CHAPTER – 2

REVIEW OF THE RELATED LITERATURE

“The research for reference material is time consuming but fruitful phase. A familiarity with the literature of any problem helps the students to discover what is already known, what others have attempted to find out, what methods remain to be unsolved” Best (1978).

The study is aimed at establishing the relationship of B.Ed. entrance test with student teachers’ teaching attitude, academic achievement, intelligence and performance in B.Ed. course. In this chapter the research already done in India and abroad related to the different variables of the study has been reviewed. Survey of the related literature has been done from various research articles published in educational journals, published books, unpublished dissertations and theses and also from the websites related to educational research.

Focus has been given only on those studies which are closely related and give some evidences in favour or against the relationships of all the variables of the present study. What does the research say about their relationships has been organized and presented below under following headings:

1. Studies Related to Admission Criteria
2. Studies Related to Teaching Attitude
3. Studies Related to Intelligence, Academic Achievement and Student-Teachers’ Teaching Success and Other Variables

2.1 Studies Related to Admission Criteria

Many researchers in India and abroad have tried to investigate
the predictive validity of the various variables of admission criteria which are most frequently used in the selection procedures for admission of candidates to the teacher education institutions. Criteria for admission to educational institutes differ from country to country. In India some states are using only entrance tests while some others are using multiple-criteria to select candidates for teacher education program. Following studies have been found which are related to this issue of admissions.

Gupta (1971) studied the admission procedures being used in the 1131 elementary and 375 secondary teacher training institutions in India with a view to suggest a suitable selection procedure. The major aspects recommended by him for admission were as follows:

(i) Academic achievements
(ii) Tests : an aptitude test, an intelligence test, content test and test in language
(iii) Interview
(iv) Teaching experience

Tiwari (1978) also studied the most frequently used selection procedures by Indian teacher-training institutes and concluded that:

(i) 36% of the training institutes used achievement tests only.
(ii) 24% of the institutes used both achievement tests and interview.
(iii) 14% of the training institutes used admission tests only.

Samart (1983) conducted a study of an entrance test to Diploma in Education course at Sarin Teachers College, Thailand. All the 13 papers of the Diploma in Education course were treated as criterion variables. The objectives of the study were firstly to examine the effectiveness of the entrance test consisting of general ability test, major subject test, teacher personality test and occupational interest and to study the factors underlying the
entrance test. He concluded: (i) Correlation between the total of general ability test and all the criterion variables were significant, (ii) Teacher personality test was significantly correlated with 6 criterion variables only, (iii) Major subject test was significantly related to 9 criterion variables and (iv) Entrance test scores were significantly related to all the 13 criterion variables.

Riggs and Riggs (1990) in their study, *A test of the validity of selected predictors of student success in a Teacher Education Program*, selected 437 subjects from the elementary teacher education program of a small California State University. Predictor variables for each subject included: (1) undergraduate Grade Point Average (GPA); (2) Subscale scores from a California Basic Education Skills Test; (3) prerequisite education course grades and (4) composite scores form the National Teacher Examination (NTE). Criterion variables included: (1) grade in curriculum and methods course taken during the last student-teaching block; (2) two student teaching performance ratings; (3) positive and negative comments written on student teacher rating forms and (4) successful completion of two quarters of student teaching. The study concluded that the GPA and reading methods course grade functioned best as predictors of the performance criteria. Scores on the standardized tests were not significantly predictive. The results of the study suggested that academic performance could be a predictor of student teacher success.

In 1987, Ohio State Board of Education adopted National Teacher Examination (NTE) as competency test, a requirement for teacher education and teacher certification. Loadman and Deville (1990) examined the NTE as a measure of general academic ability. Correlation and regression analyses were performed on data collected between 1982 and 1989 on Ohio State University teacher education graduates. Grade Point Average (GPA), American College
Test (ACT) scores and National Teacher Examination results were correlated. Regression analyses of the data indicated that ACT proved to be better predictor of NTE scores than GPA.

Williams and Wakeford (1990) examined the predictive validity of the National Teacher Examination (NTE), test of Communication Skills (CS) and General Knowledge (GK) as entrance requirements for teacher education programs. Data were collected from 1143 graduates of teacher education programs in North Corolina. The CS and GK scores were not found to be strongly enough related to performance in the teacher education programs, as measured by GPA, to merit the use as requirements for admission. On the basis of results that basic skills test scores do not improve the prediction of students' success in teacher education programs when the grade point average of the first two years of college is available. They recommended the use of GPA to predict future academic achievement in teacher education program.

Moore, Don and others (1991) found in their study that the correlations of National Teacher Examination (NTE), Core Battery scores and college Grade Point Average (GPA) with a measure of teaching effectiveness for 403 first year teachers indicated that the correlation was higher for GPA than for the Core Battery. NTE core did not predict effectiveness better than GPA.

Sentz and Erma (1991) collected data throughout the 1989-90 school year at St. Cloud State University (Minnesota) to investigate whether or not Teacher Perceiver Screeners and Pre-Professional Skills Tests (PPST) could be used to predict success in student teaching. Results indicated that the Teacher Perceiver Screeners showed promise for use in predicting student teacher abilities to motivate and communicate with students and to apply their skills in using specific teaching methods in classrooms. Some PPST scores seemed to be useful for prediction prospective teachers' abilities to
control and communicate with students and to apply specific teaching methods.

