparison to average effective teachers, high effective teachers were significantly more intelligent (B+) emotionally stable (C+), assertive (E+), consciousness (G+), adventurous (H+), tender minded (L+), and had higher self-concept control (Q3+) and they were also less suspicious (L-), less experimenting and radical (Q-), less self-sufficient (Q2-) and less tense and frustrated (Q4-). In comparison to low effective teachers the high effective teachers were more warm hearted (A+), intelligent (B+), emotionally stable (C+), assertive (E+), surgent (F+), adventurous (H+), and self-controlled (Q3+), and they were less suspicious (L-), imaginative (M-), apprehensive and guilt prone (O-) experimenting and radical (Q1-), and self-sufficient (Q2-). The average effective teachers in comparison to low effective teachers were more outgoing (A+), surgent and happy-go-lucky (F+), controlled and socially precise (Q3+) and less imaginative and more practical (M-). The above study is similar to the present study as it had an aim to find out the high, average and low categories of effectiveness of teachers. It also aimed at finding out the relation between teacher’s intelligence and effectiveness. The main objectives of the study were to explore the classroom verbal interaction pattern of effective and ineffective teachers and researcher find that effective teachers used the categories of accepts feeling praise, uses students ideas, questions, students response and initiation, whereas ineffective teachers employed lecture direction
and authority categories in the classroom behavior. The effective teachers involved more indirect influence, student initiation, teacher response ratio and pupil steady state ratio, whereas ineffective teachers involved more direct teacher talk, silence or confusion, steady state ratio and non-stimulating situation in classroom behavior. In the effective teachers teaching, students response and initiations were followed by teachers’ praise and accepting feeling, whereas in ineffective teachers teaching, student response and initiation were followed by direction and authority. The effective teachers involved more creative thinking models. The above study is similar to present study as it attempted to find out the teacher’s effectiveness and its interrelation with the classroom behavior of the teacher.

**Sofat (1977)** construction and Standardization of self-evaluation scale of teaching Effectiveness of secondary teachers, Ph.D. Education, Panjab University. The correlation coefficient between the scores of teacher’s self-evaluation and external evaluation by students and headmasters were positive and significances. The teachers working in government and private schools were equally effective. More experiences and less experience teachers were equally effective. Socioeconomic status of teachers affected their teaching effectiveness.

**Singh (1977)** conducted a study on teachers’ effectiveness and its correlates at higher secondary stage in eastern. The following Objectives were determined, to compare teacher, socio-economic status, attitude towards teaching profession and adjustment, to find out the relationship between teachers effectiveness and selected correlation, viz., intelligence, adjustment attitude and SES, to determine the combine effect of correlation on teacher effectiveness. The Findings were there is no significant difference in mean scores of male and female teachers in their effectiveness was observed. The difference in the mean intelligence scores of male and female teachers was not significant. It was revealed that the rural female teachers had scored comparatively better scores than the rural male teachers in teacher effectiveness. The difference in the mean scores of urban male and female teachers was found to be non-significant on the SES scale. There
was a non-significant difference in the mean scores of male and female teachers belonging to the rural and urban areas in their attitude towards teaching. The scores of rural male and female teachers in effectiveness appeared to be correlated significantly with only two variables intelligence and attitude towards the teaching profession. A low relationship between intelligence and SES was observed. The teacher effectiveness scores of rural male and female teachers appeared to be significantly related with intelligence, SES and adjustment. Intelligence showed a moderate and significant relationship with socio-economic status and adjustment of urban teachers irrespective of sex.

**Goel (1978)** reported extroversion as an important factor related to teacher effectiveness. Using the Flanders’s Interactive Analysis System, he found extrovert teachers to have greater interchange of classroom events than introvert teachers. The extrovert teachers had large transition from pupil response to the categories of teacher praise; encourage and questions as compared to introvert teachers. It appeared that extrovert teachers had all the seven interaction models of critical teaching behaviour while introvert teachers had only first four models of teaching behaviour. In conclusion, it may be said that personality dimension of extraversion is important in shaping the teacher’s behaviour.