Selzman (1991) in his study, Selecting the qualified: Predictors of student teacher performance, argued, “The selection of students qualified for teacher education has many facets, only some of which are addressed by standardized tests and college grades” The purpose of his study was to examine the American College Testing (ACT), Program Assessment, Pre-Professional Skills Test (PPST) and college grade point average (GPA) as predictors of student teacher classroom performance. Subjects were 610 teacher education students during semesters of 1987-90 at Idaho State University. The study data suggested the importance of verbal skills, academic measures, standardized tests and college grades were weak predictors of actual classroom performance of student teachers. These measures, ACT, PPST and GPA, do not strongly suggest themselves as criteria for teacher education program admission.

Singh (1991) conducted a study on trainees’ performance in B.Ed. entrance test in relation to self-concept, intelligence and socio-economic status. He found that the entrance test was significantly correlated with the self concept and there was a significant correlation between the entrance test and intelligence.

Amardeep (1991) studied the performance of the candidates in B.Ed. entrance test conducted by Punjab University, Chandigarh for the admission to B.Ed. course for the session 1990-1991. The study showed that the marks taken by candidates were normally distributed, performance of the male candidates was better and the performance of general category candidates was also better.

Chaudhari and Vaidya (1992) studies the relationship of the achievements of prospective teachers in their Pre-B.Ed. and degree examinations. The prospective teachers who passed their Pre-B.Ed. test in 1986 and were admitted in the Department of Education,
University of Indore were the sample subjects of their study. The Pre-B.Ed. test included general mental ability, general knowledge, teaching aptitude and two optional tests. The study found that there was no correlation between the achievement of the prospective teachers in their Pre-B.Ed. and degree examinations.

Dosangh (1992) conducted a study on B.Ed. Entrance Test of Panjab University. The sample comprised of B.Ed. students of Government College of Education, Chandigarh, Dev Samaj College of Education, Chandigarh, Malwa College of Education, Ludhiana and G.H.G. College of Education, Sidhwan Khurd. The main finding of the study were: (i) there was a positive and significant relationship between entrance test and B.Ed. marks of the candidates, (ii) significantly positive relationship exited between B.A./B.Sc./B.com. marks of the students and (iii) Academic achievement at B.A./B.Sc./B.com. level was better predictor of B.Ed. achievements both in theory and skill-in-teaching as compared to entrance test.

Prabha (1992) conducted a study on B.Ed. Entrance Test marks and B.A/B.Sc. marks of students as predictors of their B.Ed. performance. The study had a sample of 614 student-teachers taken from 4 colleges of education affiliated to Panjab University. The purpose of the study was to find out the relationship of entrance test scores with academic achievement, intelligence, skill-in-teaching and B.Ed. theory marks. The main findings of the study were: (i) all the five inter-correlations i.e. correlation between entrance test and skill-in-teaching, entrance test scores and B.Ed. theory paper marks, scholastic achievement and skill-in-teaching, scholastic achievement and B.Ed. theory paper marks were positive but there was a week relationship between entrance test and skill-in-teaching for all the colleges and (ii) the co-efficients of correlation between entrance test and B.Ed. theory paper marks of the four colleges showed significant relationships.
Kaur (1992) studied B.Ed. entrance test scores as predictors of achievement at the B.Ed. level. She found a positive relationship between the scores in the entrance test and the scores in the B.Ed. examination of the candidates and hence, showed a good predictive validity of the B.Ed. entrance test.

Coyner and Sanda (1993) study, Relationship between academic achievement and preadmission testing criteria for teacher education student at the University of Akron (Ohio). They took a sample of 455 students admitted during the calendar year 1990. The data analysis indicated that the best predictor of future performance is the past performance and that standard tests were preferable to course grades due to outside factors (e.g. grade inflation). In addition, performance in certain specific education courses proved to be predictive of academic achievement. These findings suggested the desirability of colleges of education requiring certain prerequisite courses and using those course grades in program admission decisions.

Kumar (1994) studied the predictive validity of marks in qualifying examination and marks in B.Ed. entrance test in terms of success in B.Ed. course. The sample of the study consisted of 600 B.Ed. students, 300 each from session 1991-92 and 1992-93. The sample was taken form the Government College of Education, Chandigarh affiliated to Panjab University. The results of the study showed that:

(i) There was a positively significant relationship between qualifying examination and B.Ed. final examination score for the groups of boys, girls, science students, arts students, graduates, post graduates and total sample students for session 1991-92.

(ii) The r-value for the session 1992-93 between the qualifying examination and B.Ed. final examination score for all the
groups and for total sample also was found significant at .01 level.

(iii) The relationship between the entrance test and B.Ed. final examination scores for all the groups and total sample students for session 1991-92 was also found positively significant.

(iv) For session 1992-93 there was found not a significant relationship between the entrance test and B.Ed. final examination scores for all the groups and also for the total sample students.

In the study the entrance test for the session 1991-1992 showed better predictive validity. But the entrance test for the session 1992-93 showed a poor predictive validity. He asserted that a poorly framed entrance test can even distort the predictive validity of the test and recommended that care has to be taken while framing the entrance test and entrance test should have a high predictive validity as a criterion of selection for admission.

Kumari (1999) in her study on entrance test performance of B.Ed. trainees found that there was a significant difference in the entrance test performance of high intelligence group and low intelligence group. Creativity was also found to be significantly affecting the entrance test performance as high creative group showed better performance in the entrance test.

Mikitovics and Crehan (2002) examined the validity of Pre-Professional Skills Test scores as college of education admission criteria. The results indicated a concurrent relationship between Pre-Professional Skills Test scores and scores of graduates in teacher education program examination-American College Test (ACT). But a weak predictive relationship was found between PPST scores and undergraduate Grade Point Average (GPA).