**Naidu (1980)** studied on variations in the classroom behaviour of teachers and their relationship to the educational achievement of students in English, Science and Social Studies. The objectives were to find out the extent of effectiveness of classroom behaviour of the teacher and the taught through an observation schedule process in English, Science and Social Studies of class X in the twin cities of Hyderabad and Secundarabad, to know the depth of aspects of teaching, motivating, problem solving, classroom organization and classroom management among the teachers who taught English, Science and Social Science of class X students, to assess the educational achievement of class X students in English, Science and Social Studies, to measure the student’s assessment of attitude on the classroom behaviour of their teachers employed to analyse data. The
main findings were in subject verbal classroom behaviour of the teacher occupied the place followed by valuation of that day’s lesson either by orally or by asking questions giving homework to the students. Among the rest of the activities of classroom behaviour of teacher, the blackboard work occupied the third place, in all the three subjects. The fourth place was credited to the item on teaching aids used by the teachers in all the three subjects and the last place was given to the item of demonstrating or discussing current events. He male and female teachers had significant difference of opinion on the various patterns of behaviour to be performed in the classroom. The female teachers were more favourable and active in the classroom situation than the male teachers. The above study is similar to present study as it has an objective to find out the effectiveness of classroom behaviour of teachers and students’ assessment of attitude on classroom behaviour of their teachers.

**Wangoo (1984)** teacher personality correlates and scholastic competence as related to teacher effectiveness. The finding personality adjustment democratic leadership, a high degree of intelligence and emotional control were the main characteristics that went with teacher effectiveness. The above study is similar to the study in hand as if had aim in finding out the interrelation between teaching competence and teacher effectiveness, but it also studied the personality of teacher.

**Subbarayyan (1985)** in a study of relationship between teacher effectiveness, research and publication and self-concept. The finding of the study revealed students’ rating of teachers significantly correlated with colleagues rating of teachers. Colleagues rating of teachers significantly correlated with self-rating teachers. Self-rating of teaching significantly correlated with students rating. Teacher effectiveness as rated by colleagues and self significantly correlated with teacher’s ability to do research and publish findings. But no relationship was found between teacher effectiveness as rated by students and teachers ability to do research and publish. The relationship between teacher effectiveness and his self-concept was significant. Male and female teachers did not differ significantly in respect of teacher effectiveness. Teachers who had 15 or more years of experience
did not differ from those of less experience in general factors of teacher effectiveness, but significant difference was reported in respect of professional factors. Teachers of 45 years or above did not differ significantly from those who were below 45 years. Professors, reader and lecturers did not differ significantly from one another in respect of teacher effectiveness. The above study is similar to present as it has studied the teacher effectiveness. But it differs from present study as it has studied the relationship between teacher effectiveness research and publication and self-concept.

Wali (1985) in a factorial study of the teaching correlates of teaching effectiveness. Correlation coefficients for educational qualifications, salary, experience, family education and sources of income were significant. Correlation coefficient for attitude to educational process, identity with job, democratic value, family prestige value, and a few needs were significant. Six factors emerged from out of the correlation matrix and they were designed as professional dignity (grade, salary etc.) altruistic temper, professional involvement democratic temper family background and humility. Implication for teacher preparation, such as inculcating proper values, proper selection and giving the importance to family background have been drawn on the basis of the study of the six factors. The above study is similar to present study as it has studied the teacher effectiveness. But it differs from present study as it has studied teaching correlates of teaching effectiveness.

Lalithmna (1986) investigated any inquiry into classroom instruction. The major objectives of the study were to identify and list the teaching skills required for effective classroom instruction to compare instructional material for developing some of the identified teaching skills. He found some major skills, which are required for effective classroom teaching. These skills needed are skills of planning, skills of identifying learner’s entry behaviour and skills of writing instructional objectives.

further said that thinking can be taught if appropriate teaching strategies are used.

**Hans (1986)** studied relationship among teaching style, learning gains and teaching effectiveness. The indirect teaching style teachers in general were characterized by higher scholastic mental capacity, higher ego strength, less dominance, weaker super ego, alexia, autia, shrewdness, radicalism, group adherence and a high self-concept. The indirect teaching style teachers were characterized by lower mental scholastic ability lower ego strength, dominance, strong super ego, pretension, alertness, conservatism, self-sufficiency and low integration. The teachers with a normal teaching style had been found to have an average position in respect to 11 personality traits. Intellectually superior teachers tended to adopt indirect teaching style and less superior teachers adopted direct teaching style. Young teachers used to teach through indirect style of teaching and elder teachers adopted direct teaching style. Teachers teaching through an indirect teaching style were able to develop greater learning teaching style were able to develop greater learning gains among their pupils than teachers teaching through a direct teaching style. Indirect teaching style teachers were perceived by their students to be more effective in teaching than the direct teaching style teachers. The above study is similar to present study as it has studied the teaching effectiveness. But it differs from present study as it has found out the relationship among teaching style on learning of gain and teaching effectiveness.

**Padmanabhaiah (1986)** studied job satisfaction and teaching effectiveness of secondary school teachers. The teachers in general (72 per cent) were dissatisfied with their jobs. The teachers in general were satisfied with the factors of job satisfaction. HM, suitability, students and co-teachers and were dissatisfied with factors like policy matters, physical facilities, management policies, nature of work and activities of others. All the personal and demographic variables except the variable, qualification of the teachers could significantly influence the level of satisfaction with various job factors but not the total job satisfaction. Male and female teachers were not significantly different in the level of their overall job
satisfaction, dissatisfaction. There was no significant difference between the teachers working in rural and urban areas in their level of satisfaction/dissatisfaction with their job as a whole but the two groups were significantly different in their level of dissatisfaction with policy matters and management. The teachers working in high schools were significantly more dissatisfied with physical facilities than those working in junior colleges. Married and unmarried teachers were significantly different in their level of satisfaction with only three job factors viz. policy matters, suitability and students. The three groups of teachers were significantly different in the level of their satisfaction with all the job factors as well as with their job as a whole. Among the 16 personality factors described by Catell, factors C, L and Q2 and other personality factors neuroticism of the teachers could significantly influence their level of job satisfaction. Among 11 personal and demographic variables studied, only five regions, designation, age, experience and the size of the family of teachers could significantly influence the level of teaching effectiveness. The multiple correlations between job satisfaction and the four independent variables-job discrimination index, job involvement, family satisfaction and life satisfaction put together was 0.373. The multiple correlations between teaching effectiveness and job satisfaction were 0.078. All the four variables-job involvement, life satisfaction and family satisfaction put together could obtain a multiple correlation of 0.109 with teaching effectiveness. Out of 35 variables studied only a few possessed significant coefficients of correlations with teaching effectiveness. The above attempted to develop an instrument for measuring teaching effectiveness and influence of personal and demographic variable on teaching effectiveness, but it had main objective to find out job satisfaction of teachers in this respect it is different from present study.

Prakasham (1986) in a study of teacher effectiveness as a function of school organizational climate and teaching competency. Teachers working in a open school climate were better in teaching competency and teacher effectiveness than those employed in schools with autonomous, familiar, controlled, paternal and closed climates. Teachers working in schools situated in industrial area were found
better in teaching competency than teachers working in semi-urban and rural areas whereas teachers of semi-urban and rural areas were better in teacher effectiveness than the teacher of industrial areas. However, teachers working in schools situated in urban areas were better than teachers of all other areas on both teaching competency as well as teacher effectiveness. No significant difference was found in the teaching competency and teacher effectiveness of the teachers working in government and non-government schools in global terms. However, teachers working in schools run by local bodies were found better in teachers’ effectiveness and teacher competency than those working in government schools, Christian schools and non-Christian schools. No significant difference was observed between male and female teachers on the tests of teaching competency and teacher effectiveness on the global scale, though female teachers were found moderately better in teaching competency under all types of variations, whereas they were found moderately better than male teachers in teacher effectiveness only under Christian management. In other types of variations no significant differences were observed in the teacher effectiveness of male and female teachers. A positive and significant relationship was observed in the teacher effectiveness and teaching competency of teachers in different types organizational climate. Among the various independent variables affecting teacher effectiveness, the main effect of teaching competency was found significantly higher than territorial variations or school organization climate. The main effect of management types as well as sex on teacher effectiveness was found significant and the joint interaction of territorial variations and sex as well as territorial variation and teaching competency and sex was found to have a significant interactional effect on teacher effectiveness. No other interactional effect besides these was found to affect teacher effectiveness. The above study is similar to present study as it has studied the teacher effectiveness and teaching competency. But it differs from present study as it has studied the effect of school organization teacher effectiveness and the effect of teaching competency on teacher effectiveness.
Tharyani (1986) in a study of the important factors affecting teacher-effectiveness of B.Ed. students. The findings of the study were that the I.Q. of teacher’s trainees was found to be a useful predication. Teacher’s attitudes towards their pupils did not show any significant relationship with teachers behavior in the case of high achieves. Student’s knowledge’s in their respective subject area was found to be the best prediction.

Singh (1988) who identified certain skills of science teaching and their effectiveness within the context by creative ability. He showed that it is possible to modify teacher behaviour if creativity variable is brought into picture in verbal and non-verbal interaction patterns. Instead, models of teaching have appeared on the scene (Joyceand Weil, 1985). There are problems here. First, we do not have a worthwhile theory of teaching/instruction. Secondly, cross-link among the several models need to be brought out explicitly for the further depth and reflection empirically. Thirdly, following a single model in day-to-day classroom teaching is simply a non-starter proposition. Lastly, is a tough nut to crack when it comes to developing teaching plans that meet requirements of both highly varied objectives and diverse content. Despite these difficulties, it is of course highly desirable to modify behavior in varied ways.