Kaur (2002) studied the relationship of entrance test scores
with the trainees' academic achievement and their attitude towards teaching on a sample of 200 B.Ed. students. She found a significantly positive relationship between scores in the entrance test and B.A./B.Sc. examination and also a significant positive correlation between the entrance test scores and teaching attitude of the candidates. She also found that the reserve categories candidates’ performance was lower as compared to the general category candidates with regard to entrance test and B.A. / B.Sc. examinations and their teaching attitude was also lower.

Viswanathappa (2005) in his study, Attitude towards teaching and teaching competence, attempted to find out the influence of attitude towards teaching, Rank in Ed. CET (Education Common Entrance Test), age, father’s education and occupation on the teaching competence of student-teachers. Teaching Competence Scale which consisted four parts: Lesson planning, Presentation, Closure and Evaluation was used to collect the data. The data was collected from 200 students-teachers of education colleges affiliated to Krishnadevaraya University Anantpur during the practice teaching October-November 2003-04. Following are the conclusions of the study:

(i) Attitude of student teachers towards teaching significantly predicted the teaching competence of the student teachers in lesson planning, presentation of lesson, closure of lesson, evaluation and teaching competence in total.

(ii) The CET rank for admission did not predict the teaching competence of B.Ed. students in lesson planning, presentation, closure, evaluation and teaching competence in total.

Joshi (2007) conducted a study on Common Entrance Test (CET) Scores and Academic Score of teacher trainees to find out the relationship between CET Score and Academic Score of 752 teacher trainees. A sample of 396 males and 356 females was taken from a
Dhule city of Maharashtra State. The CET comprised of four sub tests viz. Mental Ability, Teacher Attitude, Teacher Aptitude and General Knowledge. The weightage given to each of these tests was 20%, 30% 30% and 20% respectively. The marks obtained by candidates in the entrance test were converted to 50% and this score was called the CET Score. Similarly Academic Score was made on the basis of academic and some other qualifications and weightage given to Academic Score was also 50%. The findings of the study were:

(i) The co-efficient of correlation between CET Score and Academic Score of teacher trainees was 0.22, which was significant at .05 level.

(ii) The co-efficient of correlation between CET Score and Academic Score of male teacher trainees was 0.16, which was significant at .05 level.

(iii) The co-efficient of correlation between CET Score and Academic Score of female teacher trainees was 0.31, which was significant at .05 level.

(iv) The co-efficient of correlation between CET Score and Academic Score of teacher trainees belonging to open category was 0.32, which was significant at .05 level.

(v) The co-efficient of correlation between CET Score and Academic Score of teacher trainees belonging to backward class category was 0.20, which was significant at .05 level.

(vi) The co-efficient of correlation between CET Score and Academic Score of teacher trainees belonging to Arts faculty was 0.15, which was significant at .05 level.

(vii) The co-efficient of correlation between CET Score and Academic Score of teacher trainees belonging to Science faculty was 0.24, which was significant at .05 level.

So, the study indicates that the relationship of CET score with
the Academic Score is positively significant. The CET score of male, female, open category, backward category, arts faculty and science faculty student-teachers is also positively related to their academic score.

Adebayo, Bob (2008) in a study, Cognitive and non-cognitive factors affecting academic performance and retention of conditionally admitted freshmen, obtained data from 147 freshmen when approximately 2,601 freshmen were enrolled in 2006 at a comprehensive public university. The purpose of the study was to determine the extent to which cognitive and non-cognitive measure predict academic success of conditionally admitted students. Stepwise multiple regression revealed that one cognitive variable (high school grade point-average) and two non-cognitive measures are the three best predictors of first semester grade-point-average (GPA). The study indicates that past performance is a predictor of future performance of the students. The study revealed in its findings the practical implications for admission counsellors.

From the review of above studies it has been found that in India and abroad various predictors are being used for the admission procedures to the teacher education program and any admission procedure usually included more than one of the predictors. It is concluded that:

- The predictive validity of entrance-tests or admission-tests varies from test to test. The relationship of entrance tests with other variables like intelligence, teaching aptitude, teaching competence, attitude towards teaching, academic achievement and teaching skills also varies form test to test.
- The results of the number of studies show that college grades or past performance functions as a best predictor of student-teachers’ success and thus, suggested the desirability of inclusion of graduation grades in program-admission decisions. But the few
studies indicate college grade-point average as a week predictor of student-teachers’ success in the course.

Thus, it is found that the various predictors have shown different degrees of predictive validity. It becomes difficult to reach at the conclusion that which of these variables could be used as reliable standards in the admission procedures. So, some more comprehensive research in this area is required.

2.2 Studies Related to Teaching Attitude

The researchers have tried to study the attitudes, their measurement, change in attitudes and their relationship with other variables. Though it was comparatively late, yet the educationists started taking keen interest in studying attitudes of teachers towards teaching, pupils, school administration etc. A number of investigators have conducted studies to find out the relationship of teaching attitude with other variables. The studies relating to teaching attitude are given below.

Sharma (1971) aimed at studying the relationship between characteristics possessed by teachers and teaching effectiveness with a view to predict teacher’s success. The combination of five predictors namely, teaching attitude, academic grades, socio-economic status, teaching experience and age appeared to be sound predictors of teaching effectiveness. Roy (1971) also studied the relationship between teachers’ attitude and teaching efficiency and found a positive relationship between the two.

N.C.E.R.T. (1971) conducted a study on reactions of teachers towards teaching profession and concluded that training appeared to be a contributing factor in the development of positive attitude, teachers with lower qualifications were having more positive attitude towards the profession, younger teachers showed more positive attitude, experience and positive attitude were inversely
proportionate, marital status did not influence the attitude of teachers towards the profession, attitude of male and female teachers differed significantly, the tenure of service did not effect the attitude of teachers and the attitude of teachers differed significantly under different managements.