Shah (1991) determinants of teacher effectiveness: Independent study. Teacher effectiveness was significantly affected by teaching aptitude, job satisfaction, job attitude, job motivation, personality, value pattern, self-concept, intelligence and organizational climate. The variable like locality, type of school, level of educational qualification, grade and teaching experience also determined teacher effectiveness to some extent. Teachers satisfaction with the nature of work and working conditions, positive attitude towards the children and the job, adaptability, mental ability, professional information, intelligence, knowledge value, intellectual self-concept, political value and some job motivation factors, e.g. peaceful quality of job, livelihood, influencing opportunity and enough leisure, were assessed as the paramount determinants of teachers effectiveness. The above
study is similar to present study as it has studied teaching effectiveness among secondary level teachers. But it is different from present study, as it has found out the determinants of teacher effectiveness.

**Singh (1991)** creativity and intelligence as correlates of teaching effectiveness of secondary school teachers. Among the male and female teachers, teaching effectiveness was positively with fluency, flexibility, originality, composite creativity and intelligence. Creativity and intelligence taken jointly were considered better predictors of teaching effectiveness than taken separately. The above study is similar to present study as it has studied the teaching effectiveness, but it differs from present study as it has studied the relationship of teaching effectiveness with intelligence and creativity among teachers.

**Sikora (1997)** conducted a study to examine relationship between personality types and teacher effectiveness of secondary family and consumer science teachers. The sample of the study comprised of 20 FCS teachers from three school districts in Eastern Tennessee. Although the results of this cannot be generalized due to the non-random selection process of FCS teachers. The findings indicated that teacher’s personality may play a significant although a limited role in teacher effectiveness.

**Walter (1999)** studied teacher effectiveness and teacher attitude towards children with special needs and found that more effective teacher indicated greater interaction with special needs of students and higher levels of the promotion of inclusive practices in their schools. He demonstrated the method to improve teacher effectiveness from the theory of Milton Rokeach. Rokeach theorized value hierarchies affect behavior; Value hierarchies can be modified; and modification can results in changed behavior. Analysis of the value rankings for the total sample with effectiveness as independent variable produced practically no significant difference. Analysis of the value rankings of the effective and ineffective teachers within the subgroups of grade-level taught. Gender and years of teaching experience yielded significant difference.
Khalaf (2000) attempted to explore variables related to chemistry achievement of 12th grade science in the United Arab Emirates (UAE). The sample included 204 males and 252 females in 66 classes in 60 schools from 10 districts or bureaus of education in the UAE. The results of the multiple linear regression indicated that the factors of prior Student Achievement, Student Perception of Teacher Effectiveness and Teacher Experience and Expertise accounted for 45% of the variance in school chemistry achievement. The results indicated that the strongest predictors of chemistry achievement and prior achievement in science, Arabic language and mathematics; student perception of teacher effectiveness or teacher experience and expertise.

Marsland (2000) conducted a study to evaluate selected teacher effectiveness research for elements of multiple intelligence (MI) theory. The result indicated a large discrepancy between the intelligence and their representation in teacher effectiveness research. Interpretation of the numbers reveals that there is no clear balance in what is being measured or in what has emerged as themes in teacher effectiveness research.

Raj (2000) conducted a study on teacher effectiveness of secondary school teachers in relation to motivation to work and job satisfaction. The study was conducted on 100 secondary school teachers from 22 schools (both rural and urban) of Shimla District of Himachal Pradesh. The findings of the study showed that teacher motivation to work has significantly effect upon teacher effectiveness, i.e. those having higher level of motivation to work do effective teaching. The conclusions drawn from the study were that teacher effectiveness was positively correlated with the level of motivation to work and teacher effectiveness was not significantly related to job satisfaction.

Quandahl (2001) conducted a study to differentiate the instructional practices of Kindergarten teachers who were more effective, effective and less effective in producing high student achievement. The teacher sample consisted of nine Kindergarten teachers and 208 students from four schools with ethnically
diverse students. These findings suggested that it was possible to discern some common characteristics of teachers who are more effective, effective or less effective producing high kindergarten achievement. Teachers who were identified as effective generally self-reported a more developmental philosophy and practices. Interestingly, the effective teachers’ students had high first grade academic achievement. Students of one teacher who was classified more effective and self-reported a developmental approach maintained high achievement in first grade.

Abler (2002) examined the possible relationship of teacher organizational commitment and teacher efficacy to school academic standing and teacher experience. The sample comprised of 30 public school teachers who taught in high schools of the Large District Association (LUDA) in Illinois. Data analysis indicated that teachers’ organizational commitment components of a positive sense of belonging and a commitment to collaboration demonstrated importance in their number and strength of relationships to teacher efficacy, indicators of academic standing, and teaching experience. Results suggest that administrators and policy makers may nurture and retain effective teachers who are committed to the school by fostering a friendly climate and a collaborative environment.

Allison (2002) conducted a study to compare the teaching effectiveness of part time and full time clinical nursing faculty. The sample included two groups: clinical nursing students in Associate Degree Nursing programmes at schools in a mid-Atlantic state and the part time and full time faculty who taught those students. Results of the study indicated that student’s rank part time faculty as significantly less effective than full time faculty on each of the five categories measured by effectiveness inventor as important in clinical nursing instruction i.e. Teaching ability, Nursing competence, Evaluation, Interpersonal relationship and Personality traits. The findings support the result that there is no significant difference in the ways that the students rate the effectiveness of teachers and the self-ratings of the teachers themselves.
Ford (2002) attempted to determine the relationship among teachers induction programme variable, namely content, personnel and delivery modes employed and the perceived effectiveness and satisfaction of first year teachers of the 279 surveys sent to beginning teachers in twenty six randomly selected public school system throughout the state of Alabama and 63 subjects responded to most or all of the question is the survey. The findings revealed that there is a positive correlation between new teacher induction content addressed during teachers’ first years and their levels of self-perceived effectiveness. Next, direct input on a specific task was the most common way new teachers were supported and produced a strong correlation with effectiveness and satisfaction while lectures, although used seldom, produced the least effect on teacher effectiveness and satisfaction. Finally, principals were most frequently involved in the induction of new teachers, while other teachers were also highly involved. The principals’ involvement produced the strongest relationship with effectiveness and satisfaction.

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Kagathala (2002) studied teacher effectiveness of teachers of secondary schools in Gujarat in relation to area of their schools, sex, educational qualifications, experience of teaching, type of school personality and caste. Teacher effectiveness scale (Developed by the investigator), creative personality inventory were administered upon 1800 teachers (1290 male and 510 female) of
secondary schools of different parts of Gujarat. Result of the study show that:
Teacher effectiveness of teachers of secondary schools in Gujarat was found to be
of average; The teachers of urban area are superior than rural area in teacher
effectiveness; Sex of the teacher does not affect the teacher effectiveness; The
teachers with master’s degree possess more teacher effectiveness than bachelor
degrees holders; The effect of experience of teaching on the teacher effectiveness
is found increasing upto the experience of 19 years but it found decreasing after
that level of experience; The teachers of boys schools are found to be effective
than girls and coeducational school; The teacher having high creative personality
are found superior to the teacher having how creative personality in their teacher
effectiveness; No effect of caste of teacher on the teacher effectiveness was found.

Singh (2002) conducted a comparative study of job satisfaction of teacher
educators in relation to their values, attitude towards teaching and teacher
effectiveness. Results, of the present study show that job satisfaction is positively
correlated with social value, hedonistic value, power value. Attitude towards
teaching is positively correlated with job satisfaction. Teacher effectiveness is
found to be positively and significantly correlated with job satisfaction.

Paul and Kumarvel (2003) in a study revealed that teachers differ in their
effectiveness with respect to teaching experience, community, type of management
and locale. It was also pointed out that rural teachers are more effective than urban
teachers.

Castle (2003) attempted a study to develop a transformative critical
pedagogy for work with current state standards and skills that teachers are
currently required to teach. The multisen serial component is designed to assist
teachers in developing the experimental learning is part of effective learning and
pedagogy. The findings revealed that a rigorous academic programme combined
with a critical socially constructed teaching/learning environment based on
interaction, discovery and problem solving contributes to teacher effectiveness and
student learning was effective.
Selsor (2003) sought to examine differential importance in primary dimensions of effective teaching as perceived by a sample of rural and suburban community college students and to analyze the teaching had learning implications. Students from 4 community colleges (N=337) were asked to rate 31 descriptive statements which encompasses 9 dimensions of effective teaching and respond to one open ended question as stated on the student’s evaluation of educational quality. The quantitative results indicate that rural and suburban community college students rate dimensions related to communication skills highest; instructor enthusiasm, individual rapport and group interaction in that order conversely students rated dimensions related to learning and content among the lowest; learning value, breadth of coverage and assignment/readings, is that order.

Dash and Behera (2004) studied on senior secondary teacher effectiveness in relation to their emotional intelligence on teacher effectiveness. The teacher effectiveness of various dimensions on differential between high and low emotional intelligence teacher were also found positively different.