Mehrotra (1973) conducted a study on the effect of teacher education programme on the attitude of student-teachers towards teaching profession. The major finding of his study was that the attitude of those students who completed the course was more favourable than that of those who did not. The mean attitude score of full-time students was lower than that of correspondence students at the beginning of the course but it was higher at the end of the course. In both the groups, the attitude of women students was more favourable than men. The attitude of male students of correspondence courses was favourable than that of the full-time courses, both at the beginning and at the end of the course.

Ahluwalia (1974) undertook a study, Development of teacher attitude inventory and a study of change in professional attitude of prospective teachers, and made the following conclusions:

(i) The mean attitude scores of the prospective teachers were found to decrease rather than increase at the end of the training programme.

(ii) There was no significant difference in the attitude of prospective teachers in relation to sex and institutions.

(iii) Sex was not found to be either a determinant or differential of change in professional attitudes of prospective teachers as a consequence of teachers preparation programme.

Chhaya (1974) investigated certain psychological characteristics of effective and ineffective teachers on the basis of principals' ratings, students' ratings and three years' (1968 to 1970) results of students in high school board examinations of Allahabad. She
concluded that effective teachers had more favourable attitude towards teaching profession and had significantly better personality adjustments. Authoritarian teachers were rated ineffective. She also found that age and sex of teachers were significantly related to teaching effectiveness.

Singh (1974) in his study, Measurement of teacher values and their relationship with teacher attitude and job satisfaction, found that there was no difference in the attitudes of teachers due to difference in age, but male and female teachers differed in their attitudes towards teaching. The study also found a significant positive relationship between scores on attitude and scores on job satisfaction.

Bhandarkar (1980) conducted a study on teachers’ attitude towards teaching profession and found that:

(i) There was significant difference in teachers’ attitude towards teaching profession in urban, semi-urban and rural areas.

(ii) The attitude towards teaching profession was not significantly related to the qualification of the teachers.

(iii) The trained teachers’ mean attitude score was significantly higher than the mean attitude score of the untrained teachers.

(iv) The job-mobility and family problems were not significantly related to teachers’ attitude towards teaching profession.

GCPI (1981) conducted a study on relationship of academic achievement and attitude towards teaching among teacher trainees. Findings of the study showed no relationship between academic achievement and attitude towards teaching among teacher trainees.

Tiwari (1981) in her study found that sex did not have any effect on attitude towards teaching profession, teachers rated high by principles possess high attitude, correlation between attitude and teaching effectiveness as rated by students was found positive, though not very significant, which showed that teachers rated highly
effective by students did not necessarily possess a high attitude. Teachers showing excellent results showed a high attitude and a high positive correlation between teachers job satisfaction and attitude towards teaching profession was also found.

Patil (1984) reported that there was no significant difference between graduate and post-graduate pupil-teachers’ attitude towards the teaching profession. Female pupil-teachers had more favourable attitude towards teaching profession than male pupil-teachers. Experience played a great role in the development of favourable attitude towards the teaching profession.

Goyal (1985) studied some of the characteristics of the teacher educators in India. He made an excellent empirical study of factors like attitude, job satisfaction, adjustment and professional interests of teacher educators which have a significant bearing on their teaching effectiveness. The relationship between job satisfaction and teaching attitude of teacher educators was found significantly positive with each other in spite of the differences in their sex, age, qualification and teaching experience. Their social adjustment, emotional adjustment and occupational adjustment was also significantly related to teaching attitude. The study found no significant relationship between attitude and professional interest of teacher educators.

Mehra and Patil (1986) investigated the attitude of prospective teachers towards teaching profession and found: (i) there was no significant difference in the attitude of male and female prospective teachers towards teaching profession. (ii) there was significant difference in the attitude of experienced and inexperienced prospective teachers towards teaching profession.

A systematic communication skills workshop for teachers in South Carolina was analysed by Percy (1990). The objective of the analysis was to find out the effectiveness of the workshop in
enhancing both teacher attitudes toward children and selected teacher behaviors associated with effective teaching. The study concluded that the training techniques were found to improve teacher attitudes and skills for 378 elementary and secondary school teachers.

Chester and Mitchell (1991) in his study investigated whether or not selected academic ability indices and personal characteristics of student-teachers (all were Bowling Green State University teacher candidates) were associated with longitudinal changes in their attitude toward teaching measured upon the commencement of training after student teaching and near completion of their first year of full-time teaching. ANOVA procedure revealed that the average attitude toward teaching of the neophyte teachers did not differ at their three points in teacher development; that university grade point average, American College Test scores, Comprehensive Test of Basic Skills scores and student teacher performance ratings were not associated with their attitude toward teaching.

Sundarajan, Kumar and Bala (1991) for their study on student-teachers' attitude towards teaching and their interest in teaching took a sample of 262 student-teachers of Annamalai University. It was found that as many as 95.04% of the B.Ed. students of university had a favourable attitude towards teaching. No significant difference between man and women student-teachers, humanities and science student-teachers, graduate and post-graduate student-teachers in relation to their teaching attitude was found. Women student-teachers were found to have better interest in teaching as compared to men student-teachers.

Simrat (1998) in her study found that teaching attitude of teachers was a significant predictor of their teaching effectiveness. The teachers who got high scores in teaching attitude were highly effective teachers and vice versa and sex had no effect on this
finding. The study concluded that more effective teachers have more favourable attitude towards teaching.