Vandana and Punia (2004) attempted to study intuitive abilities and human resource effectiveness of educational managers. The findings indicated that educational managers are well aware of the need to find problems and setting the objectives before reaching at the solution through their effective implementation. Here in the entire process of goal setting the intuitive abilities of the administrators have a great role to play. In fact in a situation when everything seems to be going out of control, intuitive abilities come alive in the reactions and decisions of those capable of crisis management leading to human resource effectiveness. Thus, the ability to diagnose problems created by rapid, complexity and conflict may require an intuitive frame of mind to achieve the best results meaning thereby that the term intuition does not denote something contrary to reason, but something outside the province of reasons.

Vijaylakshmi and Mythill (2004) studied the influence of personal variables (Age, Marital Status, sex) and professional variables (Experience,
qualification, subject of teaching, designation, level of college type of college management) on the teacher effectiveness and work orientation of 220 teachers working in junior colleges, degree colleges, and professional colleges of Vizianagaram district of Andhra Pradesh. Results showed that there was significant difference between the teacher’s upto 35 years and above 35 years of age, married and unmarried, teachers with different designation and working in junior and degree colleges with regard to their teaching effectiveness. Regarding their work orientation, significant difference existed between married and unmarried, male and female teachers, teachers of different cadres, between junior and degree college staff and government and private college teachers. Positive and moderate relationship was present between teacher effectiveness and their work orientation. Teachers of above 35 years age, married teachers, female teachers, assistant professors and degree college teacher are more effective than their counterparts.

Amandeep and Gurpreet (2005) concluded that female teachers are more effective in their teaching than male teachers; male and female teachers do not differ significantly as far as their teaching competency is concerned; and variable of teaching competency plays significant role in teacher effectiveness of teachers.

Wu (2005) examined the relationship between teachers’ teaching effectiveness and school effectiveness. The major findings were (1) The levels of teaching effectiveness measures of comprehensive high school teachers are moderately high, with good teacher student relationship, being the highest, and teaching self-efficacy being the lowest (2) The higher the teachers’ teaching effectiveness, the higher the school effectiveness. Gender, type of school, teaching self-efficacy, systematical presentation of instructional materials and good classroom climate are the five best predictors for school effectiveness.

Bansibihari Pandit and Lata Surwade (2006) in their study on effect of emotional maturity on teacher effectiveness found that female teachers were emotionally more mature/stable than male teachers, and emotionally more mature/stable teachers were more effective.
Cheung (2006) found that female teachers were significantly more efficacious than male teachers. Years of experience were weakly but significantly related to levels of efficacy, and that educational level did not have a significant effect on efficacy level.

Ding (2006) studied the relationship between teacher effectiveness and student’s achievement as measured by test scores. A strong belief among policy makers and public as well as private funding agencies is that test scores are directly related to the quality of teaching effectiveness. This relationship implies that there could be a direct causality among teacher preparation, teacher quality and student achievement. Fundamental research issues and concerns as well as an alternative conceptual framework for studying the relationship of achievement and teaching are highlighted.

Dakshinamurthy (2007) studied interaction effect of teachers’ teaching effectiveness. Teachers’ personality and Teachers’ Attitude on academic Achievement in social science among students studying in secondary schools. The teacher with introversion personality type will influence higher on the academic achievement of students in social science than the teachers with extroversion personality type. The teacher with favorable Attitude towards profession will influence more on the academic achievement of students in social profession. The teacher with effective teaching will influence higher on the academic achievement of student in social science than the teachers with effective teaching.

Douglas Rutledge (2007) compared research on the theoretical models and predictors of teacher effectiveness with those of other occupations, focusing on three specific predictors of worker effectiveness: cognitive ability, personality, and education. The comparison of the teachers and other workers studies yields a variety of ways in which research on teacher effectiveness might be improved and expanded: First, the worker literature illustrates specific theoretical models, such as job-organization fit, that complement existing models regarding the work of teachers. The potential value of extending worker models to teaching in this way is
reinforced by the fact that the three teacher characteristics mentioned above predict effectiveness in similar ways among teachers and other workers. Second, by outlining multiple models of effectiveness, it is possible to identify the important dimensions on which they vary, such as the unit of analysis and the assumed roles of the individual worker in relation to the organization. Third, research on other workers highlights some ways to improve the measurement of the three predictors and teacher effectiveness, going beyond the use of test scores.