Kumar (1999) studied teacher effectiveness among scheduled caste and non-scheduled caste teachers in relation to their teaching aptitude and self concept. Sample comprising 502 school teachers was drawn from government high and senior secondary schools of 8 districts head quarters of Punjab by employing multistage stratified randomizing technique. To study the interaction effect of caste, teaching aptitude and the different aspects of self awareness upon teacher effectiveness of secondary school teachers, 2x3x3 ANOVA was used. The main findings of the study were:

(i) Teachers having high teaching aptitude as well as ideal self concept were more effective.

(ii) Significant difference existed in the teacher effectiveness belonging to different levels of teaching aptitude.

(iii) Caste made no significant effect upon teacher effectiveness irrespective of teaching aptitude and ideal self concept.

(iv) There was no significant interaction among the variables of caste, teaching aptitude and social concept on teachers’ effectiveness.

Pigge and Marso (2000) conducted a longitudinal study of 117 teachers the aim of which was to investigate whether or not selected academic ability indices and personal characteristics of teachers were associated with changes in their attitude toward teaching as a career. The study revealed that the attitude of neophyte teachers remained stable and positive during teacher preparation but was less positive near the end of their fifth year of teaching and that university and education grade point average, basic skill scores and student teacher performance ratings were not associated with their attitude toward teaching.

Pal (2001) conducted a comparative study of attitude of school
and college teachers towards creative learning and teaching in relation to mental Health. Subjects of the study were 180 college and school teacher from Ludhiana, Jalandhar, Patiala and Ferozepur districts of Punjab. Data was collected by employing opinionative on creative learning and teaching of Torrance and Phillips (1972) and Mental Health Inventory by Srivastava and Jagdish (1985). The conclusions of the study were that:

(i) College teachers had more favourable attitude towards creative learning and teaching than school teachers.

(ii) Gender of the teachers did not play a significant role in determining their attitude towards creative learning and teaching.

(iii) School male teachers do not differ from college male teachers regarding their attitude towards creative learning and teaching.

(iv) College female teachers have significantly higher attitude towards creative learning and teaching than school female teachers.

Singh (2002) conducted a comparative study of job satisfaction of teacher educators in relation to their values, attitude towards teaching and teaching effectiveness. The sample of 250 teacher educators was taken from the colleges of education affiliated to Panjab, G.N.D. and Punjabi Universities. Results of the study showed that job satisfaction and attitude towards teaching were positively related to each other. Teacher effectiveness was also found to be positively and significantly related to job satisfaction.

Devi (2004) in her study on student teachers undergoing the B.Ed. course during the academic year 2003-04 in Chennai, assessed the attitude of B.Ed. trainees towards teaching profession and found the relationship between the attitude towards teaching and performance in B.Ed. entrance examination. It was found that
the high achievers in the entrance examination had favourable attitude towards teaching. A positive and significant relationship existed between the attitude towards teaching and performance in B.Ed. entrance examination.

Kaur (2004) conducted a study to investigate the effect of teacher training programme on the motives, attitude towards teaching profession and different personality factors of the teacher-trainees. She concluded that the B.Ed. students’ attitude towards teaching profession decreased at the completion of the teacher-training programme. So the training programme had a negative impact on B.Ed. students’ attitude. She found that there was a significant decrease in the attitude of B.Ed. student towards classroom teaching aspect also and concluded that the teacher-training programme failed to maintain the magnitude of B.Ed. students’ attitude towards classroom teaching. Attitude of the B.Ed. students relating to child-centered practices increased during the training but remained almost same at the end of the training and hence the training programme did not improve this aspect of attitude of the trainees. The results also showed that there was no significant impact of training on the attitude of B.Ed. students towards educational process aspect. The training programme had a negative impact on B.Ed. students’ attitude towards pupils. The study also concluded that there was a gradual decrease in B.Ed. students’ attitude towards teachers. Thus, the study concluded that the teacher training programme failed to enhance the attitude of B.Ed. students towards teaching profession.

Roy (2005) studied the effect of Creativity Appreciation Training Programme (CATP) on the teachers’ attitude towards creative teaching and learning. A sample of 400 teachers were selected from high and higher secondary school teachers including male, females, private and government teachers from Kohima and
Dimapur districts in Nagaland. Torranace’s opinionative on creative learning and teaching and an informative booklet on CATP developed by the investigator were used for data collection. Results showed that teachers of high and higher secondary schools had poor perception about creativity and hence had unfavorable attitude towards creative learning and teaching. Under CATP the teacher of high and higher secondary schools showed a remarkable positive shift in their attitude towards creative learning and teaching.

Amandeep and Gurpreet (2005) endeavoured to find out the impact of teaching competency on teaching effectiveness. The sample of the study included hundred teachers out of which 50 were male and 50 were female teachers. To measure teacher effectiveness Kumar and Mutha’s Teacher Effectiveness Scale and to measure teaching competence of the teachers Passi’s Scale of General Teaching Competence was used. Results of the study showed that female teachers are more effective than male teachers. Male and female teachers do not differ significantly in teaching competency. Correlation between teacher effectiveness and teacher competency was found to be positive and significant.

Gelisli (2007) conducted a study in Turkey to find out the effects of teachers’ attitudes and behavior on students’ attitudes, behavior and academic success. The study aimed at exploring the influence of teacher’s conception of discipline, way of communication and attitude towards students on students’ academic success and attitude toward school courses and teachers. The influence of teacher attitudes inside and outside the class on students’ academic success was determined freely through student observation and student opinions and a quantitative approach was employed in the research. Findings revealed that students perceive teacher’s way of class room management. In class and out-class attitudes and teaching methods and strategies had positive and
negative impacts on their academic success and participation in lessons.