Newa (2007) studied teacher effectiveness in relation to work satisfaction, media utilization and attitude towards the use of information and communication technology among secondary school teachers of Nepal. The sample of the study consisted of 300 government and private school teachers of Kathmandu valley. Results of the study show that: For the total sample of government and private schools, teacher effectiveness was found to be positive related with work/job satisfaction, media utilization and attitude towards information and technology; No significant interaction was found between school type and teachers of academic stream with regard to teacher effectiveness; More effective teachers exhibited better work satisfaction, attitude towards media utilization and attitude towards information and technology; More effective teachers and less effective teachers of science, math, language, social sciences, of secondary school exhibited comparable work/job satisfaction, media utilization and attitude towards information and technology.

Sushil (2007) conducted a study to explore teacher effectiveness in relation to job satisfaction and occupational stress of senior secondary school teachers in District Kangra and found that there exists an occupational stress. Also there exists a significant difference in teacher effectiveness and job satisfaction.

Wang (2007) studied the impact of information entropy on teaching effectiveness. Information entropy refers to the process in which information is sent out from the information source, transmitted through information channel and acquired by information sink, while the teaching process is the one of transmitting
teaching information from teachers and teaching material to students. How to improve teaching effectiveness is virtually how to increase the transmission of effective information in teaching.

Kaur (2008) studied job satisfaction, occupational, stress and value dimensions as correlates of teacher effectiveness. A sample of 1000 teachers was selected from Government secondary school teachers of four districts of Punjab, namely, Ludhiana, Patiala, Mukatsar and Moga. Data was collected by different scales like teacher effectiveness scale by Kumar and Mutha, Job satisfaction scale by Sharma and Singh, study of value scale by Ojha and self-constructed occupational stress scale. The result of present study reflects that: The government secondary school teachers are average in their effectiveness; highly effective teachers were more satisfied with their jobs than less effective teaches. Further the study has shown that job satisfaction is a positive correlate of teacher effectiveness; Occupational stress is a negative correlate of teacher effectiveness. Also the teachers who are under high occupational stress are less effective; Theoretical, aesthetical and social values are found to be positive correlate and economic and political values are found as negative correlates of teacher effectiveness.

Rockoff et al. (2008) in their in-depth survey on new Math teachers in New York City, collected information on a number of non-traditional predictors of effectiveness including teaching specific content knowledge, cognitive ability, personality traits, feeling of self-efficacy, and scores on a commercially available teacher selection instrument. They found that individually only a few of these predictors had statistically significant relationship with student and teacher outcomes. However, when all of these variables were combined into primary factors summarizing cognitive and non-cognitive teacher skills, they found that both factors had a modest and significant relationship with student and teacher outcomes, particularly with student test scores. These results suggest that while there may not be a single factor that can predict success in teaching, using a broad set of measures can help schools improve the quality of their teachers.
Schulte et al. (2008) analyzed the characteristics of effective high school teachers as perceived by 615 college students in relation to gender, ethnicity, students status and generational status. Qualitative analyses revealed the presence of 24 themes: caring, communication, creative, disciplinarian, fairness, flexible, friendly, fun, knowledgeable, listening, manages classroom, uses different modalities, involving, motivating, organized, passion for teaching, patience, builds relationships, shows respect to others, challenges, service, teaches well and good personality.

Sridhar and Baidei (2008) compared the teacher efficacy in India and Iran. Statistically no significant difference in general teaching efficacy scores were found between two countries. A statistically difference was found between male teachers in two countries in terms of personal teaching efficacy. Iranian male teachers had high personal efficacy than their Indian counterparts. However, female teachers did not report statistically difference in teacher efficacy. Also, no significant difference was found in teacher efficacy for number of years of teaching experience.

Verma (2010) while discussing inclusive education lacks stress on teacher development, by building competencies of all ‘regular teacher’ to deal with diverse population of students and to learn pedagogical strategies that facilitate the learning of all students in their classroom. These include certain specific competencies i.e. foundational, practical and reflective competencies.

Diwan (2010) too, lays stress on increasing teaching efficacy in order to strengthen under-resourced schools to serve the cause of educability of young learners in the disadvantaged groups of society such as urban slums, SCs/STs and in remote forest and hilly areas. It is a gigantic task that can be accomplished with the support of competent teachers showing a feeling of empathy and compassion alongwith being knowledgeable and with good communication skills.

In a similar vein, Hameed and Manjustha (2010) tried to explain teacher efficacy as a correlate of teaching styles and organizational culture and it was reported that school culture has a significant bearing on teacher efficacy.
Harrison (2010) attempted to reviewed paper on researches on teacher effectiveness and its implications for current practice. This paper reviews the current research on teacher effectiveness as it applies to physical education in the areas of teacher expectations, classroom management and organization, a supportive learning environment, active teaching, task-oriented, or direct instruction, curriculum pacing, student opportunity to learn, including allocated, engaged, and academic learning time, teaching to mastery, and grade-level differences.

Establishing the field of teacher effectiveness research: moving from investigating personal characteristics of teachers to understanding effective teaching practices by Creemers, Kyriakides and Antoniou (2013).

Based on an analysis of the progress that teacher effectiveness research has made, a critical review of the different phases of the field is provided. It is shown that during the last century, we gradually moved from studies focusing on the teacher as a role model for his/her students to those aiming to understand effective teaching practices that promote student learning and learning outcomes. One of the major contributions of this field of research is that some assumptions about the importance of teachers’ personal characteristics, such as teacher personality and experience, in relation to student learning are not empirically supported, and the importance of teacher behaviour in the classroom is demonstrated. However, three conceptual problems concerning teacher effectiveness in the literature are identified. These are the limited conceptions of teaching, the need to search for relationships among teacher factors and the disconnection of teacher effectiveness research from research on teachers’ professional development. We argue that a solution to these problems can be found by establishing a dynamic approach to teacher professional development.

2.6 OVERVIEW OF THE REVIEW

The perusal of the review of related literature provides a clear picture of teaching competence and its relation with other correlated variables such as teaching aptitude, intelligence, attitude towards teaching and teaching effectiveness.
of teachers in different socio-cultural settings and population groups. The review of the related literature pertaining to these variables, under investigation provides certain indications that may be briefly summed up as under:

There does not exist a single set of competencies which all the effective teachers possess or all the ineffective ones lack. We should collect information regarding when, how, who and what the purpose of each competency is most likely to be useful to. In other words, the concept of teacher competence is highly situational one and involves value judgments where on one absolute set of competencies effective in relation to all kinds of learner groups. There are many different sets that are relevant.

Review of related studies indicates the importance of teaching aptitude and as a variable that correlates with the components of teaching competence. Some of the studies show gender difference in teaching aptitude, but some show no gender difference. Self-esteem, teacher effectiveness, success in teaching, Teaching competency factors, general intelligence, attitude towards teaching, Academic grades, teaching experience, age, SES, etc., are some of the variables that are related to teaching aptitude. Several studies show that teaching aptitude is capable of predicting teacher effectiveness and competency. Teaching aptitude is based on practice teaching and theoretical studies. The related studies reviewed, give a better understanding of the nature of teaching aptitude and the related variables and the relationship between them.

The intelligence and total personality of a teacher are the most important personal factors which are positively related to his teachings (More, 1988, Singh, 1991, Sikora, 1997). Background characteristics of teacher viz. educational levels, sibling status, childhood socio-economic level and parental education have an impact on teacher effectiveness (Minicucci, 1988).

Attitude towards Teaching Profession is an emotionalized tendency, organized through teaching experiences to react positively towards teaching. It is a learned emotional response, set for or against teaching. Individuals will have
positive attitudes towards those objects which enable them to achieve the values held and form negative attitudes towards objects which hinder the achievement of values. Studies reviewed on attitude towards teaching profession reveal that attitude towards teaching profession is a significant predictor of teaching efficiency. Studies prove that attitude can be improved through practical experience. It is also found that more effective and less effective teachers differ in attitude towards teaching. Previous exposure can increase the level of attitude. Some studies indicate that female teachers possess a high degree of attitude than male teachers. Teachers with positive attitudes encourage their students. Significant relationship of attitude towards teaching with variables like teaching interest, satisfaction, creativity intelligence, teaching effectiveness, commitment, achievement, technology, teaching experience are established in a majority of studies. But a few studies show no relationship with the variables viz., qualification, class room behaviour, age, sex, locale, etc. However, attitude towards teaching is a significant variable related to teaching that majority of studies established its relationship.

Studies reviewed reveal that teacher perception of teacher effectiveness is a determinant factor in the whole process of teaching and learning. The complex nature of teaching can be observed from the studies that they include as many variables which are directly or indirectly affect teaching effectiveness. Age, experience, academic achievement, gender, personality, satisfaction, home, health, social and emotional adjustments, intelligence, subject mastery, commitment, concern, values, democratic leadership, attitude, interest, self-concept, motivation, humour, love etc., are some of the variables that are significantly related to teacher effectiveness. Almost all the studies give an insight in to the diversity of teaching profession and the related factors affecting teaching. After going through the plethora of findings based upon the review of related literature, the investigator has undertaken his present investigation to see the relationship among components affecting teaching competence of science teachers in colleges of education in Haryana particularly.

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