Carleton, L.E., Fitch, J.C. and Krockover, G.H. (2008) in their study, An in-service teacher education program effect on teacher efficacy and attitudes, examined changes in teacher efficacy and attitude toward teaching throughout a teacher education program as teachers worked to integrate new skills into their science curriculum. Correlation co-efficients were calculated to know the changes. Positive correlation was observed between changes in attitude and self-efficacy. Changes in self-efficacy in the beginning of the school year and changes in self-efficacy at the end of the program were also correlated and a negative correlation was found between the two.

Sunitha (2008) in the study, Attitude of student-teachers towards teacher training at secondary level, took a sample of 300 student-teachers of three different B.Ed. colleges of Mangalore University. The objectives of the study was to measure the attitude of student-teachers and to find out the difference in the attitude towards training of the various groups of student-teachers towards training. The study concluded:

(i) The attitude of student-teachers was significantly related to the gap between the B.Ed. course and the graduation course. The attitude of the student-teachers who passed up to the year 2000 were found having significantly low attitude towards teacher-training than who passed in the year 2005, i.e. who completed their graduation just before admitting to B.Ed program had better teaching attitude.

(ii) There was no significant difference in attitude towards training between male and female, B.Sc. and B.A. qualified, postgraduates and graduates, with or without teaching
experience and married and unmarried student-teachers. 

(iii) The study revealed that 50% of the student-teachers had 70.17% of attitude towards teacher training program which means that 50% of the student-teachers had higher positive attitude. The expected level of attitude towards teacher training program was at least 80%. It was concluded that the teacher education program was unable to achieve that expected level of teacher-students attitude towards training program.

Heck and Mahoe (2010) in their study, Student course taking and teacher quality: Their effect on achievement and growth, aimed to examine the relationship between high school students’ curricular positions, their perception of quality of their teachers, and school academic process variables on students’ growth rate and ending achievements. The findings of the study revealed that both teacher quality and student curricular positions effect growth and achievement of the students. The effects of teacher quality on growth rates and ending achievement, however, are more consequential for students in weaker academic profiles than in stronger profiles. The results of the study imply that teacher quality may influence students growth and achievements.

The studies conducted on teaching attitude mentioned above, indicate that there is a general agreement among the researchers that the attitude of teachers towards teaching is a significant determinant of teaching effectiveness, teaching success and job satisfaction. Some of the studies also believe that teacher’s attitude towards students effects students’ attitudes and academic success. Some studies have also tried to find out the significance of difference in teaching attitude of the teachers in relation to academic grades,
qualifications, experience, sex, age, faculty, type of school, marital status and socio-economic status of the teachers. These studies are important as they help in knowing the importance of teaching attitude in teaching profession and explore teaching attitude in relation to some characteristics of prospective teachers and teachers as well.

2.3 Studies Related to Intelligence, Academic Achievement and Student-Teachers’ Teaching Success and Other Variables

Intelligence and academic achievement of candidates are among the important dimensions of any B.Ed. admission criteria because both are assumed to be directly related to the achievements of the candidates in B.Ed. course. For many investigators the relationship of academic achievement and intelligence has remained a subject of study. Some other researchers have studied the relationship of intelligence and also of academic achievement with student-teachers’ and teachers’ teaching success. Given below is the review of those studies which have tried to establish a relationships between these variables.

Seagoe (1945) studied the relationship between academic achievement and teaching success of pupil-teachers in practice teaching. By using University of California’s rating scale for practice teaching as a criterion of success in practice teaching of the pupil-teachers he concluded that tests of achievement had little predictive validity. Again in 1946, using the same measure of success, he found grade point ratio not significantly related to success in teaching practice.

Fuller (1946), found a correlation of .62 between success in student teaching and college grade points. Fattu and Hawsam (1950) in reviewing research on predictor criteria and teaching effectiveness
remarked that there was positive correlation between academic achievement and teaching success.

Lowell (1951) investigated the factors underlying teaching ability in primary and secondary schools with a view to improve the methods of selecting potential teachers. He assessed a large number of training college students on twelve traits and the results were correlated with practice teaching ability. The results showed that three factors were sufficient to account for teaching success. Among them intelligence occupied the highest position.

Studies reviewed by Getzels and Jackson (1954) on teachers personality and characteristic denied that there was any strong consistent association between general measure of cognitive ability and achievement on one hand and ratings of teaching success on the other hand. But Ullman (1954) in a study of 116 Michigan graduates reported a correlation of .3 between academic marks and teaching success. Carlile (1954) in predicting performance in teaching profession also found a correlation of .46 between success in teaching and college grade points.

Lawton (1958) in his study correlated academic ability school records and interview impressions of training college students with their final teaching marks. He found that all the co-efficients were significant and concluded that academic achievement of the teacher trainees was significantly related to their final teaching marks.

Rostker (1965) in his study aimed to find out factors affecting teaching ability. He concluded that intelligence was the highest single factor conditioning teaching ability. In a follow-up study of Rostker, using a selective battery of tests for determining teaching success, again a correlation of .61 between intelligence and teaching success was found.

Rao (1965) in his study, Some factors related to scholastic achievement, attempted to find out the relationship of intelligence,
study habits, socio-economic status and certain attitude towards school with academic achievement. He concluded that three independent variables intelligence, study habits and school attitude were significantly related to the prediction of scholastic achievement while socio-economic status was not. The multiple correlation coefficient between achievement scores and the scores of intelligence, study habits and attitude towards school was .81 which was quite high.

Byanwala (1966) studied scholastic backwardness of high school students in Calcutta. The sample consisted of seventy children who were normally progressing in class and seventy who were found failed continuously for two years. It was found that intelligence level of the students who faced continuous failure was average. Sheffield (1966) also advocated a positive relationship between intelligence and academic achievement.

It is also evident from the results of the study by Dhaliwal (1971) that intelligence and academic achievement are significantly associated with each other. Similarly, Pathak (1972) investigated in his study the factors differentiating high and low achievers and revealed that high achievers had significantly higher I.Q. (131.2) than the low achievers (93.7). Eighty four percent of the low achievers frequently expressed a fear of failure in examination. But Parkash (1972) opined on the basis of his study that intelligence is not significantly related to academic performance.

Gupta (1977) while conducting a study on successful teachers found that success in teaching had no relationship with academic achievement but was significantly related to the areas like professional attitudes, home, health, social and emotional adjustment.

Sharma (1977) studied teaching success in relation to self-concept, intelligence, experience and academic achievement. Subjects were teachers who belonged to 23 different teaching
subjects and 16 schools of Chandigarh. Among them 112 were proved successful and remaining 88 were unsuccessful teachers. The criterion employed for this purpose, was the combined rating by the heads, the co-workers and the pupils. Results showed that self-concept and intelligence of the teachers were significantly and positively related to their success in teaching. Experience and academic achievement had insignificant relationship with teaching success. Government school teachers were superior to private school teachers in teaching success and self-concept, intelligence, experience and academic achievement. Female teachers proved superior to male teachers in teaching success and self-concept and inferior to them in intelligence, experience and academic achievement. Successful teachers proved superior to unsuccessful teachers in teaching success, self-concept and intelligence and inferior to them in experience and academic achievement.

Masih and Raj (1977) conducted a study on intelligence and academic achievement of higher secondary students of Ajmer district in Rajasthan on a sample of 410 students. It was found that intelligence and academic achievement were significantly co-related factors.

Padilla (1981) made an investigation on the relationship between pre-service teacher’s cognitive development level and their ability to teach effectively during student teaching. The study resulted that there was a lack of significant relationship between the teaching success and teacher’s cognitive development.

Mahrotra (1986) conducted a study on relationship among intelligence, academic achievement, socio-economic status, anxiety and personality adjustment of high school students. A positive relationship was found between intelligence and academic achievement and between level of adjustment and academic adjustment.
Kapoor and Rita (1987) in their study on a sample of 1396 students found that high achievers tend to show a high level of intelligence. Similarly Watson and Monroe (1987) in their study to determine best variable to predict academic achievement found that intelligence was correlated significantly with achievement. Yadav and Shrivastava (1989) also found the relationship between academic achievement and intelligence to be positive and significant.

Kaur (1989) studied teacher effectiveness of physical education teachers. It was found that intelligence was positively related to teacher effectiveness. Teachers with high I.Q. were found to be highly effective than those with low and average I.Q. Psychological adjustment, positive self concept, teacher commitment, techniques of class room instructions, lesson evaluation and educational qualification were found to be important correlates of teacher effectiveness.

Slate, John and Others (1990) studied the relationship of conceptions of intelligence to preferred teaching behaviors. Results of the study indicated that the more incremental the students' conceptions of intelligence, the more likely they were to (i) prefer using a variety of teaching methods; (ii) possess better study skills and (iii) have non-dualistic thinking about the nature of knowledge.

Mekuria (1991) studied classroom verbal behaviour of teacher trainees in relation to their intelligence, self-concept and attitude towards teaching. The population in the study consisted of science teacher trainees of Addis Ababa University, Ethiopia during 1988-89 academic year. Classroom verbal behaviour was measured by Flander’s interaction analysis observational technique. Results showed that:

(i) High intelligence group of science teacher trainees were more indirect to their teaching behaviour and their pupils interacted better than the group of science teacher-trainees with low
intelligence.

(ii) The interaction effect of intelligence and self concept was found to be significant on the variables of Teacher Talk (TT) and not significant upon Indirect/Direct Ratio (I/DR), Indirect Teacher Talk (ITT), Pupil Talk (PT) and Silence (SC).

(iii) The classroom verbal behaviour of science teacher trainees was direct as measured by FIAT. Most of the classroom verbal behaviour was limited to the question answer response.

Bhattacharya (1991) studied the problem of the scholastic backwardness of adolescents in Bengali medium schools and found a positive relationship between intelligence and academic achievement. Fisher and Janis (1995) in their study on rural school students (Ohio) also found a positive relationship between intelligence and achievement and asserted that the intelligence has the ability to predict achievement.

Kaur (1993) compared the relationship of intelligence, creativity and aptitude for teaching with teacher effectiveness on a sample of 220 school teachers. The study concluded that intelligence was significantly correlated with teacher effectiveness of Navodya School teachers but it was not significantly correlated with the teacher effectiveness of traditional school teachers.

Das (1995) studied teacher effectiveness in relation to intelligence, emotional maturity, self concept and attitude towards teaching. It was concluded that teachers with high intelligence were more effective in teaching than low intelligent teachers. A significant difference was found in the male and female teachers regarding teacher effectiveness. Male teachers were found more effective teachers than female teachers.

Vasanthi and Anandi (1997) conducted a study on 417 B.Ed. student-teachers of Madras City. It was found that intelligence, self-concept and attitude towards teaching of the female pupil teachers
were significantly related to teaching effectiveness. Teaching attitude showed the highest correlation with teaching effectiveness as compared to self-concept, achievement, motivation, anxiety and intelligence of the B.Ed. students.

Minnaert and Janssen (1999) conducted a study on the additive effect of regulatory activities on top of intelligence in relation to academic performance in higher education. The analyses of variance of cognitive test results of about 500 college freshmen revealed significant effects of verbal and numerical intelligence and of cognitive regulatory activities on academic performance.

Yadav (2000) conducted the study on vocational preferences of adolescents in relation to their intelligence and achievement. He found that above and below average intelligent students differed significantly in their preferences. High intelligent students preferred to go to the jobs related to the area of physical sciences. Average and below average intelligence groups did not differ significantly in any of the area. Achievement and intelligence were correlated with the area of physical sciences and jobs.


Gagne and Pere (2002) studied the unique contribution of motivation to academic achievement after controlling the predictive power of cognitive abilities. Results for more than 200 female high school students, their parents and teachers showed that intelligence and motivation were not correlated, that parent's ratings were not closely related to the children's own judgments, and that cognitive abilities were the best predictor of school achievement.

Luo, Thompson and Detterman (2003), in a twin studies project on "The causal factor underlying the correlation between
psychometric “g” and scholastic performance’, fitted structural equation models to co-variances among the Cognitive Abilities Test variables, 11 Intelligence Test variables and 3 Achievement Test scaled scores of 532 primary school students. Results suggested that individual differences in mental speed are a main causal factor underlying correlation between general intelligence and scholastic performance.

Manhas (2004) studied the relationship of emotional intelligence with cognitive and non-cognitive variables. The sample of the study comprised of 400 adolescents taken from various higher secondary schools situated in Jammu and Kashmir. The results of the study showed that the cognitive variables such as general intelligence, creativity, academic achievement and non-cognitive variables such as self concept, mental health, academic stress and family stress are positively and significantly related to emotional intelligence.

Begum and Phukan (2005) in their study on academic achievement and intelligence investigated the relationship between the two variables. The sample of the study consisted 180 students out of which 118 were male and 62 were female students. The results of the study revealed that the co-efficient of correlation between the two variables was .70. Thus the relationship between academic achievement and intelligence of the students was positive and highly significant.

Gurubasappa (2005) studied adjustment and mental ability as correlates of academic achievement of secondary school students. The sample of the study was comprised of 400 students taken from eight secondary schools situated in Tumkur district of Karnataka state. The data was analyses with the help of t-test, product moment correlation and two way ANOVA. The study concluded:

(i) There was a significant high correlation between mental ability
and academic achievement of the students and it was concluded that the children with better mental ability achieve higher.

(ii) There was a significant high correlation between academic achievement and adjustment and it was concluded that well adjusted children in school achieve higher.

(iii) There was a significant difference in the academic achievement of students with different levels of adjustment and mental ability.

(iv) There was a significant difference in the academic achievement of students in relation to sex, type of school, medium of instruction, locality and socio-economic status.

Roberto, Mendoza and Carmen (2007) in their study explored whether or not intelligence test’s scores predict individual differences in scholastic achievement irrespective of socio-economic status (SES) factors such as parent’s income and education. From the results based on the data from 641 Brazilian school children it was concluded that children’s intelligence test’s scores predicted their scholastic differences.

Steinmayr, Ziegler and Trauble (2010) conducted the study, Do intelligence and sustained attention interact in predicting academic achievements? They investigated a sample of eleventh and twelfth grade students (N = 231). An overall performance score and quality of performance score in sustained attention as well as verbal numerical and general intelligence score served as predictors. Achievement criteria were grades in Mathematics and German as well as Grade Point Average (GPA) obtained after testing. Both types of sustained attention score were significantly related to school performance but only the quality of performance score incrementally contributed to the prediction of scholastic performance above and beyond intelligence. Overall differences in the sustained attention test significantly moderated the relationship between verbal intelligence and German grades. Quality of performance moderated
the relationship between intelligence and grade point average as well as one between numerical intelligence and Maths grades. The study elucidated the interplay between sustained attention, intelligence and scholastic performance.

Some of the above studies have reported a substantial or high correlation between academic marks and the teaching success of the prospective teachers and also of teachers and pointed out the desirability of inclusion of previous academic achievements in the admission procedures. But some studies failed to establish any positive relationship between the two and asserted that grade-point average has a little predictive validity as a criterion of student-teachers' teaching success. Some of the above studies have asserted that intelligence is an important and higher single factor in determining the teaching success of student-teachers or of teachers but a few studies have denied the strong and consistent association between the two. On the other hand, the most of the studies conducted on academic achievement and intelligence have established a significant positive relationship between the two variables and thus, have concluded that high achievers tend to possess high level of intelligence in general.

**Conclusion of the Review**

The related literature of the studies indicate that the predictive validity of the pre-admission tests vary from test to test. It also reveals that the relationship of the entrance test with other variables like academic achievement, intelligence, teaching competence, teaching attitude, teaching success, teaching skills etc. is also not very definite. Similarly some studies conclude that college-grade points are the best predictors of student-teachers' success and suggest past performance as an important variable for admission procedures but the few studies consider it as a weak predictor. A lot of research work is available on teaching attitude. But the
researchers have focused more on the relationship of teaching attitude with teaching effectiveness, teaching success, job satisfaction, qualifications, faculty, experience, marital status etc. of the teachers. Some studies on the attitude of student-teachers, no doubt, have also been found but most of them are related to their teaching attitude in relation to practice teaching, training programme, qualifications, sex etc. But very few studies are found which have explored the relationship of teaching attitude with intelligence, past performance or B.Ed. course performance of the student-teachers.

So, from the review of the related literature it is concluded that to find out the reliable predictors for the admission criteria, more search is required to study the relationships between entrance test performance, past academic achievements, teaching attitude, intelligence and B.Ed. performance of the student teachers is required. There has been found virtually no such a wide and comprehensive study in which the relationships between all these variables has been studied and that too, on such a sample representing the student-teachers of the state of Punjab. The investigator, therefore, has undertaken the present research work to study all these important variables which are very closely related to admission procedure of prospective teachers. The findings of the study may help in determining the reliable variables required for B.Ed. admission procedures.